Technology Executive Committee

23 March 2020

Twentieth meeting

Virtual meeting, 1–3 April 2020

Approach to capture information on needs, challenges, gaps and measures to develop and enhance endogenous capacities and technologies

Background note

I. Introduction

A. Background

1.   As per activity 2 of the thematic area Enabling environment and capacity-building of its workplan for 2019–2022, the TEC agreed to analyse measures that facilitate countries in enhancing enabling environment to promote endogenous capacities and technologies.

2.   The TEC previously has undertaken various work relating to development and enhancement of endogenous capacities and technologies, in response to mandate from Parties from COP21 in Paris as stipulated in decision 1/CP.21 paragraph 66(b). The work includes the following:[1]

(a)   Preliminary study in 2016–2017;

(b)   TEC survey of stakeholders' perspectives on the understanding of the "endogenous" concept (in relation to endogenous capacities and technologies) in 2018;

(c)   Soliciting inputs from other constituted bodies of the UNFCC and operating entities of Financial Mechanism in 2018;

(d)   Dialogue, in collaboration with the Paris Committee on Capacity Building (PCCB), to promote shared understanding of endogenous concept to wider stakeholders in 2019;[2]

(e)   Key messages to the COP25/CMA 2 as contained in the joint annual report of the TEC and CTCN for 2019.[3]

3.   As part of the activity of the new rolling workplan, in 2020 the TEC will identify and analyse, including CTCN work, the needs, gaps and challenges, and enabling environments to promote endogenous capacities and technologies. The deliverable in 2020 is a working paper/product, followed by a recommendation to COP/CMA in 2021. The task force on Enabling environment and capacity-building[4] implements this activity inter-sessionally, supported by the secretariat and an expert.

B. Scope of the note

4.   This note contains the planned approach to capture information on needs, gaps and challenges, and measures to build and enhance endogenous capacities and technologies, including methodology approved by the taskforce (Annex 1) and a draft questionnaire to be distributed to

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[1]   Outcomes of previous TEC work on this topic can be viewed in https://unfccc.int/ttclear/endogenous/.
[2]   https://unfccc.int/ttclear/events/2019_event9.
[3]   https://unfccc.int/documents/200725.
[4]   https://unfccc.int/ttclear/tec/members.html#Task.

National Designated Entities (NDE) and Technology Needs Assessment (TNA) Focal Points (Annex 2).

C.   Possible action by the Technology Executive Committee

5.   The TEC will be invited to consider this note and provide guidance to finalise the questionnaires.

II.   Inter-sessional work by the task force

6.   The taskforce on Enabling environment and capacity-building agreed to use three-pronged approach to undertake this activity: i) Desk review; ii) Survey/Questionnaires; iii) Solicit inputs from other stakeholders.

A.   Desk review

7.   At the onset, the taskforce agreed that this activity should build on and take into account relevant outcomes and recommendations from the past work on this topic (see paragraph 2 above). This is to ensure continuity of the TEC work and to avoid duplication of efforts. In this regard, an understanding of the concept "endogenous" (both for capacities and technologies) will be used that is based on the findings of the previous TEC survey.

8.   The taskforce will also review relevant work and activities of other bodies related to the topic. This includes, for example work of the CTCN,[5] the Paris Committee on Capacity-Building (PCCB),[6] and others, as appropriate.

9.   Further, the taskforce recognized a potential synergy with another activity under the same thematic area, namely: "*Examine enabling environments, including challenges and opportunities to incentivise the private and public sector in the development and transfer of technologies*" (Activity 1 of the thematic area "Enabling environment and capacity-building" of the TEC rolling workplan 2019-2022). Common issues discussed in both activities, such as enabling environments measures, will be examined. To the extent possible, similar terminologies will be used in both activities.

B.   Survey

10.   In 2018, national designated entities (NDEs) and different groups of technology stakeholders participated in TEC survey that solicited their views and understanding of endogenous capacities and technologies.[7] The participation to this survey was encouraging and proved to be an effective way to obtain various perspectives of these stakeholders.

11.   Some of the data obtained from the 2018 TEC survey are still relevant. Nevertheless, as the new work has a different focus, additional surveys/questionnaires will be launched in 2020 to solicit views of stakeholders on needs, gaps and challenges, and measures to develop and enhance endogenous capacities and technologies.

C.   Other inputs

12.   Other means to solicit inputs and feedback on the work may also be considered, as appropriate, for example:

    (a)   interviews following up on survey results;

    (b)   seeing feedbacks through events (e.g. in collaboration with PCCB);

    (c)   inviting inputs from other constituted bodies;

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[5] https://www.ctc-n.org/technology-sectors/endogenous-technologies.
[6] PCCB Technical paper on gaps and needs of capacity-building.
[7] Complete results of the survey was reported at TEC 17 and can be accessed in here.

(d)   reaching out to networks of observer organisations;

(e)   reaching out to organizations expressing interests to this specific work.

III.   Draft questionnaires

13.   Prior to the development of the draft questionnaires for the survey, the taskforce discussed survey methodology, prepared with the support of secretariat and an expert. This includes: different targeted audience for the surveys, types of questions, survey formats, technology lists, etc. Similar methodology was also employed during the development of TEC survey in 2018. The methodology as agreed by the taskforce for the 2020 survey is contained in Annex 1 to the document.

14.   Given the range of respondents expected to be engaged in the survey, three different questionnaires are being developed. The focus of each questionnaire and targeted respondents are explained below:

(a)   **Questionnaire 1** will cover issues relating to national management of technologies and related capacity building. Targeted respondents are those with responsibility for national-level policies and programs involving climate technologies, such as National Designated Entities and Technology Needs Assessment Focal Points.

(b)   **Questionnaire 2** will cover more general knowledge about what is required to support endogenous capacities and technologies issues. Targeted respondents are those who have knowledge on technology and capacity-building issues in the context of UNFCCC process, such as members of the TEC, former TEC, CTCN-AB, and PCCB and their observers, as well as to people identified by the nine civil society constituencies as having expertise in climate technologies.

(c)   **Questionnaire 3** will focus on work on the grounds and what works in practice. Targeted respondents are those who have first-hand knowledge of gaps, needs, and challenges relating to programs involving endogenous capacities and technologies. They will be asked to focus on the climate technology projects with which they or their organization have been involved. Examples of this group: CTCN Network members, Nairobi Work Programme members, local governments, NGOs, IGOs, and others who have done ground work with climate technologies.

15.   Based on the task force guidance, the expert developed a draft questionnaire as contained in Annex 2 to this document. Due to time constraints, at this stage only the draft questionnaire for the two key groups, namely NDEs and TNA focal points has been developed. The questionnaire for these two groups represents a more comprehensive sets of questions, as compared to the questionnaires for other target respondents. Following the TEC approval of the first survey, questionnaires can be drafted for the other groups of respondents.

16.   As previously mentioned, in drafting the questionnaires, previous TEC work and relevant work of other bodies (2018 TEC survey, CTCN work, PCCB work and previous TEC work on enabling environments and barriers) were taken into account, which resulted in the following:

(a)   Categories of "Mitigation", "Adaptation", and "Cross-cutting issues" in the draft questionnaire in Annex 2 are consistent with 2018 TEC survey and at the same time covers categories indicated in the CTCN and PCCB work. The use of consistent categories will also allow the TEC to determine whether gaps and/or capacity needs match up with the areas most often included in the considered in the 2018 survey;

(b)   A few questions from 2018 TEC survey in relation the capacity needs (skills and knowledge, specific measures to enhance capacity) have been included again to determine how they will compare with the 2018 survey;

(c)   Findings from previous survey were used to seek further information, for example, on participatory approach;

(d)   Categories of strategy areas for "Enabling environments" are consistent with CTCN work, PCCB work and previous TEC work on enabling environments and barriers.

17.   The draft questionnaire also rely more on soliciting views from respondents through qualitative (open) questions, recognizing that issues such as needs, gaps, and challenges and enabling environments may be specific to each country or respondent's experience.

IV. Next steps

18.   Once the TEC agrees to the draft questionnaire for NDEs and TNA focal points, the next steps will be as follows:

(a)   Develop the questionnaires for other targeted groups;

(b)   Prepare accompanying cover letters to the questionnaires;

(c)   Launch the survey in May 2020 for a period of response until June/July 2020, and depending on number of responses received, the survey closing date could be extended;

(d)   Analyze the results in August 2020;

(e)   Present initial findings from the survey at TEC 21.

Annex 1

Methodology to capture information on needs, gaps and challenges, and enabling environment measures to develop and enhance endogenous capacities and technologies

(as approved by Taskforce on 9 March 2020)

A.   Background and purpose

1.   The TEC has undertaken two studies of endogenous capacities and technologies.   The 2020 surveys will build on the findings from previous work and take into account the other work below.

2.   The TEC has done work on mapping barriers and enabling environments and is about to expand that analysis. The CTCN commissioned work on endogenous technologies in West Africa. PCCB has undertaken some work on needs, gaps and challenges of capacity building.

3.   The purpose of the 2020 surveys is to collect feedback from various groups about needs, challenges, gaps, and measures relating to endogenous capacities and technologies.

4.   Results will be used by the TEC to develop recommendations for enhancing endogenous capacities and technologies.

B.   Scope and definition

5.   Surveys conducted in 2018 asked about the scope and definitions of "endogenous capacities and technologies." Based on this survey, in its 2019 report to the COP, the TEC identified elements that stakeholders often include in their understanding of endogenous capacities and technologies, which are elaborated below.

6.   "Endogenous technologies" are those that are:

(a) Identified and developed within the country or by a team of in-country and external people, or

(b) Existing technologies developed elsewhere but modified and adapted within the country or by a team of in-country and external people to meet the country's needs and conditions.

7.   "Endogenous capacities" include the capacities to:

(a) Assess climate-related technology needs from the individual to the national level;

(b) Identify appropriate technologies to assist in meeting identified needs

(c) Adapt technologies to local needs and conditions.

8.   "In-country" skills, knowledge, and practices include those contributed by indigenous groups, local communities, researchers, educators, businesses, and others located within the country.

> **Guidance from Taskforce:** Approve the use of these definitions for the survey.

C.   Possible respondents

9.   The surveys may be sent to numerous groups. Some groups will be more difficult to survey than others. Follow up surveys or could be used to clarify or expand findings.

10.   Possible respondents are identified and may include:

(a) National Designated Entities (NDEs). This group, which is responsible for climate-related technologies in their countries, may have more knowledge about the relevant endogenous issues than anyone else.

(b) TNA focal points. This group is most familiar with the TNA process.

(c) Other planners and implementers. These people are involved in projects that involve technologies. NDEs could be asked to invite a few people to respond to the survey, such as their country's National Climate Change Focal Points, government research and technology agencies, ministry affiliates, etc.

(d) UNFCCC Constituencies. Each of the nine constituencies represents a different sector of civil society or the private sector:

(i) Constituency focal points could be asked to identify members knowledgeable about climate-related technologies, or who have worked on climate-related problems.

(ii) The survey could be sent to all constituency members who have attended a TEC meeting or otherwise have been involved in TEC activities.

(e) Intergovernmental Organizations (IGOs). A number of IGOs regularly follow TEC meetings or are otherwise involved in TEC issues. Extending the survey to this group could draw different perspectives given their expertise and close engagement in the climate technology issues.

(f) Other constituted bodies and Observers. PCCB is one key body who deals with capacity-building issues, therefore having theirs view may be useful. It will also serve to strengthen the collaboration with the TEC. Several countries send observers to meetings who are not members of the TEC. Many of these observers have expertise and are familiar with the relevant issues.

(g) Current and former TEC members. Those who have served on the TEC can provide important insights about endogenous capacities and technologies.

(h) Nairobi Work Programme (NWP). NWP partner organizations are public and private entities from all over the world, with diverse expertise and sectoral specialties, that support the NWP in producing and disseminating information and knowledge on adaptation to climate change. NWP partner organizations include NGOs and other civil society organizations, universities/education/training organizations and research centers, and private sector companies. Many of these organizations are engaged in capacity building and may have expertise in endogenous technologies and could contribute to the survey.

(i) CTCN Network Members. Network members respond to climate technology requests from developing country Parties. In addition, network members participate in CTCN events, exchange information, and provide experts for webinars, e-learning courses and other types of trainings offered by the CTCN. CTCN can identify members who have responded to requests for assistance from developing countries.

(j) Local and municipal governments. This is where much of the climate-related work takes place in countries. ICLEI could identify people who have been leading those efforts, who can provide information about stakeholder.

(k) Private sector. Many technologies are funded or provided by the private sector. As providers, rather than consumers or users, they provide a different perspective. Tracking down companies and people involved in projects may be difficult. Survey respondents could be asked to identify such people, and they could be surveyed or interviewed later in the summer. The CTCN network includes a number of members from the private sector.

(l) Practitioners. Some of these will be captured through the constituencies and through the CTCN network members.

(m) Endogenous researchers, educators, and consultants. These are some of the people who can both supply and benefit from capacity building. Deciding who to survey will be challenging.

11. Given limitations of the time and capacity to handle large number of respondents to the surveys, and also considering the different focus of the work this year, the following groups are proposed as the target groups for the 2020 surveys:

(a)   NDEs

(b)   TNA focal points

(c)   Additional respondents knowledgeable about technology invited by NDEs

(d)   CTCN Network members who have responded to requests for assistance

(e)   PCCB, TEC observers from constituencies, IGOs, and observer countries

(f)   Local and municipal governments

(g)   Current and former TEC, CTCN, and PCCB members

(h)   Nairobi Work Partner (NWP) organizations

12.   Other groups, such as researchers, educators, practitioners, and the private sector, could be included in limited numbers as nominated by the UNFCCC civil society constituencies

Guidance from Taskforce: Approve the proposed list of respondents in paragraph 11 & 12 above

D.   Survey formats

13.   Several versions of the survey will be needed to correspond to responsibilities and areas of expertise of different types of groups.

(a)   NDEs, TNA focal points, and their colleagues have the most detailed information about technology-related activities, uses of technologies, capacities, and needs for a particular country. The survey sent to them needs to be fairly detailed.

(b)   Observers and other groups have more generalized knowledge about endogenous technologies and capacities. The survey presented to this group should be more general.

Guidance from Taskforce: Approve the format of questionnaires customized to the backgrounds and expertise of different groups of respondents as mentioned in para 13 above

E.   Possible types of questions

14.   Qualitative vs. Quantitative Questions. Both can be useful, and the survey can include both types of questions. Here are reminders of some of the pros and cons of each type.

(a)   Quantitative Questions

(i)   Pros: The questions allow aggregation across countries, and analysis for different types of countries and/or respondents. Basic frequencies and bar graphs will be available as soon as the survey is closed, expediting analysis and reporting.

(ii)   Cons: Not everything can be measured quantitatively. The questions define the limits of the information to be collected. This makes it difficult for respondents to provide responses that do not comply with the researchers' thinking. Details about programs and ideas can be lost.

(b)   Qualitative Questions

(i)   Pros: Open-ended, qualitative questions allow respondents to provide deeper responses to questions, and to think beyond the way the researchers posed the questions.

(ii)   Cons: Analysis is much more difficult, time consuming, and less precise. Categorizing questions requires a considerable amount of time. Responses may be too diverse to allow for meaningful conclusions.

(c)   Hybrid Questions. Rating scales and other more closed-ended questions can include an "Other, please describe" option so that respondents can provide responses that go beyond those anticipated by the researchers. Separate questions can ask for examples of best practices.

15. The 2018 surveys included a mixture of quantitative, qualitative, and hybrid questions. The 2020 surveys will employ similar formats.

16. Proposed areas for questions

    (a)   Respondent background and responsibilities

    (b)   Experience with endogenous technologies and capacities

    (c)   Skills and knowledge required to enhance endogenous capacities and technologies

    (d)   Ongoing capacity building needs, including priorities

    (e)   Gaps in information and resources

    (f)   Modalities for improving skills and knowledge for different groups

    (g)   Ways to enhance collaboration and partnerships

    (h)   Institutional arrangements, policies, and programmes that enable or challenge endogenous capacities and technologies

> **Guidance from Taskforce:** Approve the use of mostly closed-ended questions that will provide more quantitative data but also provide options to add "Other" responses. Use open-ended questions only when needed to collect information that cannot be easily obtained through closed-ended questions. Suggest additional areas for questions.

F.   Technology lists

17. Technologies and related issues can be presented in several ways in the surveys. The 2018 surveys asked questions about:

    (a)   Inclusion of various types of mitigation and adaptation technologies in TNAs, TAPs, TRMs, and NDCs.

    (b)   Training and resource needs in areas such as choosing, installing, and maintaining technologies.

The draft paper on mapping barriers and enabling environments used more general categories, such as Economic and Financial, Legal and Regulatory, and Human Skills. For 2020 surveys, the lists to use may differ by the types of question and the group surveys.

> **Guidance from Taskforce**: Approve of using the list that seems most appropriate for different type of questions. The lists can be changed after reviewing the draft questionnaires.

G.   Draft questionnaires

18. A cover letter will be sent to respondents by email. The message will explain the purpose of the survey and provide a link to the survey itself, which will be constructed using Survey Monkey software.

19. Draft cover questionnaires will be included as a TEC20 meeting document.

Annex 2

Draft Questionnaires for National Designated Entities and Technology Needs Assessment focus points

> ### TEC 2020 NDE and TNAFP Survey
>
> **Definitions.** Surveys conducted in 2018 asked about the scope and components of "endogenous capacities and technologies." In its 2019 report to the COP, the TEC identified elements that stakeholders often include in their understanding of endogenous capacities and technologies. Based on those findings, this survey asks you to use the following definitions as you respond to the questions in this survey.
>
> - "Endogenous technologies" are those that are:
>   - Identified and developed within the country or by a team of in-country and external people, or
>   - Developed elsewhere but have been modified and adapted within the country or by a team of in-country and external people to meet the country's needs and conditions.
> - "Endogenous capacities" include the capacities to:
>   - Assess climate-related technology needs from the individual to the national level,
>   - Identify appropriate technologies to assist in meeting identified needs, and
>   - Adapt technologies to local needs and conditions.
>
> "In-country" skills, knowledge, and practices include those contributed by local communities, indigenous groups, researchers, educators, businesses, and others located within the country.
>
> ### Respondent and Country Characteristics
>
> 1. Which country are you from?
>
> [   ]
>
> 2. In which region is your country located?
>   - ○ African States
>   - ○ Asian States
>   - ○ Eastern European States
>   - ○ Latin American and the Caribbean States
>   - ○ Western Europe and Other States
>
> 1

3. Who is your primary employer? Please check only one option.

○ National government

○ Sub-national government (such as a state, provincial, or local government or planning authority)

○ Intergovernmental organization

○ Academia

○ Business or industry

○ Non-governmental organization

○ Consulting firm

○ Other (please specify)

[   ]

4. If you work for more than one entity, please check any other types of organizations for whom you currently work.

○ National government

○ Sub-national government

○ Intergovernmental organization

○ Business or industry

○ Non-governmental organization

○ Consulting firm

○ Other (please specify)

[   ]

5. In which of the following roles do you serve? Please check all roles involving climate technologies in which you currently serve.

☐ National Designated Entity

☐ Technology Needs Assessment Focal Point

☐ UNFCCC Focal Point

☐ Global Environment Facility Focal Point

☐ National Designated Authority

☐ Other government position related to the UNFCCC (please specify)

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6. If you currently serve as a National Designated Entity, how many years have you served in that position?

○ Less than 1 year

○ 1 year

○ 2 years

○ 3 years

○ 4 years

○ 5 or more years

○ I do not currently serve as a National Designated Entity

7. If you currently serve as a Technology Needs Assessment Focal Point, how many years have you served in that role?

○ Less than 1 year

○ 1 year

○ 2 years

○ 3 years

○ 4 years

○ 5 or more years

○ I do not currently serve as a Technology Needs Assessment Focal Point

Needs, Gaps, and Challenges

8. Using the definitions of endogenous capacities and technologies described at the beginning of this survey, please rate the strength of your country's current capacities in the climate technology areas listed below. Leave blank any area in which you have no opinion.

	Very weak	Somewhat weak	Neither weak nor strong	Somewhat strong	Very strong
Mitigation: Carbon fixation and abatement (such as oil and gas flaring reduction or CO_2 capture and storage)	○	○	○	○	○
Mitigation: Transport (such as modal shift or electric vehicles)	○	○	○	○	○
Mitigation: Energy Efficiency (such as efficient lighting or energy management systems)	○	○	○	○	○

	Very weak	Somewhat weak	Neither weak nor strong	Somewhat strong	Very strong
Mitigation: Renewable energy (such as solar PV or renewable energy resource mapping)	○	○	○	○	○
Mitigation: Waste management (such as landfill aeration or recycling)	○	○	○	○	○
Mitigation (such as afforestation or carbon stock measurement)	○	○	○	○	○
Mitigation: Agriculture (such as N2O/CH4 reduction or minimizing food waste)	○	○	○	○	○
Mitigation: Industry (such as fuel switch or power plant rehabilitation)	○	○	○	○	○
Adaptation: Early warning and environmental assessment (such as early warning systems or hazard mapping)	○	○	○	○	○
Adaptation: Agriculture and forestry (such as terrestrial ecosystems management or agroforestry)	○	○	○	○	○
Adaptation: Water (such as rainwater harvesting or seawater desalination)	○	○	○	○	○
Adaptation: Human health (such as heat wave plans or insecticidal bed nets)	○	○	○	○	○
Adaptation: Infrastructure and urban planning (such as sewerage infrastructure or building codes)	○	○	○	○	○
Adaptation: Coastal zones (such as storm surge barriers or coastal monitoring)	○	○	○	○	○

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	Very weak	Somewhat weak	Neither weak nor strong	Somewhat strong	Very strong
Adaptation: Marine and fisheries (such as fisheries management or artificial reefs)	○	○	○	○	○
Cross-cutting: Governance and planning (such as assignments of responsibility and oversight)	○	○	○	○	○
Cross-cutting: Financial management (such as accessing funding and managing budgets)	○	○	○	○	○
Cross-cutting: Monitoring and reporting (such as standardized data collection and analysis and establishing indicators of progress)	○	○	○	○	○
Cross-cutting: Communication (such as using social media and customizing messages for different groups)	○	○	○	○	○
Cross-cutting: Legal and regulatory (such as revising regulatory structures and protecting intellectual property)	○	○	○	○	○
Cross-cutting: Engaging affected stakeholders (such as involving local communities, indigenous peoples, and the most vulnerable in project planning)	○	○	○	○	○
Cross-cutting: Gender responsiveness (such as reporting differential impacts of technologies on women and men)	○	○	○	○	○

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9. Please list up to three areas in which you think your country needs to enhance its capacities to develop new technologies or to adapt existing technologies to local needs and conditions. You may use the list from the last question or describe something different.

Area 1. _____

Area 2. _____

Area 3. _____

10. What skills and knowledge would be most helpful in enhancing your country's ability to develop endogenous capacities and technologies? Leave blank any areas in which you have no opinion.

	Very helpful	Somewhat helpful	Not very helpful	Not at all helpful
Assessing local community needs for climate technologies	◯	◯	◯	◯
Selecting appropriate technologies	◯	◯	◯	◯
Importing technologies	◯	◯	◯	◯
Installing technologies	◯	◯	◯	◯
Maintaining technologies	◯	◯	◯	◯
Adapting technologies to local needs and conditions	◯	◯	◯	◯
Operating technologies safely and efficiently	◯	◯	◯	◯
Recycling technologies at end of use	◯	◯	◯	◯
Improving supply chains	◯	◯	◯	◯
Making development more sustainable	◯	◯	◯	◯
Drafting legal and regulatory approaches to technologies	◯	◯	◯	◯
Dealing with intellectual property issues	◯	◯	◯	◯
Evaluating the social, economic, and environmental impacts of technologies	◯	◯	◯	◯
Managing interdisciplinary teams	◯	◯	◯	◯
Working with external industries and consultants	◯	◯	◯	◯

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	Very helpful	Somewhat helpful	Not very helpful	Not at all helpful
Managing finances relating to technologies	○	○	○	○
Encouraging development and adaptation of technologies to meet local needs	○	○	○	○
Avoiding unintended consequences	○	○	○	○
Estimating useful lives of technologies	○	○	○	○
Engaging various stakeholders	○	○	○	○
Utilizing local and indigenous knowledge	○	○	○	○
Empowering social capital	○	○	○	○
Assessing gender impacts of technologies	○	○	○	○
Boosting national and community ownership	○	○	○	○

11. The previous TEC survey found a need to enhance the capacities of the NDEs. Please list any areas in which you would like to enhance your skills and knowledge in relation to your role(s) in the UNFCCC process.

12. Please list up to three challenges that are likely to hinder your country's development of new technologies or modification of existing technologies to meet local needs and conditions.

Challenge 1:

Challenge 2:

Challenge 3:

Participation

13. Findings from the previous TEC survey indicated that adopting a participatory approach could enhance endogenous capacities and technologies. To what extent have each of the following groups been involved in the planning, development, and deployment of climate-related technologies in your country?

	Not at all involved	Slightly involved	Somewhat involved	Heavily involved	Not sure
National government	○	○	○	○	○
Local and municipal governments	○	○	○	○	○
Intergovernmental organizations	○	○	○	○	○
Civil society	○	○	○	○	○
Indigenous peoples	○	○	○	○	○
Women	○	○	○	○	○
Business and industry	○	○	○	○	○
Financial institutions	○	○	○	○	○
People most vulnerable to climate impacts	○	○	○	○	○
Universities and other research institutions	○	○	○	○	○

Other (please specify)

_____

Enhancing Enabling Environments

14. In the last TEC survey, a number of strategies were identified that could enhance endogenous capacities and technologies. Other factors also are important. For each of the following, please indicate the degree to which strategies in that area can help to create enabling environments for enhancing climate capacities and technologies in your country.

	Does not enable	Enables slightly	Enables moderately	Enables significantly
Collaboration: Internal (such as collaboration among national and local governments, civil society, indigenous peoples, businesses, and others within your country)	○	○	○	○
Collaboration: External (such as collaboration with researchers, funders, or practitioners from outside your country)	○	○	○	○

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	Does not enable	Enables slightly	Enables moderately	Enables significantly
Economic issues: (such as market conditions or the high cost of capital)	◯	◯	◯	◯
Finance: (such as access to funding for capacity building, planning, and technologies)	◯	◯	◯	◯
Legal and regulatory structures: Domestic (such as property rights, liability, and environmental laws)	◯	◯	◯	◯
Legal and regulatory structures: International (such as trade agreements and intellectual property rules)	◯	◯	◯	◯
Institutional and organizational issues (such as policies, programmes, and organizational structures)	◯	◯	◯	◯
Information: Research (such as access to relevant data and up to date information)	◯	◯	◯	◯
Information: Contextual (such as the social, cultural, economic, and other characteristics of communities)	◯	◯	◯	◯
Human resources: Technical (such as installing, running, and maintaining technologies)	◯	◯	◯	◯
Human resources: Management (such as supervising workers, interacting with different sectors, and overseeing project implementation)	◯	◯	◯	◯

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	Does not enable	Enables slightly	Enables moderately	Enables significantly
Human resources: Analytical (such as collecting, organizing, and summarizing qualitative and quantitative information)	○	○	○	○
Governance: Decision-making (such as assignment of responsibilities, lines of authority)	○	○	○	○
Governance: Financial (such as where funds are deposited, procedures for budgeting and spending)	○	○	○	○
Education: Domestic (such as school programs or training targeted to specific skills, groups, or levels)	○	○	○	○
Education: International (such as student exchanges, attending school or workshops outside the country)	○	○	○	○
Communication: (such as raising awareness about climate-related problems and sharing best practices)	○	○	○	○

Other (please specify)

15. How important are the measures listed below to enhancing your country's capacities to develop new climate technologies or to adapt existing technologies to local needs and conditions?

	Very important	Somewhat important	Not very important	Not at all important
Access to additional funding	○	○	○	○
Training in the research, development, and innovation process	○	○	○	○
Educational programs in engineering, social science, and other fields	○	○	○	○
Collaborative projects with academic researchers in other countries	○	○	○	○
Collaborative projects with industries in other countries	○	○	○	○
Public/private partnerships	○	○	○	○
Participation on international collaborative teams	○	○	○	○
Access to peer-reviewed literature	○	○	○	○
Access to existing databases	○	○	○	○
Exchange programs for students and faculty	○	○	○	○
Fellowships for student and faculty	○	○	○	○
Travel to international conferences for researchers	○	○	○	○

Other (please specify)

[   ]

16. Please describe up to three factors that significantly contribute to enabling environments to enhance climate capacities and technologies in your country. You may use the categories listed above, or describe a different enabler.

Enabler 1: [   ]

Enabler 2: [   ]

Enabler 3: [   ]

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Other

17. Please use this space for anything else you can tell us that would help to enhance endogenous capacities and technologies in your country.

18. Please describe any successful projects or programs that your country has developed that enhance climate technology capacities or technologies.

Many thanks for taking the time to complete this survey. The preliminary findings will be presented to the TEC at its next meeting.

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