



# Organising the National Technology Needs Assessment (TNA) Process

- *An Explanatory Note*

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## Background

Technology Needs Assessments (TNAs) were directly referenced in the Paris agreement, which acknowledged the importance of widespread technological change in reducing emissions and stabilizing atmospheric concentrations of GHGs<sup>1</sup>. Multilateral support to developing countries to conduct effective TNAs and implement Technology Action Plans (TAPs) has become instrumental to the UNFCCC process. Through the GEF (Global Environment Facility) funded TNA project, UN Environment, together with UNEP DTU Partnership, works in partnership with developing countries to determine their technology priorities for mitigating and adapting to climate change. The TNA project aims to articulate a range of specific actions that stakeholders - including governments - can pursue, to enable the transition to low-carbon and climate resilient economies. The TNA project also acts as bridge to both private and public sources of investment. The TNA project follows a country-driven approach. A designated national institution takes the lead, involving a wide range of stakeholders in the process. Working with regional centres of excellence in climate change mitigation and adaptation, the project offers support to participating countries in the form of national, regional, and global capacity building workshops, technical support missions, and technical backstopping throughout the process.

Overall, national TNA teams should work closely together with the teams in charge of the NDC process, National communications preparations, NAPs and other relevant processes. Institutions and stakeholders such as Ministries of Finance and Planning, business associations, financial institutions, academia/research institutions and donors/development partners should be involved in the TNA process. We recommend that effort is made to involve relevant decision makers, donors and development partners, financial institutions and business representatives.

This note provides guidance to countries joining the TNA project on how to create and utilize existing institutional structures for establishing and implementing the TNA process. It also explains the regional and global support mechanisms.

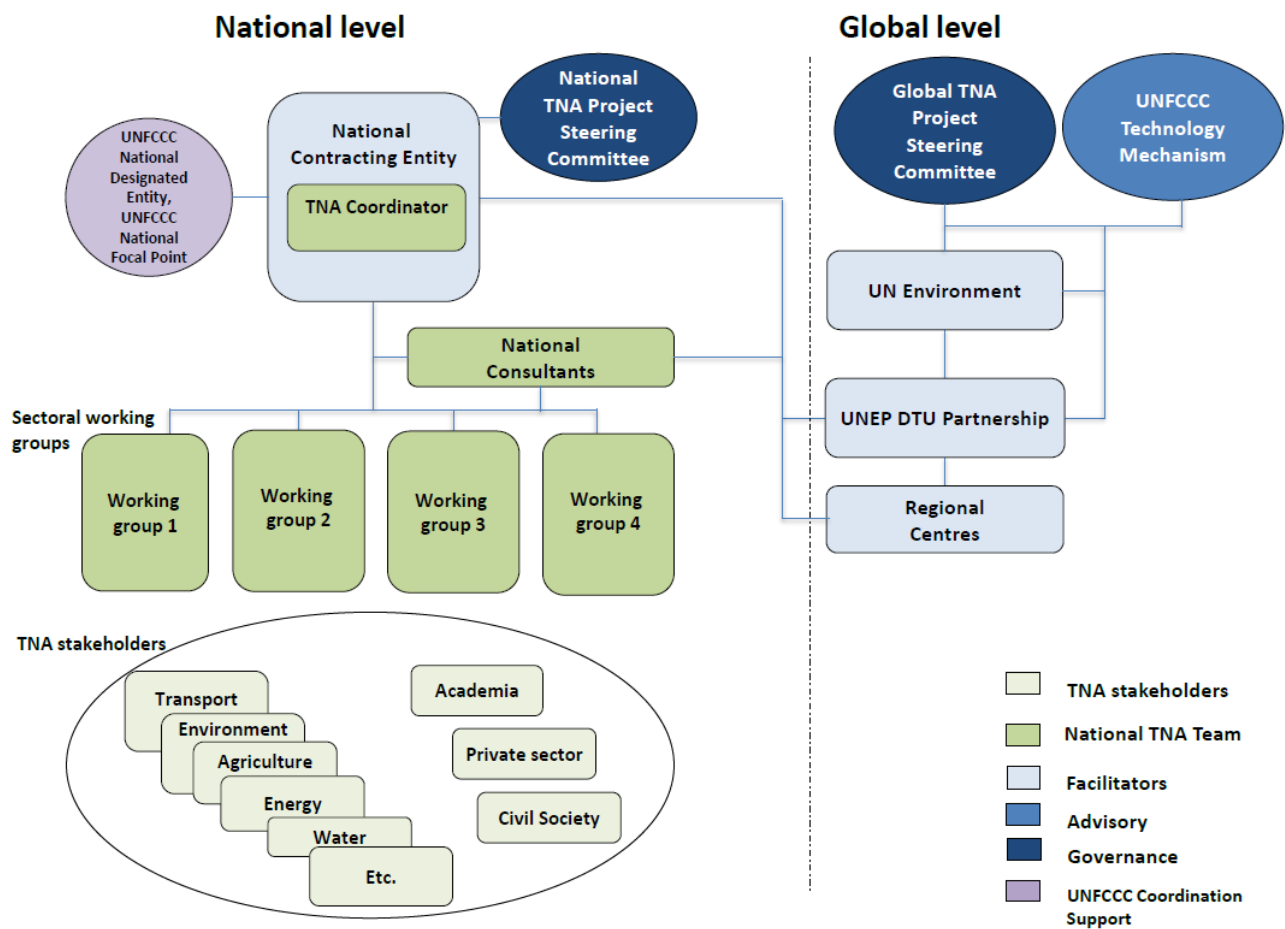
## The institutional structure

The typical institutional structure for carrying a successful TNA is shown in the figure below. The National TNA Team will consist of a National TNA Coordinator, the National Consultants, and Working Groups. Roles for each of them are clearly defined. Once the national team has been established, national capacity will be strengthened through national and regional capacity building workshops, in which the TNA coordinator and two consultants will participate. The national consultants will receive training on methodologies and tools for conducting the TNA.

The in-country institutional elements and their exact nomenclature would depend on countries. For example, a country may decide to call the project steering committee a “National Advisory Committee” and it may utilize an existing committee, e.g. if there is a national Climate Change Committee already. However, each element of the in-country institutional structure is designed to play an important role.

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<sup>1</sup> Decision 1/CP.21, para 67



The TNA process will be conducted through a stakeholder driven approach led by the national TNA Coordinator in collaboration with the national consultants. A wide range of stakeholders should be consulted, including the involvement of working groups. The TNA team can come out with policy recommendations but if those are to be implemented, they need to be vetted by policy makers, who constitute the National Steering Committee. A more detailed description of the various national bodies and their corresponding role is described below.

## In-country TNA set-up

### 1. National Steering Committee

National Steering Committee is the key guiding body of the project. The National Steering Committee should be comprised of members responsible for policy making from all relevant ministries as well as key stakeholders from the private sector. The National Steering Committee provides political acceptance to the TNA process within a country and will be responsible for political endorsement of the Technology Action Plans. In some countries there is an existing inter-ministerial National Climate Change Committee, which could also be utilized as a steering committee for the TNA project, ensuring coherence and linkages between national climate change activities.

## *2. National TNA Team*

The National TNA Team will be the main decision making body for the project with the National TNA Coordinator acting as a focal point. The National TNA Team includes the National TNA Coordinator, the National Consultants, and the Working Groups. The National TNA coordinator will play a key role and coordinate amongst the different groups to ensure that they work together as a team.

### *2.1 National TNA Coordinator*

The appointment of the National TNA Coordinator is the responsibility of the Signing entity (responsible ministry). The National TNA Coordinator will be the focal point for the effort and manager of the overall TNA process. In view of the role of National Designated Entities (NDEs) to the UNFCCC Technology Mechanism, it is strongly recommended that countries select their NDEs as their National TNA Coordinators. This will involve providing vision and leadership for the overall effort, facilitating the tasks of communication with the National TNA Committee members, National Consultants and stakeholder groups, formation of networks, information acquisition, and coordination and communication of all work products. The leadership of the National TNA coordinator is crucial for the success of the TNA in each country. It is therefore recommended that the skill set of the TNA Coordinator include facilitation skills, project management, and some familiarity with technology aspects.

### *2.2 National Consultants/Experts*

The national consultants are national experts, selected by the national signing entity with support and guidance from the TNA National Steering Committee, the regional centres and from UDP. The consultants will work in close collaboration with the various working groups, and will report directly to the National TNA Coordinator. The national consultants' overall task is to support the entire TNA process and to prepare the analytical inputs. The national consultants will participate in capacity building workshops to be organized by UDP at regional level together with the regional centers. They will be responsible for providing process-related and technical advisory services needed for conducting TNAs and developing Technology Action Plans at the country level. The role of the national consultants will thus be to lead and undertake activities such as research, analysis and synthesis in support of the TNA process. The national consultants will assist the TNA coordinator in applying a participatory approach to the TNA process by facilitating the tasks of communication within the national TNA team, outreach to stakeholders, formation of networks, and coordination and communication of work products. The national consultants are expected to:

- facilitate the identification and prioritization of technologies for mitigation and adaptation sectors through a participatory process with a broad involvement of relevant stakeholders;
- analyze, in close collaboration with the working groups, how the prioritized technologies can be implemented in the country and how conditions for implementation can be improved by addressing the barriers and developing an enabling framework;

- elaborate on the essential elements of an enabling framework for technology transfer consisting of market development measures, institutional, regulatory and financial measures, and human and institutional capacity development requirements. This includes a detailed plan of actions in order to implement the proposed policy measures and estimate the need for external assistance to cover additional implementation costs;
- prepare the Technology Action Plans based on the previous steps.
- elaborate project concepts (one per sector).

### *2.3 Working groups*

The experts in the working groups are central to the TNA process. A network of stakeholders needs to be established to carry forward an implementation plan after completion of the TNA. Therefore, to give an active role to the stakeholders in the TNA process, constitution of these working groups is key. The working groups are in most cases established as sectoral groups, but could also be created based on technology types.

The working groups should include stakeholders from government departments with responsibility for policy formulation and regulation, private and public sector industries, electric utilities and regulators, technology suppliers, finance, technology end users (e.g., households, small business, farmers, technology experts (e.g., from universities, consultants, etc.) and others (international organizations, donors, non state actors, etc.).

### *2.4 UNFCCC Coordination support*

The national entry point for a TNA is the UNFCCC focal point office. As for TNA Phase II, TNA Phase III countries will be encouraged to nominate their TNA coordinators from the same office as the main focal points in the countries for the Technology Mechanism of the UNFCCC: the National Designated Entities (NDEs) of the CTCN. In cases where NDEs are not TNA Coordinators, they should have continuous collaboration with the TNA Coordinator and be actively involved in the TNA process through participation in meetings etc. The direct ownership of the TNA by NDEs will ensure the generation of Climate Technology Centre and Network (CTCN) technical assistance requests that support the implementation of priority actions and project ideas identified in TNA and Technology Action Plan process.

## Regional TNA support mechanism

### *Regional Centers*

To create a greater awareness about technology needs of the countries at the regional level, and to enhance capacities within the region, UDP collaborates with regional centers in each of the regions (Francophone Africa, Anglophone Africa, Asia, Asia-Pacific, Eastern Europe, and the Caribbean). The regional centers will thus play a substantial role in providing technical support to the national TNA teams. The main responsibilities of the RCs and consultants include:

- Partner with UDP in the organization and facilitation of regional training workshops where participants from countries will be trained in the methodology for conducting the TNA;
- Provide technical and process support to the countries within the region during the whole project implementation;
- Provide participating countries with support through the help desk upon request from the countries throughout project implementation;
- Review country deliverables to help improve quality of reports and compile a synthesis report.

## Global TNA support mechanism

### 1. *UNEP DTU Partnership (UDP), Executing Agency*

UDP is the Executing Agency for the project at the global level and is responsible for day-to-day management of the project, including financial management and project reporting. UDP works directly with participating countries, and facilitates the TNA process through several activities including, but not limited to:

- guidance and assistance to the participating countries to set-up institutional structures for conducting the TNA process;
- development and provision of methodologies;
- training in methodological tools and methodologies through national and regional capacity building workshops.

### 2. *UN Environment, Implementing Agency*

The project Implementing Agency is the UN Environment Climate Mitigation Unit. It is responsible to the GEF for the project's oversight, the use of resources as written in the Project Document, or any amendments agreed to it by all donors.

### 3. *UNFCCC Technology Mechanism*

UN Environment and UDP collaborate closely with the UNFCCC Secretariat's technology team and the CTCN team, and are members of the UNFCCC Technology Executive Committee (TEC) TNA Taskforce. These linkages and cooperation will continue to increase opportunities related to technical assistance, knowledge sharing and networking activities.

The two bodies of the UNFCCC Technology Mechanism, the TEC and the CTCN, will serve in an advisory role to the TNA project, since both are members of the Global TNA Project Steering Committee. Also, the TNA project will continue working closely with the CTCN in order for countries to receive support for taking their TNA results forward.

### 4. *Global level Project Steering Committee (PSC)*

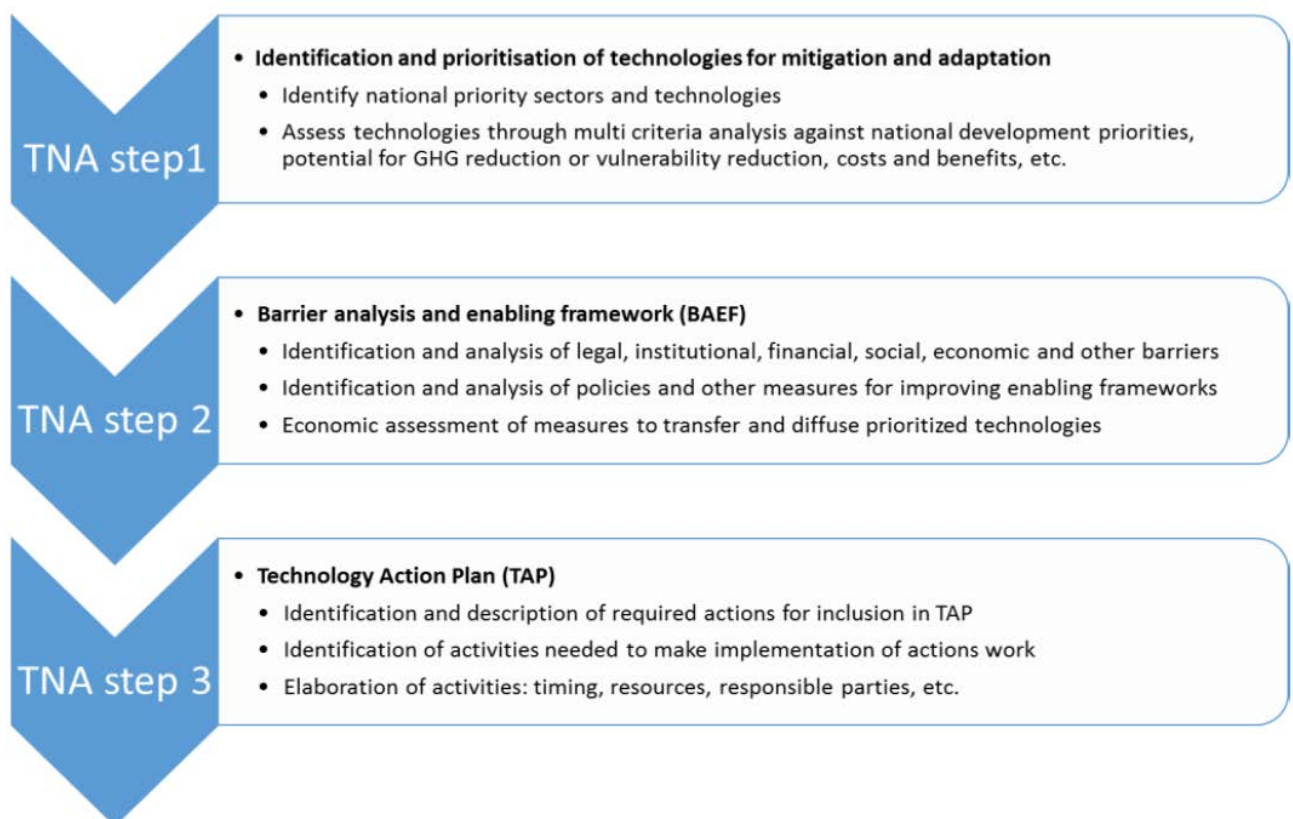
The Steering Committee plays a central role in the implementation of the project by providing strategic guidance and advice on various issues related to the implementation of the TNA project at a global

level, and suggests corrective measures or interaction with participating countries along project implementation. The Steering Committee will receive periodic reports on progress and will make recommendations to UN Environment and UDP concerning the need to revise any aspects of the implementation.

## Key steps and components of the TNA process

A TNA process is organized around three main steps and deliverables, with three main components:

1. To identify and prioritise mitigation and adaptation technologies for selected sectors;
2. To identify, analyse and address barriers hindering the deployment and diffusion of the prioritised technologies including enabling the framework for the said technologies;
3. To articulate, based on the inputs obtained from the two previous steps, a Technology Action Plan (TAP), which is a medium/long term plan for increasing the uptake of identified technologies. The plan outlines actions to be undertaken to enhance the uptake, which are further elaborated as project concept notes.

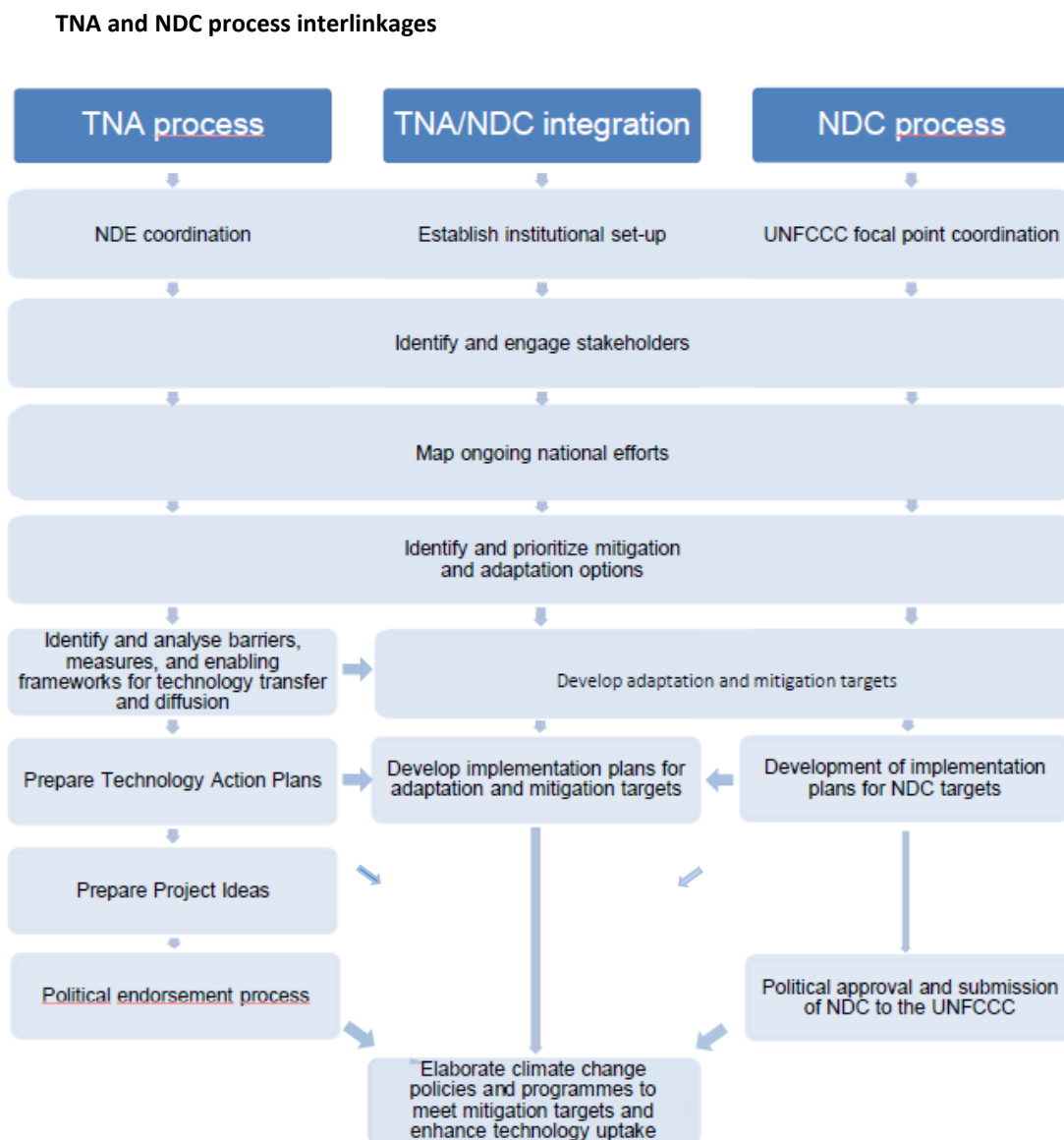


More details on the TNA approach and methodology can be found in the TNA Step-by-Step guide book available here

[http://www.tech-action.org/-/media/Sites/TNA\\_project/TNA-guide-note-Sept-2015\\_Final.ashx?la=da](http://www.tech-action.org/-/media/Sites/TNA_project/TNA-guide-note-Sept-2015_Final.ashx?la=da)

## Linking TNAs with other processes

The existing TNA methodology includes detailed identification, prioritization, and assessment of sectors, technologies and implementation measures to overcome barriers for technology development and transfer. Hence, TNAs could serve as a logical starting point for countries to prepare for NDC implementation. Linking sectors, technologies, and implementation measures across TNAs and NDCs furthermore ensures that coherent climate targets and actions are mainstreamed and embedded in national policies and frameworks.



More information on experiences on linking TNAs with NDCs can be found here:

[http://unfccc.int/ttclear/misc/\\_StaticFiles/gnwoerk\\_static/tn\\_meetings/40067a60235c4b1c9737e9abf532003a/e8a0bd09bec44237934ee7ed569b2d9d.pdf](http://unfccc.int/ttclear/misc/_StaticFiles/gnwoerk_static/tn_meetings/40067a60235c4b1c9737e9abf532003a/e8a0bd09bec44237934ee7ed569b2d9d.pdf)