Appendix 1: Terms of Reference for National Expert Consultant for Mitigation

covering i) Energy Sector, ii) Industry Sector

for Technology Needs Assessment of Myanmar

1. Background

The current Global TNA project, deriving from window (i) of the Strategic Program on Technology Transfer, is designed to support countries to carry out improved Technology Needs Assessments within the framework of the UNFCCC.

The purpose of the TNA project is to assist participant developing country Parties identify and analyse priority technology needs, which can form the basis for a portfolio of environmentally sound technology (EST) projects and programmes to facilitate the transfer of, and access to, the ESTs and know-how in the implementation of Article 4.5 of the UNFCCC Convention. Hence TNAs are central to the work of Parties to the Convention on technology transfer and present an opportunity to track an evolving need for new equipment, techniques, practical knowledge and skills, which are necessary to mitigate GHG emissions and/or reduce the vulnerability of sectors and livelihoods to the adverse impacts of climate change. The main objectives of the project are:

1. To identify and prioritize through country-driven participatory processes, technologies that can contribute to adaptation and adaptation goals of the participant countries, while meeting their national sustainable development goals and priorities (TNA).
2. To identify barriers hindering the acquisition, deployment, and diffusion of prioritized technologies.
3. To develop Technology Action Plans (TAP) specifying activities and enabling frameworks to overcome the barriers and facilitate the transfer, adoption, and diffusion of selected technologies in the participant countries.

Further, the TNA process will develop Concept Notes for attracting funding to implement selected technologies in priority areas of national relevance.

A work plan detailing the components and timeline for the TNA project is found at Annex .

To support and facilitate the TNA process, national experts are being recruited for the execution of activities in relation to climate change mitigation in Industry and Energy sectors under the direct supervision of the TNA Coordinator.

The general and key tasks of the National Consultant for mitigation action, energy and industry sectors are described follow.

2. Overall tasks

The national consultant in the Energy , Industry Sectors will work in close collaboration with the TNA Coordinator, and the national TNA team, including other experts for the TNA project. In relation to the project work plan detailed at Annex , it is expected that the project work will be completed by November 2020 . His/her overall task is to support the TNA process for mitigation in energy and industry sector, ranging from engaging with stakeholders, attending and contributing to technical meetings and develop the national TNA project reports for selected technologies in the energy and industry sector. Consistent with domestic and global objectives, the National Consultant in the energy and industry sector will be responsible for providing the national TNA teams with the process-related and methodological/technical advisory services needed for developing Technology Action Plans (TAPs) at the country level. The role of the National Consultant will thus be to lead and undertake activities such as research, analysis and synthesis for the energy and industry sector in support of the TNA exercise and in close collaboration with the TNA teams. The National Consultant will apply a participatory approach to the TNA process, involving a wide range of stakeholders while ensuring a multi-sector and multi-disciplinary scope. Moreover, the National Consultant will facilitate the tasks of communication with the national TNA team members, outreach to stakeholders, formation of networks, information acquisition, and coordination and communication of work products.

In close collaboration with the rest of the national TNA team and the TNA Coordinator and regional centre, the TNA National Consultant will be responsible for, *inter-alia*:

a) Organising consultative stakeholders meetings and workshops (inception, TNA Validation, and TAP finalisation/validation).
b) Participate in 3 regional training workshops organised by UDP and Regional Centres and obtain training in TNA process and methodologies for conducting the TNA.
c) Build the capacity of sectoral experts and stakeholders in the TNA process and methodologies.
d) identification and prioritization of technologies for the energy and industry sector through a participatory process with a broad involvement of relevant stakeholders, including;
    (i) identification and link-up with relevant stakeholders and facilitation of the sector working groups to be set-up,

(ii) identification of institutions for data and other support, and
(iii) collecting, analysing and synthesising information and data to prepare concept notes (technology fact sheets) for the sector.

e) leading the process of analysing with the stakeholder groups how the prioritized technologies can be implemented in the country and how implementation circumstances could be improved by addressing the barriers and developing an enabling framework based, *inter-alia*, on undertaking of local market and other assessments, as may be required;

f) Prepare and finalize the TNA, BAEF and TAP reports, with project ideas, and advocacy and policy briefs, and with inputs of stakeholders included.
(i) Prepare working papers and other TNA-related documents as may be required to ease the consultative process and harnessing inputs from stakeholders during meetings, workshops, amongst others.

g) Provision of any other inputs, as may be required, relevant to related part of the TNA process and output targeted as may be requested by the TNA Coordinator, the UNEP DTU Partnership (UDP), Regional Centres and the national TNA team.

The National Consultant will be required to use best practices, guidelines, methodologies and technical guidance available through the UDP and other approved sources.

The following table provides an overview of the key tasks to be conducted by the Consultant.

3. Specific tasks

	Tasks	Deliverables	Timeframe	Additional remarks
1.	**Identify priority technologies for mitigation** Review of existing document at the national level (NDC, sectoral policies, National Communications, first TNA, etc.) In close collaboration with the TNA Co-ordinator, and the other TNA consultants, the National Consultant will support and facilitate: • working groups consisting of technical experts and practitioners within each of these sectors. • through a participatory process, the identification of relevant technologies.(between 8 and 12 technologies) • based on a multi-criteria analysis, the prioritization of the selected technologies.	Portfolio of technologies for the sector	As per work plan	Detailed methodological guidelines for prioritizing technologies will be provided at a regional capacity building workshop.
2.	**Prepare report on priority technologies (TNA report)** • Prepare TNA report, which will be validated by TNA coordinator and TNA team through workshops, and the TNA Steering Committee.	TNA report, containing prioritized list of technologies and describing the process followed, water and agriculture sectors respectively.		Outline for TNA report to be provided by UDP.

3.	**Conduct barrier analysis and prepare Enabling Frame work for the deployment and diffusion of prioritized technologies.** Conduct: 1. Analysis of market and barriers for development, deployment and diffusion of priority technologies for the technologies chosen for mitigation , energy and industry sector 2. identify measures to overcome barriers 3. Propose Enabling Framework to overcome barriers identified for the chosen technologies.	Report on Barrier Analysis and Enabling Frameworks for development for the deployment and diffusion of priority technologies in the sector		TNA National Consultants will participate in a regional TNA capacity building workshop on barrier analysis and Enabling framework development.
4.	**Prepare a Technology Action Plan (TAP)** In collaboration with TNA Coordinator, TNA team and stakeholders , the National Consultant (energy and industry sector)will: • Develop technology action plan for deployment and diffusion of prioritised technologies in the country. • Propose project/programme concepts based on priority technologies selected for future funding.	Technology Action Plan based on format agreed for the project, water and agriculture sectors respectively.		Template for the TAP will be shared by UDP at the regional capacity building workshop.

5.	**Support development of sector advocacy and policy briefs (one per sector) and organise dissemination event** Based on the work previously delivered in the TNA project, • The National Consultant will prepare a targeted sector brief, support its dissemination and present it in a national TNA dissemination and donor engagement event organised by the National TNA coordinator.			

4. Support documents

Process related :

- Organising the National Technology Needs Assessment (TNA) Process
- Multi-criteria analysis guide notes, mitigation and adaptation
- Overcoming Barriers to Transfer and Diffusion of Climate Technologies
- Guidance for preparing a Technology Action Plan
- Presentations provided at capacity building workshops

Technology related

- Technology guidebooks from UDP
- Climate tech wiki (Online Technology database)
- TNA Technology factsheet database
- CTCN website

Other documents

- Report of past TNA, National communications, sectoral Policies, Strategies and Action Plans, nationally-relevant management plans, etc..

5. Qualifications

a) The National Consultant should possess at least a postgraduate degree in a relevant field for the tasks

b) The National Consultant should possess at least 3-5 years of work experience in the energy and industry sector or related fields.

6. Profile and Skills

The national Consultant should have applied knowledge in energy and industry sector related technologies in the context of the country. He/She should have extensive knowledge of - and experience with - climate change mitigation strategies, technologies and policies at the national level. More specifically he/she should be familiar with national development objectives and energy and industry sector sector policies ,have overall insights in climate change science, and potential climate change impacts, as well as mitigation needs for the country in the energy and industry sector sector. Moreover, the National Consultant should have good coordination and facilitation skills, and possess proven analytical capabilities, as well as excellent writing skills.

7. Working Agreement

The National Consultant would be recruited on a part-time basis. He/She would be required to be available for the timely delivery of milestones relevant to the specified tasks over the duration of

the project, as required by the TNA Coordinator. In order to facilitate good interaction between TNA Coordinator and the consultant office space at no cost would be provided with the office of Environmental Conservation Department.

8. Budget

The project has a budget of USD 46,000 for in country work. The costs for participation in the 3 regional training workshops (outside Myanmar) will be borne by UDP. The bidder should provide a budget in the budget template (Annex 2).

9. Payment

Payment of fees will be based on the approval of following deliverables.

a) TNA Report
b) Barrier Analysis and Enabling Framework report
c) TAP Report
d) Policy briefs

All the deliverables will be reviewed by UDP and the Regional Centre and the final document would be routed through the TNA Coordinator for payment.

10. Selection Process and selection criteria

The selection process will be carried out UDP with the assistance of the TNA Coordinator. The selection will be based on criteria such as relevant qualifications, experiences, skills, contributions on climate change mitigation, national and international development objectives and sector policies, and understanding of the methodological approach to the assignment. Lastly, the National Consultant needs to have a good understanding of local context and well established networks in the country.

11. Language

All working papers, draft reports and Final Report should be prepared and submitted in soft copies in English Language.

12. Intellectual Property Rights

All information, results and products, whether tangible or intangible, resulting from the project will be considered as the property of Environmental Conservation Department, Ministry of Natural Resource and Environmental Conservation and UDP. The National Consultants will be duly acknowledged within the reports for their contribution.

13. Time for completion

The assignment will commence from Feb 2019 and will end in Oct 2020.