

## Terms of Reference for Consultancy

### *Update of Low Emission Development Strategy for the Transport Sector (2016) and preparation of roadmap and action plan for implementation.*

#### 1. Introduction

The Paris Agreement requires all parties to submit an updated NDC periodically with increasing ambition and in 2020 parties are to submit their updated and enhanced NDCs for the period 2025-2030. The COP26 has been postponed to 2021, however, it is expected that the NDCs would be submitted as per the deadline to the extent possible.

The Kingdom of Bhutan submitted its Intended Nationally Determined Contributions (INDC) that was rated as sufficient towards the Paris Agreement goals in 2015. Bhutan reiterated the pledge to remain carbon neutral that was first made in 2009 at the Copenhagen Climate Summit. Bhutan is now in the process of preparing its second NDC and several rounds of consultations at various levels has been conducted, including a stock take and gap assessment. In the past few years a few sectoral Low Emission Development Strategies (LEDS) including one for the Transport Sector (2016) and other elaboration of climate change actions in the form of programs and projects were also prepared.

The transport sector is a significant source of GHG emissions in Bhutan and also a sector with significant climate change mitigation potential. According to the draft Third National GHG inventory, emissions from the energy sector in Bhutan was 707.9 Gg of CO<sub>2</sub> and accounted for 18.87% of national emissions. Within this sector, the major source of emission is from fuel combustion in transport sector accounting to 60.01% of energy emissions. Several studies on the possibility of Bhutan remaining carbon neutral (NEC & NIES, Draft 2017 and Gomi et.al 2019) identify transport a significant sector for future emissions and mitigation potential. In particular Gomi et. al project that primary energy demand is projected to increase by 5 times by 2050 and is mainly driven by oil for transport with most transport emissions coming from freight and commercial transport.

The LEDS for Transport Sector 2016 identified and prioritized several program/activity interventions across six areas (*mass transit, integration of transport and structural planning, electric/hybrid vehicles, intelligent transport systems, non-motorized transport, and stringent vehicle emission standards*). The strategy also identified institutional roles and responsibilities along with an implementation timeline for the short (up to five years), medium to long term (up to 25 years). Since then, several projects for low emission transport in Bhutan have also been initiated for mass transport (City Bus Services and BRT in Thimphu) to promotion of electric vehicles.

However, during the initial phase of preparing the 2<sup>nd</sup> NDC for Bhutan in the first half of 2020 it was found that the several activities are being pursued for implementation in the transport sector by various agencies in an almost *ad hoc* manner without a cohesive or comprehensive national approach. Part of the reason for this has been the multitude of players in the sector with overlapping interests and mandates. This has resulted in a gap in identifying clear national actions and targets from the sector in the 2<sup>nd</sup> NDC despite opportunities for integrated climate change actions. The first phase of the Climate Support program to prepare the 2<sup>nd</sup> NDC recommended the preparation of a *National Roadmap and Action Plan for Low Carbon Transport and Mobility* to improve the *coherence for enhanced transport and mobility*. Subsequent consultations with the sector re-confirmed the need for a holistic roadmap for transport and mobility, including the need to clarify and strengthen institutional roles to lead the process.

With about 40% of the population of Bhutan living in urban areas and with one of the highest rates of urbanization in Asia and rapid growth in vehicle ownership, there exists numerous opportunities

to improve “sustainable mobility for all”. The current exercise to develop an economic roadmap for Bhutan in the 21<sup>st</sup> century and the COVID-19 pandemic and plans around the world for recovery and re-building economies, also provide opportunities for integrating green and sustainable recovery, build-back better and requirements for social distancing and climate benefits in new public infrastructure investments.

In addition, cross-cutting issues need to be integrated into the LEDS such as integration of gender issues as identified in the report on Gender and Climate Change in Bhutan (2020) where specific recommendations in agriculture, energy (including transport) and waste sectors were identified.

Towards this objective of updating the LEDS for Transport Sector 2016 a consultancy will be recruited.

## **2. Main Task of Consultants**

The objective of this consultancy is to update the Low Emission Development Strategy for Transport Sector 2016 including a roadmap and action plan for implementation. The main tasks for the international consultant(s) include:

1. Review and assess the 3<sup>rd</sup> National GHG Inventory, as a basis for climate change mitigation assessments and projections for the transport sector in Bhutan and provide any recommendations for updates to the inventory and improvements in GHG data collection, tools, and reporting for the transport sector. This review should also look at the separation of international and domestic aviation emissions.
2. Updating the Low Emission Development Strategy for Transport Sector 2016 as a holistic and integrated approach for implementing actions towards sustainable and low emission transport and mobility in Bhutan in the following manner.
  - The starting point for the document will be the Low Emission Development Strategy for Transport Sector 2016. Developments and updates since 2016, including the draft National Transport Policy, Climate Change Policy of Bhutan, national vehicle emission standards and action plan, ongoing projects for mass transport and electric cars among others plans and programs will be reviewed as a basis for updates.
  - Fill any gaps and/or elaborate actions necessary for low emission sustainable transport and mobility. Actions are to be prioritized based on techno-economic feasibility, mitigation potentials and cost benefits analysis.
  - Prepare a detailed action plan for implementation in the short, medium- and long-term with clear roles and responsibilities of actors, including the identification on one overall lead agency.
  - The minimum elements to be covered in the document is included in Annex I.
3. Conduct a training session on GHG inventory and mitigation assessment for transport and mobility as part of the consultation and sectoral data review process. The sessions may be used as part of online workshops for mitigation assessment and prioritization.
4. Lead consultation workshops with sectoral experts and stakeholders to identify and prioritize mitigation actions and development of an implementation plan.
5. Present finding and drafts to the focal agencies and stakeholders.

### 3. Timeline and duration.

The engagement will be for 40 days staggered from mid-November 2020 to January 2021 as per the anticipated timeline and workplan below:

	Activity	# days (estimate)	Month 1		Month 2				Month 3			
			Wk 3	Wk 4	Wk 1	Wk 2	Wk 3	Wk 4	Wk 1	Wk 2	Wk 3	Wk 4
1	Desk review (relevant national priorities, plans, programs and reports)	5 days	V/D									
2	Inception meeting w/ national stakeholders & submission of inception report	2 day		V/D								
3	Consultations with sector task force and stakeholders & data analysis. (online workshops & meetings - one initial meeting with full team, - meetings with subgroups as necessary - one final meeting with full team)	11 days		V	V	V						
4	Training on GHG inventory & mitigation assessment as part of the consultation and sectoral data review process. (online workshop)	5 days			V/D							
5	Data analysis, review & drafting	11 days										
6	Presentation of draft and review by task force (presentation + follow up)	2 days							V/D			
7	Revision of final draft	3 day										
8	Final draft presentation	1 day									V/D	

V = video conference D = deliverables M = mission (if possible for #3, #4, #6 & #8)

### 4. Deliverables

- a) Inception report detailing methodology and workplan including task assignments to individual experts.
- b) Training Report for GHG inventory and mitigation assessment for transport sector.
- c) Report on review of the sections relevant for transport sector within the National GHG inventory including recommendations for updates and improvement in data collection and reporting for Monitoring Reporting and Verification (MRV) for the LEDS implementation.
- d) Final draft document for the updated *Low Emission Development Strategy for Transport Sector* in Bhutan including *Road Map and Action Plan for Implementation*. See **Annex I** for elements to be included in the document.

## 5. Institutional Arrangements

- a) *A consultancy firm will be recruited by United Nations Development Program-Bhutan (UNDP) for this task. While it is expected that most of the work for this task will be carried out remotely (home based) due to travel restrictions under the current pandemic the firm shall ensure that at least one expert is based in Bhutan.*
- b) The consultants will report directly to UNDP and Ministry of Information and Communication (MOIC). UNDP and MOIC shall liaise with the National Environment Commission Secretariat (NECS) for guidance and further endorsement of any document.
- c) The *lead consultants shall* lead the development of the document including the training, technical assessments and consultations as described in the above sections and liaise closely with the locally based expert.
- d) *One expert is expected to be located in Bhutan and* will function to liaise and coordinate closely with the international consultant(s) to (i) assist and facilitate consultations with key national stakeholders in the country (ii) collect information and documents as necessary and (iii) also review the information and reports prepared by the international consultant(s) to provide proper local and national context and relevance.

## 6. Station

Given the current restrictions on travel presented by the CoVID-19 Pandemic, it is anticipated that most of the work of the international consultants will be conducted remotely (home based). This working arrangement will include regular video conferencing with lead focal persons from UNDP, NEC and MOIC, the Sectoral Task Force members and other stakeholder representatives. UNDP-Bhutan will arrange and provide online meeting facility through Zoom teleconferencing.

If the situation evolves and so permits, at least one visit to Bhutan may be necessary to validate national and local circumstances and relevance of information and recommendations.

The locally based expert will be stationed in Thimphu, Bhutan

## 7. Payment Modality

<b>Payment</b>	<b>Milestones &amp; Deliverables</b>
1 <sup>st</sup> Payment – 20%	Contract signing and inception report submission
2 <sup>nd</sup> Payment – 30%	GHG inventory and mitigation assessment training workshop completed. Submission of report on training and consultation workshops including recommendations for improvements in data collection.
3 <sup>rd</sup> payment – 30%	Submission of 2 <sup>nd</sup> draft report
4 <sup>th</sup> payment – 20%	Submission of final draft document and upon acceptance by UNDP & MOIC

## **8. Qualifications**

The individual expert(s) assigned to the task shall be identified and must meet the following requirements:

- The individual expert(s) assigned to this task will hold an advanced degree in field of transport planning/engineering, environmental/civil engineering, energy systems or related field.
- The assigned expert(s) must have at least 10 years of working experience on climate change mitigation issues, ideally in developing country and LDC context.
- At least one of the assigned experts must have at least 10 years of demonstrated experience in sectoral mitigation assessment including in (i) baseline and mitigation scenario development as well as experience in prioritizing mitigation options (ii) measuring and evaluating the impact of mitigation actions on sustainable development and (iii) Sectoral Marginal Abatement Cost Curves (MACCs) that incorporate multi-criteria (cost-benefit) analysis.
- Demonstrated experience in drafting Low Emission Strategies, particularly for transport and mobility, and preferably in the region.
- At least one of the experts assigned to the task will be based in Bhutan and should have demonstrated knowledge and experience with transport issues in Bhutan.
- The experts assigned should have familiarity with international negotiations and processes under the UNFCCC and working experience in developing countries.
- Strong communication, written and presentation skills in English is a must.

## **9. Evaluation Criteria for Selection :**

The consultant who fulfills the requirements will be assessed based on a combined scoring of:

- Technical evaluation 70%.
- Financial evaluation 30%.

## **Annex I:**

### ***Indicative outline for an updated Low Emission Development Strategy for the Transport Sector***

The final document should include at a minimum the following elements:

- a) An Introduction including overview of relevant policies and programs and institutions and rationale.
- b) Mitigation scenarios (BAU and different emission scenarios) for the sector. The methodologies used to project emissions as well as mitigation assessment must be described.
- c) Identified priority actions based on techno-economic feasibility, mitigation potentials and financial costs and benefits. The approach and criteria leading to the selection of actions should be described. The assessment should consider and prioritize actions for sustainable and low emission transport and mobility in Bhutan and should cover a wide range of options. The objective is to provide global and local benefits by:
  - i. reducing GHG emissions, local pollution and congestion
  - ii. providing wider range of options for sustainable mobility for people and goods transport
- d) The roadmap and action plan (including indicative financing requirements for the prioritized mitigation interventions) will build on existing policies and strategies such as the LEDS for Transport Sector 2016, the National Transport Policy, Climate change Policy of Bhutan, Transport 2040 Integrated Strategic Vision, national vehicle emission standards and action plan, relevant ongoing programs and projects, among others. Therefore, the options should fill any gaps and/or elaborate actions necessary for low emission sustainable transport and mobility. Some of the actions to be considered, but not limited to, include:
  - *mass transit such as intra and inter-city buses, BRT, rails, trams (with priority for clean energy source)*
  - *integration of transport and structural planning for mobility and access –*
  - *electric/hybrid or other zero/low emission vehicles*
  - *intelligent transport systems for traffic management*
  - *smart transport and new mobility (ride share, rentals)*
  - *non-motorized transport (including pedal assist bicycles)*
  - *stringent vehicle emission standards (type & tailpipe)*
  - *efficient freight and commercial transport systems*
- e) Identify and integrate any potential synergies with:
  - Crosscutting issues and potential for synergies with other sectors and key stakeholder agencies. One of the key sectors is human settlements where the “*Comprehensive National Development Plan 2030*” has been completed and the LEDS for Human Settlements 2017 (concurrently being revised).
  - Opportunities for integration with any post CoVID-19 recovery programs and the 21<sup>st</sup> Century Roadmap (being prepared as part of a separate process).
  - Synergies with climate resilience and ongoing co-benefits with adaptation programs such as the National Adaptation Plan.
  - Integration of findings and recommendations for integration of gender issues as identified in the report on Gender and Climate Change in Bhutan (2020).
  - Integration of accessibility for differently abled persons (See the Guidelines for Disabled Friendly Construction 2019, MOWHS)

- f) A detailed implementation plan and strategy including, suitable measures for financing (including international), policy measures, further research and capacity building requirements and institutional arrangements. The time frame should cover priority actions in short, medium and long term from 2020-2050.
  
- g) Institutional arrangements for implementation. Identify key agencies and stakeholder agencies and groups, along with issues related to institutional overlaps. Recommend a clear lead agency to lead the implementation of the roadmap and action plan, along with roles and responsibilities for other agencies and stakeholders.

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