**Bhutan Sustainable Low-emission Urban Transport Systems**

**Midterm Review Report**

**Executive Summary**

The Bhutan Sustainable Low-emission Urban transport Systems (UNDP-GEF) project has an objective to facilitate low-carbon transition in the Bhutan’s urban transport sector by promoting wider uptake of low emission vehicles (LEVs), in particular electric vehicles (EVs), as the preferred fuel source for transport in Bhutan. The project has three main components, 1. Policy support for low-emission transport; 2. Awareness and capacity development; and, 3. Investment in low-emission transport systems and support services.

Ministry of Information and Communications (MoIC) is the implementing partner (IP). UNDP is the primary provider of oversight services, guidance, and backstopping and also provides technical inputs. There is a full-time project management unit (PMU) for the project staffed with Project Manager, Project Support Officer and a Project Administrator. The project is implemented for a period of 3 years starting from September 2019 and is 12 months away from completion. The total project cost is USD 12,957,726; the GEF financing is USD 2,639,726 and the Government support is USD 10,318,000.

**Relevance:** The GHG emissions from the transport sector are projected to 660,000 tCO2 in 2030[[1]](#footnote-1). Electric Vehicles are high priority for RGoB. Besides that, safe, reliable, comfortable and environmentally friendly transportation system are enshrined in Bhutan’s Vision 2020, a 20-year strategy for national development. The Bhutan Sustainable Low-emission Urban transport Systems project is aligned with RGoB’s efforts to reduce fossil fuel imports and GHG emissions from transport sector. The project ensures relevance by introducing EVs in Bhutan’s taxi segment which is expected to then penetrate other segments as well. Additionally, the project also strives to support low emission transport policies and capacity development of various stakeholders.

**Progress:** The project has undertaken significant activities resulting in a favorable environment for electric vehicles in Bhutan. The project is on course for many of its indicators related to policy and regulatory support. Limited progress is seen with activities related to awareness and capacity development and deployment of EVs. One of the reasons for delay is attributed to the COVID 19 pandemic, but these can be easily overcome by implementing the recommendations provided in this MTR. By mid-term 100 EV taxis were targeted to be deployed and even though 128 taxis have already been sanctioned by the project, the pandemic has delayed the delivery and hence deployment of the EVs. Few trainings and awareness activities were undertaken by the project, but additional efforts are required with respect to awareness and knowledge transfer on EVs, specifically on training of taxi drivers on technical, safety and financial aspects of EVs and training of public transport policy makers & transport staff/officials. The project should closely monitor the progress in the next six months as well as the COVID 19 situation and based on the position in March 2021 an extension of 12 or 18 months beyond the current end date of September 2021 can be considered. If the project is able to achieve most of its targets it will be a pioneer project likely to shape the LEV journey in Bhutan.

**Expenditure:** At the time of MTR the budget of USD 1,422,716 out of the USD 2,639,725 GEF contribution (~54%) has been spent. Additionally, USD 2,718,475 has been spent which includes USD 2,946,159 from the Government out of the USD 10,318,000 allotted for the project and 2,435,190 from project partners.

**Notable Achievements:** There are a number of achievements for the project. A few notable achievements are: 1) RMA, the central bank, approved 70% loan ratio for procurement of EVs from FIs from September 2019 in while it is only 30% for ICE vehicles and loan tenure increased from 5 years to 7 years; 2) A number of awareness and training workshops have been conducted for the benefit of the taxi drivers and government officials due to which there is knowledge of EV in the Bhutanese society; 3) The project has sanctioned/disbursed EV subsidy for 128 beneficiaries for 122 male drivers and 6 female drivers; 4) 65 more applicants have been shortlisted to receive subsidy under the project.

**Challenges:** The project faces a few challenges given the current situation of COVID-19 pandemic and evolving landscape of EV technology.

* There has been a significant delay in the delivery of the electric vehicles due the ongoing COVID-19 Pandemic. As a result, only 2 EVs have out of the 128 sanctioned have been deployed. It is expected that the remaining EVs should be delivered by end of December 2020.
* The project has undertaken quite a few awareness and capacity building activities which includes awareness workshops for stakeholder’s study visits to Korea, India etc. However, a sustainable approach is lacking to ensure capacity building of the stakeholders i.e. for the taxi drivers and government officials. The project is in the process of developing a curriculum in collaboration with Ministry of Labour and Human Resources however, the challenge is compounded by the pandemic and the training program activities have been deferred.
* The project has successfully created a Project Board and Technical Working Group for the project oversight. However, there is currently no systematic coordination for the broader theme of sustainable mobility to ensure collaboration between government, donor agencies, development partners and other stakeholders.
* There are concerns amongst the banking community with respect to the ability of taxi drivers to pay back the loan. One of the reasons is the adverse impact of the pandemic on the tourism industry and its direct correlation with the taxi business.
* The project has lost considerable amount of time due to the COVID-19 pandemic and the project is only 12 months away from its end date. This has left the project with very little time to complete all the planned activities under the project.
* The PMU currently has one Project Manager, Project Support Officer and a Project Administrator. Though the PMU is doing excellent work, human capacity augmentation is necessary to complete the project in a timely manner.
* Under the current practice no financial commitment is sought from the shortlisted taxi drivers for booking the EV. This could escalate in a situation where the taxi drivers withdraw their commitment after the EVs are delivered under the project.

**Ratings:** The project has the potential to make a major impact in Bhutan’s sustainable transport ecosystem and achieve highly satisfactory ratings across all components if the MTR recommendations can be adopted and implemented. In sum, despite the challenges mostly from the COVID-19 pandemic can be overcome to achieve the objectives of the project. The specific ratings are: Project objective - Moderately Satisfactory; Component 1 – Satisfactory; Component 2 – Moderately Satisfactory; and Component 3 - Satisfactory. The indicators which are a cause of concern are: Number of public transport policy makers and transport staff and officials trained; Share of taxi drivers willing to switch to EV; Number of taxi drivers benefitting from training and information about technical, safety and financial aspects of LEV ownership; and Number of new EV purchases enabled by the project. From a sustainability point of view MTR team does not see any major sustainability risks to the project and has been rated Moderately Likely (ML) which is moderate risks, but expectations that at least some outcomes will be sustained due to the progress towards results on outcomes at the Midterm Review

**Recommendations:** A summary of recommendations for the project are:

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| R1 | **Identify the training need of transport policy maker and transport staff/officials, create a well-defined training programme for officials and identify the officials to be trained.** *Justification:* The project has to train 100 (50 female) officials from the transport sector. The activities to meet this indicator have been ad hoc in nature. For example, International EV Technology conference & ASEAN EV summit 2019, Study visit to Delhi, India for carry out comparative rates assessment for EV charging stations. The current strategy for training which relays on study tours and conferences/expos is non-sustainable as the knowledge gained through these activities is either lost or compartmentalized. Additionally, moving forward, study tours and/or expos visits may not be possible due to travel restrictions as a result of COVID 19 pandemic. A more sustainable approach would be to develop a training programme/curriculum covering different aspects of EV ecosystem relevant to transport staff/officials and train officials similar to the one being developed for taxi drivers with support from MoLHR. The project can also identify relevant webinars on low emission transport offered by different multilateral agencies and leading universities around the word and explore participation of officials and policy makers. Responsible Party: PMU and MoIC |
| R2 | **Create a coordination committee for sustainable urban mobility constituting of representatives from key government agencies and donor agencies active in Bhutan.***Justification:* In outcome 2 the first indicator is coordination mechanism between government and donor agencies. The indicator is very specific and clear and has been included in an effort to institutionalize low emission transport in Bhutan. However, no such effort has been made under the project. The current project activities have been limited to creating PB, TWG and coordination with taxi drivers and car dealers. The activities have been very restrictive and limited to the project. In an effort to create a mechanism which is sustainable and effective well beyond the project timelines the project needs to create systematic collaboration between government and activate donor agencies in Bhutan. The PMU with support from UNDP & MoIC should develop a strategy to create such a mechanism. The strategy could be as simple as defining a mission and vision statement for this committee and identifying representatives of the relevant government agencies and donor agencies operating in the low emission transport space and bringing them together on one platform. This committee can then meet regularly to identify the gap, overlaps and issues in the sector and work in collaboration to resolve them. This type of mechanism will also help in streamlining the efforts of different entities, create a symbiotic relationship between agencies and help avoid duplication of efforts and redundancy.Responsible Party: PMU and MOIC.  |
| R3 | **Ensure the perception survey conducted towards the end of the project records the willingness of taxi drivers to switch to EV cars.** *Justification:* The measure of the achievement of the indicator under component 2, “Share of taxi drivers willing to switch to EV” will be done through a perception survey towards the end of the project. The first perception survey was conducted at the beginning of the project and the survey covered entire demographic of Bhutan.It is understood that in the second perception survey taxi drivers will be covered but the project should ensure that a separate section is dedicated to taxi drivers in the perception survey which will help in easily measuring the end of project indicator value. The project can also carry out regular assessment for this indicator at end of each training session organized for the taxi drivers. This information can be used as complimentary to the perception survey. Responsible Party: PMU and UNDP |
| R4 | **Strategize and include innovation in training and information on technical, safety and financial aspects of LEV for taxi drivers.** *Justification:* Under the component 2 the indicator target is 200 taxi drivers (all women drivers - 35 women) at midterm and 1000 taxi drivers (35 women) at end of the project) Though the project has taken considerable efforts the project has not been able to achieve significant numbers with respect to training taxi drivers. So far, the trainings have been restricted to advocacy workshops and study tours. The project is currently developing curriculum for training taxi drivers with support from MoLHR. However, due to the COVID 19 pandemic there have been some delays as well as lack of clarity on how to take up these trainings. The MTR team did not get a chance to review the work in progress/draft curriculum developed but assumes it includes important technical, safety and financial aspects of EVs. For example, the dos & don’ts in case of a fire in an electric vehicle are completely different from a conventional ICE vehicle. The precautions necessary for a long battery (major cost component of EV) life is vital from a taxi drivers’ perspective as the EV is his main source of income.The project should create a specific plan and schedule for training of remaining taxi drivers. The project is also advised to explore avenues for conducting online training session and encourage participation of taxi drivers in webinars as classroom trainings, study tours may not be possible due to the ongoing COVID-19 pandemic. This approach would be more sustainable and could be extended to other EV owners as and when required. Additionally, the project can also involve automobile workshop owners/ mechanics and energy sector adequately for workshops, trainings and discussions on the project.Responsible Party: PMU |
| R5 | **Reconnecting with FIs/banks, bankers, insurance companies and taxi association to ensure their participation in the project.***Justification:* The Royal Monetary Authority of Bhutan (RMA) RMA during its 151st Board meeting held on 17th September 2019 accorded up to 70% loan approved for the purchase of EV. The loan tenure for EV has been increased from 5 years to 7 years. These have been some positive financial arrangements for EVs.Even though these financial policies and regulations are in place there might be issues with their compliance as these are only the ceilings applicable for loan approvals by FIs. During the stakeholder consultations with the taxi association it was pointed out that they are not happy with the current electric vehicle loan policies of banks. The banks seem to have various requirements and criteria for EVs and not following as per RMA directives- in terms of repayment period (not 7 years, but 5 years), amount calculation (only 70% after reduction of subsidy amount, not on total cost of car), and requirement of collateral etc.Similarly, during the interview with FIs the banks expressed their concerns with respect to taxi driver’s ability to pay back the loan and hence have put in place extra collaterals for EVs. The FIs expressed the need for a sit down with the project and taxi association to bring more clarity to the issue. They also gave good inputs which could be adopted to resolve the current situation. Cars are expected to arrive soon in Bhutan. Therefore, it is highly recommended for the PMU to coordinate a meeting between the RMA, banks, insurance companies and Taxi Association. The key issues to be highlighted during the meeting are;1. PMU to present the benefits and risks of EV taxis to stakeholders formally with proper figures and examples of pay-back, benefit to country etc.,
2. Propose various mechanisms to reduce the risk of EV taxi loans such as insurance schemes, group loans or government support,
3. Discuss on the issues of insurance claim clarity with the insurance companies, and
4. Come up with a mutually beneficial and amicable loan plan for EV taxi drivers with 1-2 of the banks without further delay.

Responsible Party: PMU and MOIC |
| R6 | **The project is advised to apply for an extension.***Justification:*The project end date is September 2021; the project is left with only 12 months. Due to the COVID-19 pandemic considerable time has been lost and since the pandemic situation is evolving there is little clarity on when the situation will return to normal. The project is adapting to the situation however there have been delays in majority of the activities. The pandemic has not only resulted in delays in the project activities but also in the way people and business operate now. With respect to the project activities the pandemic has impacted the delivery of the EVs which has resulted in only 2 EVs plying on the roads instead of 100; and delays in training and awareness activities; a total of 5 indicators have been impacted. The project is recommended to apply for an extension. The project can assess the situation around March 2021 and based on the progress can decide if a 12 month or an 18-month extension is necessary. The project should apply for extension 6 months prior to close of the project which is on or before March 2021.Responsible Party: UNDP |
| R7 | **Enhance the capacity of the Project Management Unit (PMU)***Justification:*The PMU has been very proactive in implementation of the project. However, the MTR team recognizes the current limited human capital in the PMU especially the technical knowledge required for training and capacity building of the stakeholders.The capacity limitation was also highlighted by Secretary MoIC during the MTR mission. Hence it is advisable to recruit a communication expert/s to support the PMU in preparation of training/advocacy materials and conduct trainings/ awareness etc. The technical person can be hired by UNDP for this project or an expert from RSTA can be taken on secondment for the period of the project. Responsible Party: UNDP |
| R8 | **Ensure commitment from taxi drivers and prepare a backup plan to ensure deployment of EVs.***Justification:*Under the current practice, selected taxi drivers can book and secure the EVs without any financial commitment. The MTR team is of the view that this could transpire into a situation where the EVs are delivered and the taxi drivers may refuse to receive the vehicles later. To mitigate this risk going forward a small down payment (5%-10%) should be made by the taxi drivers. Additionally, due to the COVID-19 pandemic and related issues, the taxi business, like many other businesses (tourism), does not look promising for a considerable period in the near future. Subsequently there is a huge risk that there may not be adequate EV taxi applicants seeking project support. Therefore, the PMU and PB will have to be vigilant and may have to carry out necessary strategic alignment to the project activities. One of the possible solutions is providing subsidy to private cars for personal use or utility services, on-line shops, but reducing subsidy amount (~10%). With this, more EV cars could be purchased that may eventually lead to equivalent GHG reduction. Responsible Party: PMU |
| R9 | **Other critical recommendations based on stakeholder consultations**1. In August 2020, the PMU had just moved from MOIC to PMO. In the immediate term, this is an excellent move and would give the project much attention and drive. Nevertheless, for the long term, the EV and LEV transport sector should have a focal office and dedicated officers. For this an institutional review of MOIC or RSTA is required and an office for low emission/ alternative fuels transport highly recommended to be set up immediately.
2. A feasibility study to explore possibility of manufacturing EV components using local resources to make Bhutan a player in the EV industry could be commissioned as part of the project.
3. Look into possibility for more enhanced trainings and TOT programs for TTIs with possibility of procuring a training EV model- either a real demo or an old EV car or 3D training kit for EVs to start working on the training programs
4. The budget savings in some activities, could be re-allocated for procurement of 2-3 EVs or rental of 2-3 existing EV taxis through the project for PMU, MOIC, RSTA or DTE/MOLHR for advocacy, demonstration and training purpose. The activities that has some savings are: Activity 1.1.3; Activity 1.3.2; Activity 1.3.3; Activity 2.3.1; Activity 3.1.2; and, Project Assistant based in MOIC that adds to around US$87,000.
5. Review the need to have charging station at both Tachhogang and chumzom which are less than 10km apart and maybe explore setting up one at Menchhuna/ Lumitsawa on the way to Wangdue from Thimphu,
6. Bilateral discussion with insurance companies on EV Car Accident recovery and also on business loan for EV taxis besides Accident insurance.
7. Study on TOP system for Taxis and viability of ensuring all new Taxis to be EVs henceforth
8. Initiate a feasibility study of coming up with a scrapping policy for old polluting cars to ensure a level playing field for EVs.
9. Study and propose taxation policy for PHEVs and HEVs depending on their performance to promote LEVs in addition to EVs.

Responsible Party: PMU and MOIC |

1. Bhutan Vehicle Emission Reduction Road Map and Strategy, 2017–2025, ADB BRIEFs, ADB, July 2019 [↑](#footnote-ref-1)