Project Title: Bhutan Sustainable Low-emission Urban Transport Systems
GEF Project ID: 9367
UNDP PIMS ID: 5563

TE Timeframe:

Region and Countries: Bhutan

GEF Period and Focal areas: GEF-6 / Climate Change Mitigation

GEF Agency: United Nations Development Programme (UNDP)

Implementing Agencies: Ministry of Information and Communications (MoIC)

Terminal Evaluation report

JULY 2022

Prepared by:

Prof. Aurelian Mbzibain (International Consultant, Team Leader)
Tashi Pem (National Consultant)

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Special thanks to all partners and stakeholders for their commitment and overwhelming contribution and support throughout the project phases including the terminal evaluation. We hope that this report will inform the design and implementation of subsequent projects in Bhutan and beyond.

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ACRONYMS AND ABBREVIATIONS

AGM	Accountability and Grievance redress Mechanism
AWP	Annual Workplan
BICMA	Bhutan Information Communication and Media Authority
BoB	Bank of Bhutan
BPC	Bhutan Power Corporation Ltd.
BTFEC	Bhutan Trust Fund for Environment Conservation
CSR	Corporate Social Responsibility
DAT	Disability Awareness Training
DET	Disability Equality Training
DPA	Disabled People's Association
EDP	Economic Development Plan
EMI	Equated Monthly Instalment
EMI	Equated Monthly Payment
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
GAP	Gender Action Plan
GEF	Global Environment Facility
GHG	Greenhouse Gas
GNHC	Gross National Happiness Commission
ICE	Internal Combustion Engine
LEV	Low Emission Vehicle
M&E	Monitoring and Evaluation
MoEA	Ministry of Economic Affairs
MoF	Ministry of Finance
MoIC	Ministry of Information and Communications
MoLHR	Ministry of Labor and Human Resources
MTR	Mid Term Review
NCGS	National Credit Guarantee Scheme
NDC	Nationally Determined Contribution
NEC	National Environment Commission
NEX	National Execution Manual
NPL	Non-Performing Loan
PB	Project Board
PIR	Project Implementation Reports
PM	Project Manager
PMO	Prime Minister's Office
PMU	Project Management Unit
PWD	People with Disability
RGoB	Royal Government of Bhutan
RICB	Royal Insurance Corporation of Bhutan
RMA	Royal Monetary Authority
RSTA	Road Safety and Transport Authority
SESP	Social and Environmental Screening Procedure
SLEUTS	Sustainable Low-emission Urban Transport Systems
SMART	Specific, Measurable, Achievable, Relevant, Time-bound
TE	Terminal Evaluation
TTI	Technical Training Institute
TVET	Technical and Vocational Education Training

TWG	Technical Working Group
UNDP	United Nations Development Programme
UNDP CO	United Nations Development Programme Country Office
UNFCCC	United Nations Framework Convention on Climate Change

EXECUTIVE SUMMARY

UNDP-GEF project summary information

Project Name	Bhutan Sustainable Low-emission Urban Transport Systems
Project Type	Full Sized Project
Funding Source	GEF
GEF Project ID	9367
UNDP Project ID	5563
Country	Bhutan
Region	South Asia
GEF Period	GEF-6
GEF Focal Area / Strategic Program	Climate Change Mitigation / CCM-2 Program 3
ProDoc Signature date	28/09/2018
GEF Agency	UNDP
Executing Agency	The Ministry of Information and Communication (MoIC)
GEF total grant	US$ 2,639,726
GEF grant utilized	US$ 2,586,726
Expected Co-financing	US$ 10,318,000
Co-financing total realized	US$ 21,997,553.8
Implementation timeframe	September 2018 – September 2022
Project website	www.cabinet.gov.bt
Project objective	To facilitate the initial stage of low-carbon transition in the Bhutan's urban transport system by promoting wider uptake of low emission vehicles (LEVs), with a particular focus on electric vehicles (EVs) and taxi sector.
Terminal Evaluation timeframe	05/20/2022 – 07/30/2022
Evaluation team	Prof Aurelian Mbzibain, Team Leader Tashi Pem, National Consultant

Project description

The project "Bhutan Sustainable Low-emission Urban Transport Systems (SLEUTS) – (PIMS 5563)" is financed by Global Environment Facility (GEF) and was implemented from September 2018 to September 2022. The Implementing Partner for the Project is the Ministry of Information and Communications (MoIC), which has the governmental mandate to promote low emissions and efficient transportation system in Bhutan. The project was later brought under the direct supervision of the Prime Minister's Office (PMO) to enhance delivery of its objectives. The project's goal is it to contribute to the key objectives of the 2017 Draft National Transport Policy of Bhutan which includes; promoting development of alternative and energy efficient transportation modes for both passengers and freight transport; establishing an eco-system to promote sustainable and inclusive transportation services which is safe, reliable, accessible and affordable for all; and contributing to the goal of remaining carbon neutral at all times. The SLEUTS project was implemented through three main components:

- Policy support for low-emission transport;
- Awareness and capacity development; and
- Investment supported for low-emission transport system and other services.

Evaluation ratings table

The table below summarizes the project ratings.

Area	Rating
Quality of Monitoring and Evaluation (M&E) system	
M&E design at entry	**Highly Satisfactory**
M&E Plan Implementation	**Highly Satisfactory**
Overall Quality of M&E	**Highly Satisfactory**
Implementation and Execution	
Quality of UNDP Implementation/Oversight	**Highly Satisfactory**
Quality of Implementing Partner Execution	**Highly Satisfactory**
Overall quality of Implementation/Execution	**Highly Satisfactory**
Assessment of Outcomes	
Effectiveness	**Satisfactory**
Relevance	**Highly Satisfactory**
Efficiency	**Satisfactory**
Overall Project Outcome Rating	**Satisfactory**
Sustainability	
Financial resources	**Moderately Likely**
Socio-political/economic	**Moderately Likely**
Institutional framework and governance	**Moderately Likely**
Environmental	**Moderately Likely**
Overall Likelihood of Sustainability	**Moderately Likely**
Overall Project Rating	**Satisfactory**

Summary of findings, conclusions and lessons learned

Project design/formulation

All the project objective and outcome indicators were found to be compliant to the time-bound and measurable criteria. Overall, majority of the project indicators (seven) were SMART compliant while several other indicators were not fully compliant to one or more of the SMART criteria. During the project design, a total of five risks were identified and mitigating measures were proposed accordingly. The identified risks were assessed during the project implementation period and new risks were identified as they emerged. An important new risk identified during the project period is related to the outbreak of the COVID-19 pandemic which delayed some activities of the project.

National actors were consulted as part of the project design to solicit their views and feedback on the project interventions. A stakeholder engagement plan was elaborated which included a total of 15 stakeholder groups/institutions alongside proposed methods of their engagement

within project implementation. The project is found to be linked with other initiative in the country such as the Bhutan Green Transport Project implemented with support from the World Bank.

Project Implementation

Adaptive management

The COVID-19 pandemic presented significant challenges to project delivery as delays in the implementation of some activities were recorded following lockdowns and other precautionary measures introduced in the country. The project team responded accordingly through the introduction of adaptive management measures including the implementation of project activities virtually. Also, UNDP was able to secure a one-year extension for the project to catch up with the time lost as a result of the pandemic. Government support was provided to ensure the procurement and delivery of the EVs as well as the introduction of financial measures working with the Bank of Bhutan Ltd to facilitate access to loans and liquidity by local car dealers.

Project finance and co-finance

The project was financed by GEF to the tune of USD 2,639,726 with a planned co-financing of USD 10,318,000 from the government. The project attained a co-financing of USD 21,998,398.8 mobilized from the public and private sectors, corresponding to 213% achievement of the planned co-financing. The amount of co-financing from the government is USD 14,507,818.4, representing 140% achievement of the committed co-financing demonstrating significant ownership and appropriation of the project by government and private sector.

Monitoring and evaluation

The overall rating of the M&E is **Highly Satisfactory**. M&E implementation occurred as per the designed system and the TE respondents from UNDP and the Project Management Unit (PMU) believed the budget allocated for M&E implementation was sufficient. The project had a well-designed M&E plan which guided the M&E activities of the project. Data collected as part of the M&E process was reported in the quarterly and annual project reports and where relevant, reported data was disaggregated by gender. Both M&E design and implementation were rated as **Highly Satisfactory**.

Project implementation and execution

Overall project implementation and execution is rated as **Highly Satisfactory**

UNDP implementation oversight: this is rated as **Highly Satisfactory.** UNDP provided oversight and supervision during project implementation. UNDP assumed the role of the technical and financial reporting of the project to GEF and equally supported delivery of the project by providing adaptive management measures especially during the era of the COVID-19. Its comparative advantage and ability to leverage new partnerships was demonstrated for instance with mobilisation of resources from the Government of Japan.

Implementing partner execution: MoIC assumed the role of the implementing entity of the project until August 2020 when this responsibility was shifted to the PMO in order to achieve enhanced delivery of the project objectives. A Project Board that served as a governance body was established within the framework of the project. This body met at least twice annually to monitor project progress and provide orientation/recommendations for enhanced delivery of the project. A technical committee comprising of experts from different ministries was equally established under the project for the provision of technical support and advice to the project.

Project results

Outcomes

Achievement of outcomes is rated **Satisfactory**. This rating considers the outcome achievements at terminal evaluation against its expected targets. To reach this Satisfactory rating, the project outcomes were assessed and rated on three dimensions: Relevance, Efficiency, and Effectiveness, and the ratings are provided below:

- *Relevance is rated Highly Satisfactory* because the project design and the results are in alignment with the country's national priorities. The project supports the commitment of Bhutan to reduce reliance on fossil fuel import and to attain carbon neutrality in line with its Nationally Determined Contributions under the Paris Climate Agreement.

- *Effectiveness* is rated *Satisfactory*.

At TE, 75% of the outcome 1 indicator targets were achieved while the rate of achievement for those of outcomes 2 and 3 were at 66% each. The remaining targets are however on-track to be achieved by the end of the project period. The project intended to address three key challenges and barriers linked to the promotion of EVs and their uptake in Bhutan: the lack of an enabling policy and regulatory environment for EVs, misperceptions and low level of technical knowledge amongst market/sector stakeholders, and high upfront costs and limited infrastructure for deployment.

The barrier pertaining to the lack of regulatory framework and enabling policies for LEVs in Bhutan was addressed by the project through the adoption of a national target for LEV, establishment of EV enabling policies such as zero import duty and sales tax on EVs and increase in the loan for the purchase of EVs from 30% to 70% and a suite of other policy instruments. Based on the stated expected results, the TE team concludes that a favourable policy and regulatory environment for LEVs has been established to address the barriers identified.

The high-upfront cost barrier for LEVs adoption was addressed through the provision of subsidies for the purchase of EVs demonstrating that specific financial support interventions can address financial barriers to EV adoption. It is important to note that this was piloted amongst the qualifying taxi drivers and as such this barrier will remain beyond the EOP in the absence of a follow-on subsidy mechanism.

The low level of stakeholders' technical knowledge, misperceptions and negative attitudes against EV was addressed through capacity building initiatives delivered faced to face and online due to the Covid 19 pandemic reaching 924 of the target 1000 stakeholders. While respondents in the evaluation reported improved knowledge and awareness, a planned end of project perception survey is expected to provide evidence of the effective level of improvement in knowledge and awareness achieved compared with the baseline[1]. This survey will provide evidence on the level of removal of constraints and the outstanding issues that could be addressed beyond the initial project period.

[1]Based on the project team/prodoc, activity 2.1.4, this will be an analogous awareness/perception survey conducted following the same survey techniques and methodology as the baseline survey. The purpose is to monitor, assess and report on the achieved results and their effectiveness in terms of changes in perception and attitudes as well as identify remaining capacity and knowledge gaps were additional awareness/capacity needs could be provided post project.

At the level of the specific objective, the Greenhouse gas emissions reductions target will not be achieved by the end of the project due to most EVs only delivered towards the end of 2021 and 2022 given the impact of the Covid 19 pandemic on global supply chains. The two other indicators linked to numbers of citizens using EVs for transport and the mobilization of financial resources for EV promotion were significantly overachieved (217% and 213% respectively).

- *Efficiency* is rated *Satisfactory*. The project was well resourced in terms of administrative, governance structure and the project management unit. The team demonstrated its ability to leverage external resources and consultants to support project delivery although this was in some cases not possible due to COVID- 19. The project faced significant challenges with the COVID- 19 pandemic in terms of the ordering, procurement and delivery of EV vehicles and the delivery of capacity strengthening and awareness raising activities which led to the project being extended for a year. Despite this challenge, project resources were efficiently utilized to achieve targets and to ensure that results are on track to be achieved by the end of the project.

Country ownership

Country ownership of the project was strengthened through the engagement and consultation of national stakeholders in the design and implementation of the project. The project also witnessed the participation of policymakers in some of its activities relating to the crafting of policy and regulatory frameworks for the promotion of low-emission transport technologies in Bhutan. The adoption of a whole of government approach under the leadership of the PMO was a key success factor of this project which also translated to the mobilisation of necessary co-funding for the project.

Gender

Gender mainstreaming is rated **Highly Satisfactory**. Gender-related issues received close attention right from the project design stage including the formulation of the Gender Action Plan (GAP) to address various gaps that were identified. During the implementation of the project, keen attention has been given to support participation of men and women and also to mainstream gender aspects in the project activities. The project contributed to economic and socio cultural empowerment through facilitating access to productive resources such as credit and subsidies to women to access EVs, while strengthening their self-image and status. The M&E process equally tracked the participation of women in the project activities and statistics were regularly disaggregated by gender in the quarterly Reports and Project Implementation Reports.

Other Cross-cutting Issues

Disability: The project design did not have any deliberate attempts to consult and meaningfully involve people with disabilities in the project planning and design. Meaningful and effective participation of people with disability (PWD) both in the project design as well as implementation would have led to a more inclusive transport sector development. However, it came out from stakeholder consultations that, imported EVs within the framework of the project had high safety standards with potential to offer more comfortable and a safer ride to PWD.

Knowledge management: this was considered in the project design and was constantly tracked during the project implementation period. Most of the training and awareness programs were

however either cancelled or moved to an online platform due to the COVID-19 restrictions. The project generated several knowledge management products.

Social and Environmental Standards
The environmental and social safeguard rating is **Highly Satisfactory.** Social and environmental considerations were considered right from the design phase of the project using the UNDP Social and Environmental Screening Procedure (SESP). From the screening, three risks were identified including: improper management of EV battery disposal; inappropriate site selection of charging stations without due environment consideration; and the lack of equal opportunity for women in the transportation sector. For each identified risk, mitigative measures were proposed. During project implementation, the SESP was reviewed over time at address the emergence and impact of the Covid 19 pandemic in 2019. The project risk framework was updated accordingly in 2020 and mitigation measures introduced including provision of online trainings, stronger coordination between government and EV suppliers and provision of financial incentives to overcome cashflow barriers amongst suppliers amongst others.

The project had in place an accountability and grievance readdress mechanism (GRM) designed to identify and address grievances raised by project stakeholders. The phone numbers of the PMU staff were widely circulated to the stakeholders so that they can reach them directly by phone. On average, the PMU receives around 30 calls and messages in a day seeking their support. The AGM is rated **Highly Satisfactory.**

Sustainability
Project Sustainability is rated **Moderately Likely.**
The key risks that may affect the continuation of benefits after the project ends are summarized below:

Financial risks: lack of future funding and loan repayment were identified risks. The upfront cost of EVs is high and they will remain unaffordable (for some time) to average Bhutanese lest they are provided with subsidies. The project had a catalytic objective and attempted addressing the high upfront cost of EVs through the provision of subsidy to a targeted number of qualifying taxi drivers. Scaling up of the experience depends on future available subsidies, market development, reduction in costs of EVs and increased affordability of the vehicles. This effectively means that the up front cost barrier has not been fully addressed. Pertaining to loan repayment, COVID-19 related lockdowns/restrictions will negatively affect the abilities of the EV taxi drivers to comply with the payment of their car loans. When financial sustainability is considered specific to the EV taxis, the project's financial risk is rated as **Moderately unlikely in the absence of a follow on project for taxi drivers**. However, when considered regarding the development of the wider EV sector, sustainability is assessed as **moderately likely**. This is because the ongoing feasibility studies for the Bhutan Green Transport Project (BGTP) geared toward providing reliable, safe, and green transportation by the World Bank could lead to a new support programme for the sector. This is in addition to ongoing actions by the PMU/UNDP with UNIDO and Japanese funding providing additional support for further development of the wider EV sector.

Socio-economic risks: COVID-19 emerged as a socio-economic risk to the sustainability of the project. In the events of lockdowns, the EV taxi drivers will be unable to work and this will affect their ability to comply with their Equated Monthly Payment (EMI). Also, if number of EV cars on the road does not increase beyond 300, there is the risk that car dealerships will not

maintain EV spare part inventories due to limited demand. The socio-economic risk is rated as **Moderately Likely**.

Institutional framework and governance risk: after project closure, there is a risk that taxi drivers will have nowhere to take their EV related problems to as the PMU would have been dissolved. Also, there is risk of inadequate maintenance of the established charging stations following the completion of the project. The institutional framework and governance risk is rated as **Moderately Likely**.

Environmental risk: there is the risk of e-waste contaminating the environment due to their poor management and disposal. The environmental risk is rated as **Moderately Likely**.

Progress to impact
The project has contributed towards the creation of an enabling environment for low-emission urban transportation in Bhutan. It promoted the use of EVs in Bhutan's taxi sector which generates emission reductions compared to the baseline. The global rising fuel prices caused by the Russia-Ukraine conflict has further strengthened the project's relevance and potential impacts. The project enabled EV drivers to offer competitive rates to passengers compared to their counterparts who operate internal combustion engines. The result is an increased income of EV taxi drivers as increased passengers are exhibiting preference for EV taxis.

Lessons Learned

The ownership and leadership of local and national government authorities – a whole of government approach
The project demonstrates the importance of local and national government/authorities buy in and ownership in the delivery of such high innovation, high risk and high value project. The Royal Government of Bhutan was able to use all levers of government in developing the policy framework and facilitating the financial framework required for delivery. The strategic positioning of the PMU within the PMO sent a strong message about the commitment and ownership of government. The government was pragmatic and demonstrated strong willingness to engage with a wide range of stakeholders to ensure the success of the project. The importance of ownership and government commitment was demonstrated in overcoming the procurement and supply chain issues brought about by COVID- 19 pandemic working across government. As most respondents acknowledged, this project would have failed without this intervention. The decision by H.E Prime Minister to take part in this evaluation is further evidence of the high-level support for the success of this project which is fully aligned with the government's vision and ambition for EV expansion in the country and for becoming an active player in the global EV supply chain. Local authorities were involved throughout which ensured that local charging stations and related infrastructure was installed. The continuous operation and security of the stations depends on strong local support from authorities.

The private sector can play a key role in achieving the country's climate change goals
The private sector injected the match funding while car dealers mobilised resources and engaged in CSR activities supporting the delivery of the project. Even though the loan repayment rate in the taxi sector is low, banks provided much needed support with the backing of government and national guarantee scheme. While the project can be seen as a pilot, the support of private sector provides the framework for scalability. There is demand for this project to be expanded to other target sectors such as government fleet and public transport amongst others. The GEF project provided the start-up capital for this initiative working

together with government. In the long run, private sector can play a more substantial role and hence contribute towards the achievement of government development and climate goals. One of the crucial co-benefits from this action would be a reduction in the country's trade deficit as Bhutan spends around Nu. 8.34 billion (USD 106.92 million[2]) annually on the import of fossil fuels[3]. Based on an analysis carried out by the evaluators, the savings in terms of fuel import by the EVs that are currently plying the road up until June 2022 works out to over Nu. 9 million (USD 115,384.62). Alternatively, the amount spent for charging these EVs for the same duration works out to Nu. 213,165 (USD 2,732.89) which translates to 98% cost saving in fuel[4].

Awareness raising and capacity strengthening crucial to strengthen the adoption of new technologies and innovations

The project was able to bring innovation by working on the factors facilitating or constraining the adoption of EVs. The project carried out awareness raising and advocacy actions to enhance interest and adoption of EVs. A combination of approaches was adopted including the use of social media and messaging applications. By adopting a bottom-up approach, the project ensured that taxi drivers were regularly informed and updated on progress. The social media tools applied ensured that the project listened and responded in real time to concerns while providing necessary assurances to taxi drivers in case of problems. Developing the educational and cognitive environment of the project proved successful through training, training of trainers and working with TTIs to develop an EV curriculum.

Multipronged approach to delivery

The project adopted an evidence-based approach to decision making. For instance, implementation of feasibility studies, production of technical specificities drawing on world class experiences and research to inform the design and implementation of charging stations, identification of EV specifications amongst others. Obviously as an innovative project, initial focus included working with international consultants, but as progress was achieved in project delivery, the development of national capacity was also prioritised. Adopting a multi-pronged approach to supporting the roll out of innovations enhanced adoption with consequent positive efforts for sustainability.

An ecosystem approach is required

This project also highlights the need for an ecosystems approach to the promotion of EVs. The key is not only to focus on the importation of cars, but also strengthen the policy environment and local infrastructure for its expansion. Developing local capacity for operations and maintenance while building trust with the private sector and banks is critical. Further, it is also important to constantly ensure that the citizens understand the merit of the action to bring them along through adoption of EVs or green e-mobility. This obviously requires a long-term perspective as opposed to a projectized approach. The development of the EV Roadmap; revision of building codes to integrate home charging facilities; introduction of green number plates for EVs; facilitating access to credit etc. are all aspects of the country's institutional environment for effective EV deployment. Signaling and modelling also emerged as a key factor with the Project Manager and UNDP staff using EVs themselves to promote the new technology. The issuance of directives regarding the renewal of government fleet with EVs is another relevant piece but must be monitored to ensure compliance.

[2] Exchange Rate: USD 1 = Nu. 78

[3] Bhutan Trade Statistics 2021

[4] The total km covered by 133 EVs until June 2022 is 2,319,897 km. The assumption used are as follows: ICE vehicle milage = 24.34km/l (Wagon R); EV average km for full charge = 350km; and electricity tariff of Nu. 2.68/unit

UNDP comparative advantage and convening power
GEF catalytic funding has enabled the government to deliver on this project. Project respondents were unanimous that the introduction of subsidies to taxi drivers was the key tipping factor considering the prices of EVs. Considering the sustainability of this project is moderately likely, the benefits of this funding are likely to be felt for decades. The effectiveness of this support required an organisation like UNDP with the global comparative advantage to deliver. It showed great ability to work with government and drew from its global network of experts and knowledge base to support the PMU and government. Its neutrality and convening partner ensured that it was listened to by government and other national stakeholders.

Awareness and Training on Inclusive Public Transport Service
The early inclusion of people with disability (PWD) in the project design could led to a more inclusive development of public transport sector. While there was no deliberate attempt at including the needs of PWD in the project design, the PMU in coordination with the UNDP has organized a one day training in July 2022 on disability equality training (DET). Trainings on the needs and challenges of PWDs should be incorporated right from the planning stage for future projects through delivery of DETs and disability awareness trainings (DATs) to the stakeholders to achieve inclusive transportation sector development.

Recommendations

NO.	FINDING/CHALLENGE	RECOMMENDATIONS
	Operation and maintenance of EVs and associated infrastructures	
1.	Inadequate capacities in the country for operation and maintenance of EVs and associated infrastructures such as charging stations. The charging stations are out of order most of the time.	Platforms and opportunities for knowledge-sharing and lessons learned should be established. Such forums would provide an opportunity for different stakeholders including but not limited to the Charging Station Operators, Car Dealers, Bhutan Power Corporation Ltd, PMU, and the EV drivers, to come together and resolve any issues and clarify doubts about the future sustainability of the project achievement. The RoGB and UNDP should create this platform prior to project closure and designate a unit within MoIC that will oversee the functionality of the platform beyond the life of the project. **Responsibility**: RGoB **Timeline**: By project closure
2.		The capacity of BPC should be strengthened on the maintenance of charging stations to ensure that these are functional at all times. The PMU and UNDP should identify key staff within BPC who are less likely to be influenced by staff turnover and capacitate them with the necessary skills required for the maintenance of charging stations. These staff should be trained as trainers so that they could in turn train other staff of BPC. In addition, the training should be accompanied by the provision of manuals/materials for charging stations' maintenance

NO.	FINDING/CHALLENGE	RECOMMENDATIONS
		which the staff can always make reference to in case of need. **Responsibility**: RGoB and UNDP **Timeline**: By the end of the first quarter of 2023
3.		Capacity building opportunities for PMU and the lead government agency responsible for EV promotion to keep abreast of changing technologies and assessing policies options that will be needed to ensure that EV import and the battery end-of-life treatment to contributes towards sustainability and the ultimate objective of CO2 emissions reductions. **Responsibility:** RGoB and UNDP **Timeline**: By end of the first quarter of 2023
4.		Prior to project closure, the project should work with the RGoB to explore options and devise strategies necessary after the life of the SLEUTS project for the enhancement of the supply and availability of EVs alongside accompanying support facilities including inter alia, repair and maintenance of charging stations, supply, recycling and disposal of battery. **Responsibility:** RGoB and UNDP **Timeline**: Before project closure
5.	Limited evidence at TE of actual change in attitudes, perceptions, knowledge and awareness on EVs by stakeholders	Carry out the proposed perception survey in line with outcome 2. The purpose will be to monitor, assess and report on the achieved results and their effectiveness in terms of changes in perception and attitudes as well as identify remaining capacity and knowledge gaps where additional awareness/capacity needs could be provided post project. A control group methodology with beneficiaries and non-beneficiaries of the project will provide insights into the project's contributions. **Responsibility:** PMU **Timeline:** Before project closure
6.	Failure to achieve GHG emissions reductions target by end of the project	The project should ensure that the 300 EVs are fully delivered by end of project to selected taxi drivers. While this will not immediately address the gap in terms of the GHG ER target by EOP, the objective will rather be achieved over time through direct and indirect ERs. Future projects to scale up the initiative through provision of

NO.	FINDING/CHALLENGE	RECOMMENDATIONS
		additional taxis to individuals on the current waiting lists could further the GHG ER targets **Responsibility:** RGoB/UNDP **Timeline:** Before project closure
	Sustainability – clarifying institutional ownership and agency in charge after project ends	
7.	Taxi drivers expressed concerns that after the project ends, they are not sure on the institution they could go to when they have issues.	A dedicated agency should be given the mandate for EVs in Bhutan. In this way, project beneficiaries will know exactly where to report their issues to after the life of the project. The RGoB should designate a government agency/institution that will have the mandate over EVs in the country. **Responsibility**: PMU/PMO **Timeline**: Before the end of the project (September 2022)
8.	Lack of policy prescription on recycling of batteries.	While battery recycling has been studied, no policy directives exist. There is need for the government to develop a policy directive on the recycling of spent batteries in the long run. The project should support the government to initiate the process elaborating a recycling policy directive for used batteries. An immediate step could entail setting up a task force prior to project closure for the elaboration of the policy directive. **Responsibility**: RGoB **Timeline**: By the end of 2023
9.	Lack of a clearly defined exit strategy for the project and concerns from stakeholders about continuity.	The government should work towards a second phase of the SLEUTS Project to build on its specific achievements and enable more uptake of EVs. This will enable the country not only to secure gains particularly in terms of the financing/subsidy model for EVs, but also upscale to other areas such as public transport while continuing to strengthen the national EV ecosystem. An immediate action will entail the government working with UNDP for the elaboration of a second phase of the project targeting an eligible climate financier such as the Green Climate Fund and GEF. Part of the exit strategy would include a future long term impact evaluation to assess the economic viability of the financial model developed and pilot tested by this project. **Responsibility**: RGoB and UNDP **Timeline**: By the end of 2023
	Charging stations	

NO.	FINDING/CHALLENGE	RECOMMENDATIONS
10.	Inadequate amount of charging stations. This increases the wait times for EV taxi drivers to charge their cars	There is need for the network of charging stations to be strengthened especially in areas with high number of EVs. This will translate into shorter wait times for taxi drivers who can spend more time working. Prior to project closure, the project should work with the RGoB to explore options and devise strategies that will ensure expansion of network of charging stations after the life of the SLEUTS project. Responsibility: RGoB **Timeline**: By the end of 2023

1. INTRODUCTION

The project "Bhutan Sustainable Low-emission Urban Transport Systems (SLEUTS) – (PIMS 5563)" is financed by the Global Environment Facility (GEF). The cost of the project is US$ 12,957,726, of which a GEF allocation of US$ 2,639,726 and a co-financing of US$ 10,318,000 from Royal Government of Bhutan (RGoB) and other partners. The project document official signing was on the 28th of September 2018 for a period of three years with an initial end date of September 2021. The effective start date was the 30th of October 2019. The midterm review of the project was completed on the 15th of September 2020. With the advent of the COVID-19 pandemic and reasonable delays, a one-year extension was granted for a final end date of the 28th of September 2022.

The project is nationally executed in accordance with the National Execution (NEX) Manual agreed between the UNDP and the RGoB. The Implementing Partner for the Project is the Ministry of Information and Communication (MoIC), which has the governmental mandate to promote low emissions and efficient transportation system in Bhutan. The project has now been brought under the direct supervision of the Prime Minister's Office (PMO) to enhance delivery and achievement of its objectives.

1.1. Purpose and objective of the TE

The TE assessed the achievement of project results against expected objectives and generated lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. The TE report promotes accountability and transparency and assesses the extent of project accomplishments. The TE is part of UNDP Bhutan Country Office Evaluation Plan (2019-2023).

More specifically, the TE:

- Assessed to what extent the SLEUTS Project has contributed to address the needs and problems identified during project design, i.e., to remove barriers to low-carbon transition in Bhutan's urban transport sector and in the wider uptake of low emission vehicles (LEVs);
- Assessed how effectively the project has achieved its stated development objective or purpose;
- Measured how efficiently the outcomes were realized, and outputs delivered in attaining the development objective/purpose of the project;
- Assessed both negative and positive factors that have hampered and facilitated, respectively the progress in achieving the project outcomes, including external factors/environment, weakness in design, management and resource allocation;
- Assessed the extent to which the application of the rights-based approach and gender mainstreaming are integrated within the planning and implementation of the project;
- Identified and documented substantive lessons learned, good practices and also opportunities for scaling up in future;
- Provided forward-looking programming recommendations for the project and the relevant portfolio of UNDP.

1.2.Scope of the TE

This TE assessed the relevance, effectiveness, efficiency, factors affecting project performance and cross-cutting dimensions – considerations such as gender, indigenous and minority issues,

human rights; social and environmental safeguards applied to the project. The TE placed particular emphasis on the findings and recommendations provided in the Mid Term Evaluation as a relevant starting point for assessing the project's achievements. In delivering on the assignment, the team followed GEF guidelines in terms of ranking the performance of key criteria: 1) Relevance; 2) Effectiveness; 3) Efficiency; 4) Sustainability; 5) Factors affecting performance. The team also assessed the relevant cross cutting issues such as risks and social and environmental safeguards (6), gender (7), progress towards impact (8), and capacity strengthening (9) but these were not scored/ranked in line with GEF evaluation guidelines.

1.3. Methodology

The evaluation team employed a three-phase review: (i) Inception phase, (ii) data collection and analysis phase and (iii) close out phase. The final review report was submitted at the end of the close out phase.

A. Inception phase

The objective of this phase was to gain common understanding between the project stakeholders and the evaluation team on the objectives and scope of the assignment. This phase started with an initial meeting on the 25th of May 2022, which brought together the Evaluation Manager, project manager, member of project support team and two TE consultants to exchange ideas, relevant documentation, and reach agreement on initial timelines. Two further meetings were held on the 7th and 9th of June 2022 which enabled the project team to present the inception report and approach to update the TE team on the overall progress of the project. Following these, the inception report, data collection tools, evaluation matrix, field visit plan and evaluation stakeholders were agreed.

B. Data collection and analysis phase

This phase represented the core of the assignment. The evaluation team adopted a mix method/approach comprising secondary data analysis, qualitative and quantitative data collection and analysis.

Desk review, research and analysis:

Initial documentary review commenced at inception and continued as additional information became available. The list of documents reviewed is provided in Annex D.

Primary data collection:

Primary data collection took place through a quantitative and qualitative approach. Regarding the quantitative approach, the consultants reviewed the secondary data provided to assess progress in line with the results framework. The approach entailed comparing reported achievements against project baselines and working out the level of achievement of the project indicators, outputs, and outcomes. Quantitative data were also collected through the semi-structured interviews.

Regarding qualitative approach, the TE team collected data through virtual/in-person interviews with identified project partners and stakeholders presented in Annex C. The instruments employed in the data collection are presented in Annex G.

Data analysis

We used Microsoft Excel to analyse quantitative data derived from the semi-structured questionnaires. This was presented in the form of tables and graphs. We used NVIVO 12 to analyse qualitative data collected through interviews and focus group discussions with stakeholders. By using a combination of secondary and primary data sources, we ensured triangulation of findings which enabled the team to present the results and formulate relevant conclusions.

C.  ***Close out phase***

An interim draft was elaborated and submitted to UNDP following data analysis and write up phase. Comments from the draft report from UNDP and relevant stakeholders were addressed and a revised document presented to the client.

1.4.Limitations to the evaluation

The main limitation of this evaluation was the time allocated for the exercise. This meant that the data collection phase of the evaluation had to be very much shortened to meet the tight schedule for delivery. The number of people taking part in the evaluation was consequently also limited as well as the sites that could be reached within reasonable distance. However, care was taken to ensure that the main stakeholder groups were involved. All stakeholders approved at inception were effectively available and took part in the evaluation. The project evaluation team also benefitted from the insights of the His Excellency the Prime Minister of Bhutan providing additional assurances in terms of government commitment, ownership, and viability of the project.

Other potential limitations due to approach (qualitative versus quantitative) were also mitigated through a mixed methods approach and triangulation of findings from secondary data analysis, focus group discussions and individual interviews with key informants.

Further, due to the COVID-19 restrictions the international consultant could not travel to Bhutan. As such, all the field data collection and stakeholder consultations were carried out by the national consultant. However, in order to maintain the quality of the evaluation, the international and national consultant maintained a constant line of communication using virtual platforms throughout the TE process.

1.5.Structure of the TE report

This TE report comprises of four (04) main sections. Section 1 provides an introduction to the terminal evaluation. Section 2 provides a description of the SLEUTS project while section 3 presents the results of the TE. In its section 4, the conclusion, recommendations and lessons learnt are presented.

2. PROJECT DESCRIPTION

2.1.Project start and duration

The project received the GEF CEO endorsement on 23rd July 2018 for a period of three (03) years[5]. The project was subsequently signed between UNDP CO, the MoIC and the GNHC on September 28, 2018, constituting the official start date of the project[6]. The project inception meeting took place on October 30, 2018 in Thimphu. The project's original closing date was September 2021 but a one-year no-cost extension was secured, extending the project closing date to September 2022.

2.2.Development context

2.2.1. Environmental

A direct outcome of the growth of traffic in Bhutan is increased greenhouse gas emissions (GHG) due to the high reliance of the transport sector on fossil fuels. The energy sector accounts for the second largest share of emissions after agriculture, with transport accounting for 45% of energy-related emissions and 8% of the nation's total GHG emissions in 2008[7]. The emissions from the transport sector are projected to more than double from their 2005 value of 177,000 tCO_2 to 376,000 tCO_2 in 2020, and then subsequently decreasing to 348,000 tCO_2 by 2040 based on the assumption that the need for transport services will stabilize, leading to saturation of the market for vehicles[8].

Air pollution also constitutes an environmental challenge faced by Bhutan, especially in the urban areas. Emissions of Particulate Matter (PM10) for instance have been on the rise, with a six-fold increase been recorded between 2006 and 2011. In some instances, the concentration of PM10 exceeded the maximum permissible (75 $\mu g/m^3$) level for sensitive areas such as schools and hospitals. While the emission of PM10 emanates from different sources such as building construction and usage of fuelwood for cooking, road transport is likely a major contributor.

The Royal Government of Bhutan (RGoB) recognizes the importance of addressing and curtailing the rapid growth in the consumption of fossil fuel and GHG emissions from the transport sector, and enhancing the quality and accessibility of transport services to the population. As a consequence, the government lays significant emphasis to advance sustainable low-emission transport systems in its key strategic and programmatic documents and plans in line with the "Avoid-Shift-Improve (ASI)" approach.

2.2.2. Socio-economic

The nation's population is estimated at 757,979 inhabitants, although with a relatively small population, the country is faced with the challenge of increasing rural-urban migration[9]. For instance, the population in residing in urban areas in Bhutan doubled between 2000 and 2015, with the capital city Thimphu having recorded a higher population expansion. The country's capital is projected to witness a doubling of its population from 122,242 by 2043. This rise in urban population culminates in larger cities, triggering an increase in urban mobility demand leading to an alarming growth rate of private vehicles.

[5] ProDoc
[6] Project inception meeting report
[7] Bhutan's second national communication to the UNFCCC (2011)
[8] ProDoc
[9] ProDoc

Consequently, the increasing number of cars in the country especially in Thimphu is posing several traffic-related challenges for the nation, including traffic congestion, reduced road safety, growing distance travelled, social exclusion and inefficient land use, local air pollution and negative health impacts. Moreover, the transport sector of Bhutan is heavily reliant on fossil fuel imports and consequently, the growth in private internal combustion engines (ICE) vehicles has culminated in an increase in the importation of petroleum products. This exerts budgetary pressure on the foreign exchange account and renders the country vulnerable to energy security risks.

There exists gender disparity in travel modes, patterns and needs of men and women in Bhutan as revealed by the gender analysis conducted for the Thimphu transport sector. While women embark on more trips than men, associated with their reproductive and care responsibilities, they have less access to private vehicles compared to men. Overall, women exceed men in their reliance on and use of public transportation especially for trips to schools, work or hospitals.
Transport and infrastructural development are at the core of Bhutan's 20-year development strategy – Bhutan's Vision 2020. The document inter alia highlights the need for the development of a safe, reliable and comfortable public transport system. Based on this, the nation developed a National Policy and Low-emission Development Strategy as part of its effort to reduce fossil fuel and GHG emission in the transport sector

2.2.3. Institutional

Prior to the commencement of the project, there existed limited capacity in terms of knowledge and technical expertise across transport agencies and city/municipal councils to design and implement supportive light electric vehicle policies. Policy makers also lacked information relating to the performance of LEVs, technological advancement and outcomes of relevant policy actions internationally and required support pertaining to the development and implementation of appropriate mix of enabling mechanisms and regulations.

Bhutan is also faced with weak institutional coordination which equally serves as an impediment for the adoption of LEVs in the nation. There is the absence of an explicit mandate for different institutions as far as the transport sector in general and the promotion of LEVs in particular are concerned. While the overarching mandate for the development of the transport sector lies with MOIC, a number of other actors including but not limited to Road Safety and Transport Authority (RSTA), Traffic Police, Royal Monetary Authority (RMA) and Municipal Authorities equally have a role to play in the penetration of LEVs in Bhutan. This absence of an effective institutional coordination mechanism constitutes a barrier for the establishment of enabling policies and regulatory environment that a new market for LEVs necessitates.

2.2.4. Policy factors

Bhutan possesses a National Transport Policy whose vision is to provide the entire populace of the nation with safe, reliable, convenient, affordable, cost-effective and environmentally-friendly transport system. The policy lays emphasis on low carbon transport solutions such as EVs and supports a number of principles including sustainability, inclusiveness, effective governance and sound asset management.

RGoB's Nationally Determined Contributions (NDCs) submitted to the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat in 2015 affirmed the nation's position and commitment taken in 2009 (at the UNFCCC 15th Session of the Conference of Parties) to achieve carbon neutrality. The NDCs included the promotion of low carbon system for the transportation sector as one of the mitigation measures for the growing

GHG emissions. In fact, these commitments was further reaffirmed in the 2021 through the revised NDCs[10] which state that the Bhutan Electric Vehicle (EV) Roadmap (2020-2025) has also been developed for a transition to zero emission mobility with targets for 2035, 2045 and 2050. The current project, the NDCs highlight, is designed to initiate the transition to EV mobility by focusing on taxis as the primary target for eventual market transformation. Bhutan's First and Second National Communications in 2000 and 2011 respectively equally identified the significant contribution of the energy sector to the nation's emissions and included the promotion of alternative fuels, hybrid and electric technologies and mass transport options as measures for curbing emissions in the transport sector.

Bhutan's 12th Five-Year Plan (2019-2024) identifies the promotion of EVs as a measure for reducing dependency on fossil fuels and addressing environmental challenges as a key programme envisaged for the transport sector and that contributes to National Key Result Area 6 – Carbon Neutral, Climate and Disaster Resilient Development Enhanced. Also, Bhutan's Economic Development Policy (EDP) 2017 clearly recommends that hybrid/electric transport system be introduced in urban areas of the country. Furthermore, the EDP encouraged the provision of subsidy and incentives to targeted interventions where economic viability is questionable due to low mass.

2.3.Problems that the project sought to address

As per the project document, the key categories of barriers to introducing LEVs into the transport sector of Bhutan includes: misperceptions and low level of technical knowledge existing among sector stakeholders/various markets; inadequate infrastructures and high up-front cost for LEVs: and lack of regulatory framework and enabling policy for LEVs. The project sought to address these challenges to achieve the introduction of sustainable and inclusive transport that is accessible and affordable, reliable, safe and supports the country towards a transition to a low-carbon development pathway.

2.4.Immediate and development objectives of the project

The immediate objective of the project is to facilitate the initial stage of low-carbon transition into the urban transport system of Bhutan, through the promotion of wider uptake of low emission vehicles with particular emphasis on electric vehicles and the nation's taxi sector. The project intended attaining this objective by the implementation of activities through three main components:

- Policy support for low-emission transport (component 1)
- Awareness and capacity development (component 2);
- Investment supported for low-emission transport system and other services (component 3)

[10] Royal Government of Bhutan, 2021, revised June 2021 - Second Nationally Determined Contribution, https://unfccc.int/sites/default/files/NDC/2022-06/Second%20NDC%20Bhutan.pdf

2.5.Expected results

The expected results of the project under its different components/outcomes are presented in Table 1.

Table 1: Expected results of the project (Source: ProDoc)

Component/outcome	Expected results at end of project
Component/outcome 1: By the end of project period, required policy and regulatory environments are in place to support the promotion of low emission transport systems	• National targets for the introduction of LEV adopted • Minimum of three (03) additional electric vehicle enabling regulations proposed and adopted; • Regulations addressing e-waste disposal adopted and piloted; • 100 public transport policy makers and transport staff and officials trained
Component/outcome 2: By the end of the project period, institutions and consumers are fully aware and knowledgeable on the EVs	• Coordination mechanism among public and donor agencies engaged in low emission transport established • Minimum of 75% of taxi drivers are willing to switch to EV car[11] • 1000 taxi drivers (including all 35 female taxi drivers) are trained and informed about technical safety and financial aspects of LEV ownership
Component/outcome 3: By the end of the project period, necessary financial support / incentive mechanisms are in place to increase investment in low emission transport systems and support services	• 300 new EV vehicles purchases enabled by the project • Financial support mechanism to promote LEV investment is operational on a sustainable basis • USD 6,545,000 (private) and USD 10,300,000 (public) investment in EV leveraged • Exemptions for 300 EVs and 45 charging stations established.

2.6.Main stakeholders

Several stakeholder group were envisaged to be part of the SLEUTS project as per the stakeholder engagement plan. These categories of stakeholders include:

- RMA and other Financial Institutes
- EV Taxi Drivers
- Local Governments (Dzongkhags and Thromdes)
- RSTA
- Car Dealers
- MoIC
- Bhutan Taxi Association
- GNHC
- Ministry of Finance (MoF)
- Ministry of Economic Affairs (MoEA)
- Ministry of Labor and Human Resources (MoLHR)
- National Land Commission (NLC)
- National Environment Commission (NEC)
- Druk Holdings and Investments (DHI)

[11] Analysed as poorly formulated and unrealistic by MTR

- Bhutan Postal Corporation Limited
- Bhutan Power Corporation Limited (BPC)
- Technical Training Institutes (TTIs)
- National Credit Guarantee Scheme (NCGS)
- Taxi Users
- Media

2.7.Theory of change

A theory of change was elaborated for Bhutan SLEUTS project at its design phase and included in its project document (Figure 1). The project's goal is it to contribute to the key objectives of the 2017 Draft National Transport Policy of Bhutan which includes:

- Promoting development of alternative and energy efficient transportation modes for both passengers and freight transport;
- Establishing an eco-system to promote sustainable and inclusive transportation services which is safe, reliable, accessible and affordable for all; and
- Contributing to the goal of remaining carbon neutral at all times.

While the RGoB has taken commitments at the international level to achieve carbon neutrality, the nation heavily relies on the importation and use of fossil fuel to drive its transport sector. The energy sector of Bhutan accounts for the second largest share of emissions after agriculture, with transport contributing to 45% of energy-related emissions and 8% of the nation's total GHG emissions in 2008. Emission projections for the transport sector of the nation indicates a rising trend which is tied to the increased number of vehicles and congestion, especially in urban areas. The RGoB recognizes the importance of addressing and curtailing the rapid growth in the consumption of fossil fuel and GHG emissions from the transport sector, and enhancing the quality and accessibility of transport services to the population. In this light, the government lays significant emphasis to advance sustainable low-emission transport systems in its key strategic and programmatic documents and plans in line with the "Avoid-Shift-Improve (ASI)" approach.

In order to achieve a transition towards a low-carbon transport system, the SLEUTS project was designed to address the following barriers to the uptake and adoption of EVs: misperceptions and low level of technical knowledge existing among sector stakeholders/various markets; inadequate infrastructures and high up-front cost for LEVs and lack of regulatory framework and enabling policy for LEVs.

The SLEUTS project introduced transformative actions under three main components:

- Policy support for low-emission transport;
- Awareness and capacity development; and
- Investment supported for low-emission transport system and other services

The expected project outputs include regulations developed and promoted to enable operations of EVs and electric vehicle supply equipment (EVSE); mid-term and long-term target for national EV and EVSE developed; policy guidelines and regulations developed to address e-waste disposal and management; technical capacity of the relevant agencies and public bodies are enhanced on various aspects of EVs and EVSE; awareness campaign supported; information guide developed and training implemented on EVs; effective and functional coordination mechanism established to promote EVs; financial support mechanism for EVs established and operational; financial regulations are revised to enable implementation of EV Discount Program and its sustainability; charging infrastructure expanded through demonstrated viable business model to ensure sustainability. These outputs will enable

Bhutan's transport sector to witness a transition towards the use of low-emission transport technologies.

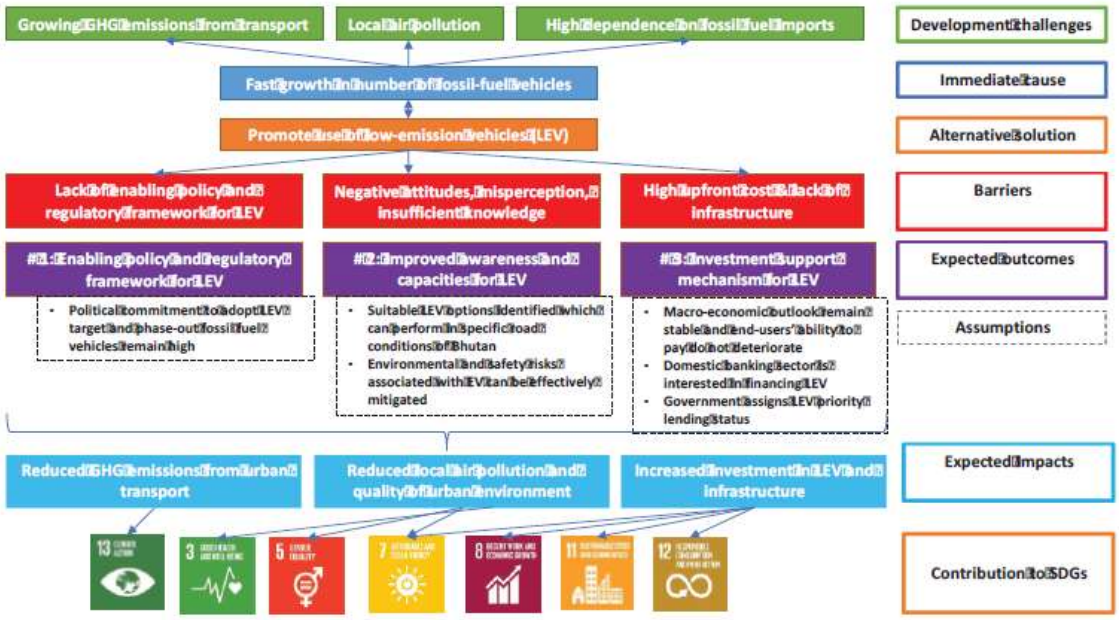


Figure 1:Theory of change of the Bhutan Sustainable Low-emission Urban Transport System Project (Source: ProDoc)

3. FINDINGS

3.1.Project design/formulation

3.1.1. Analysis of results framework

The project result framework was analysed to ascertain the extent to which the project indicators and targets are SMART (Specific, Measurable, Achievable, Relevant, Time-bound). All the project objective and outcome indicators were found to be compliant to the time-bound and measurable criteria (**Table 2**). Overall, while majority of the project indicators (seven) were SMART compliant, a number of other indicators were not fully compliant to one or more of the SMART criteria. For instance, the third indicator for outcome 1 which concerns the establishment and piloting of an e-waste disposal and management regulation was found to be partially compliant to the achievable criteria. The mid-term review raised concerns that the life span of the batteries and electric components of the EVs to be procured within the framework of the project will be longer than the life of the project and as a consequence, piloting of the regulation will not be possible within the duration of the project. It could be argued that once developed, the e-waste regulations could within the life of the project, be piloted on spent batteries from other sources in the country such as those from solar photovoltaic systems. However, at terminal evaluation, the e-waste disposal and management guidelines had been developed but not piloted, attesting to the fact that the piloting component of the indicator could not be achieved within the life of the project.

Table 2: Terminal evaluation SMART analysis of the project's objective and outcome indicators

Indicator	End-of-project Target	Terminal evaluation SMART analysis				
		S	M	A	R	T
Project Objective: To facilitate the initial stage of low-carbon transition in the Bhutan's urban transport systems as the preferred choice of mobility in Bhutan						
Lifetime direct GHG emissions avoided as a result of project-facilitated increase in LEVs	3,440 tCO2/year or 43,000 tCO2/ lifetime					
Number of users of low emission vehicles (including female)	300,000 passengers per year for 300 EV taxis, including at least 50% (150,000) female					
Volume of investment mobilized and leveraged by the project for low-emission vehicles, of which: - public (mln US$) - private (mln US$) [UNDP Strategic Plan 2018-2023, Output 2.5.1] "Amount of resources brokered by UNDP for investment in renewable energy and zero-carbon development"	Private: $6,545,000$ (80% of 300 EVs) Public: $10,318,000$: (Nu.540.00 million – value of tax incentives/import duty exemption for 300 EVs + 45 charging stations)					
Outcome 1: By the end of the project period required policy and regulatory environments are in place to support the promotion of low emissions transport systems						
Status of national targets for introduction of LEV	National target for LEV adopted					
Status of regulations enabling and incentivizing investment in LEV and support infrastructure	At least 3 additional EV enabling regulations proposed and adopted					
Status of regulations addressing e-waste disposal and management issues	Regulations addressing e-waste disposal adopted and piloted					
Number of public transport policy makers and transport staff and officials trained (including female)	100 (50 female)					
Outcome 2: By the end of the project period institutions and consumers are fully aware and knowledgeable on the EVs						
Status of coordination mechanism among public and donor agencies involved in low emissions transport	Coordination mechanism in place					

Share of taxi drivers willing to switch to EV	At least 75% of taxi drivers are willing to switch to EV car[12]					
Number of taxi drivers (including female) benefitting from training and information about technical, safety and financial aspects of LEV ownership	1,000 (and all current women drivers – 35 female)					
Outcome 3: By the end of the project period necessary financial support/incentive mechanisms are in place to increase investment in low emission transport systems and support services						
Number of new EV purchases enabled by the project [12th FYP] Number of electric vehicles registered [CPD draft 2.3.3] Zero or low emissions vehicles uptake	300					
Status of the financial support mechanism to promote LEV investment	Financial support mechanism is operational on sustainable basis with the level of investment support reflecting changes in market development (gradual decrease)					
Leveraged investment in EV and support infrastructure enabled	Private: $6,545,000$ (80% of 300 EVs) Public: $10,300,000$: (Nu.540.00 million – value of tax incentives/import duty exemption for 300 EVs + 45 charging stations)					

Legend		
SMART criteria compliant	Questionably compliant to SMART criteria	Non-compliant to SMART criteria

3.1.2. Assumptions and risks

During the project design phase, a total of five (05) risks were identified alongside their respective mitigation measures as presented in Table 3. During project implementation, the risk register of the project was reviewed and modified where necessary. Obviously, COVID-19 emerged in 2019 which culminated in a disruption of the global supply chain, affecting the timely delivery of cars to Bhutan. Furthermore, the management of logistic was rendered challenging during the COVID-19 times since Bhutan depend on the Indian Port for the

[12] This indicator should have been revised following the mid term review which highlighted that this indicator could not be delivered by EOP.

importation of goods. To address this situation, the PMU worked with the Ministry of Foreign Affairs to have a bilateral discussion with the Government of India to facilitate delivery of cars. The subsequent importation of cars was facilitated through the Chennai Port instead of the Kolkata port ensuring no additional cost to the beneficiaries and avoiding further delays.

Table 3: Project risks and proposed mitigating measures

Risk description	**Risk type / category**	**Mitigation measures**
Low uptake of financial support mechanism	Market	After pilot phase of the EV discount program roll-out, an evaluation will be conducted and corrective measures proposed – stronger incentive is provided in case demand is weak and reduction of incentives in case of over-subscription to the program
Potential delays in the implementation of the required policy and regulatory changes may jeopardise the effectiveness and impact of the EV discount program	Policy	The Government of Bhutan has firmly committed to implement required policies and regulatory measures in a timely manner
Inadequate E-waste management and disposal of used batteries	Environmental	Enabling regulation on e-waste management and its enforcement will be proposed
EV technology failure	Operational	Strict technical qualification criteria for EV suppliers will be introduced and taxi drivers and technicians involved in operation and maintenance services will be trained
Sustainability of financial support mechanism	Financial	The project will work with the Government of Bhutan to obtain alternative domestic and international sources of financing in order to ensure sustainability of the EV discount program but this is to happen only after the evaluation of the pilot phase revealed a need for such actions
Covid 19 pandemic	Health	Move trainings, awareness raising and advocacy actions online/social media, policy engagement with government and suppliers, Royal Bank of Bhutan and importers

Pertaining to environmental and social risks, an environmental and social risks screening was conducted for the project to identify potential risks of the project. The screening was conducted using the UNDP Social and Environmental Risk Screening Tool. The tool comprises of three principles: Human Rights (Principle 1); Gender Equality and Women Empowerment (Principle

2); and Environmental Sustainability (Principle 3). Screening questions for the environmental sustainability principles were structured under seven standards:

- Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management;
- Standard 2: Climate Change Mitigation and Adaptation;
- Standard 3: Community Health, Safety and Working Conditions;
- Standard 4: Cultural Heritage;
- Standard 5: Displacement and Resettlement;
- Standard 6: Indigenous Peoples; and
- Standard 7: Pollution Prevention and Resource Efficiency

As per the results of the screening, potential risks were identified for Principle 2 and Standards 1, 3 and 7. The evaluators are of the opinion that the project risks were well identified and the proposed mitigative measures were appropriate. During project implementation, the SESP was reviewed over time to address the onset of the Covid 19 pandemic in 2019 and the subsequent impacts in 2020 and beyond. The risks management framework was updated accordingly to minimize the impact of the pandemic on the project

3.1.3. Lessons from other relevant projects

The review of project documents as part of this terminal evaluation generated no evidence on how the project development built on the lessons generated by other relevant projects in the country. As per the stakeholder engagement plan of the project, several stakeholder consultations took place to ensure the inclusiveness of the project design and activities as well as their alignment with existing Acts, Rules and Regulations of the Government of Bhutan. No information came out from the stakeholder engagement plan pertaining to how the consulted stakeholders provided lessons from past and ongoing relevant projects that informed the design of the Bhutan low emission sustainable transport project. However, consultation with the PMU revealed that the six (06) EV taxis imported in 2014 are still on the road and have not reported any major maintenance or battery replacement till date and these case studies have been extensively used as an example during the awareness and advocacy campaign for the project to demonstrate the battery longevity and showcase the bare minimal maintenance cost of EVs. The feasibility studies commissioned in 2018 for charging stations and car model drew heavily on international best practice and regional experiences particularly in India. As reported, the project interventions design also benefited from the EV study report by the World Bank and lessons from the past projects[13].

3.1.4. Planned stakeholder participation

The project elaborated a stakeholder engagement plan with details of the different stakeholders to be involved in the project alongside their envisaged methods of participation (Table 4). The project will engage stakeholders involved in the project to secure their support, and benefit from their guidance to ensure project implementation achieves higher results.

[13] Information provided by UNDP CO

Table 4: Planned stakeholders to be engaged in the project (Source: stakeholder engagement plan)

Envisaged project stakeholders as per stakeholder engagement plan	**Envisaged participation method**
EV Taxi Drivers	Meetings, Focus Group Discussions
Municipalities	Meetings
Road Safety and Transport Authority	Meetings
Private suppliers / Dealers of EV	Meetings
Ministry of Information and Communications	Workshops, Meetings
Taxi Association	Meetings
Gross National Happiness Commission Secretariat	Meetings
Ministry of Finance	Meetings
Ministry of Economic Affairs	Meetings
National Environment Commission	Meetings
Bhutan Postal Corporation Limited	Meetings
Bhutan Power Corporation Limited	Meetings
Taxi Users	Public meetings, media
Media	Audio visuals / radio
Financial institutions	Meetings

While the timeline for the participation of the different stakeholders in the project activities was to be confirmed at the inception phase of the project, the stakeholder engagement plan provided an indicative timeline for stakeholder participation as follows:

- Inception workshop (April 2018)
- First project steering committee meeting (twice/year) – April 2018
- Meeting with financial institutions (bi-annually) – May 2018
- Stakeholder consultations (quarterly) – May 2018
- Meetings with Taxi Drivers and Taxi Association (quarterly) – June 2018

The project was also responsive and engaged with new actors that were not initially identified in the project document. The plan was consequently amended as necessary and stakeholders such as BTEFC, DRE, BFL, RMA, Thromdes, etc. where closely engaged which were not identified in the earlier plan.

3.1.5. Linkages between project and other interventions within the sector

The UNDP also played a key role in providing linkages among various programs implemented by other development partners such as ADB in the same area. For example, the ADB support in TVET (Technical and Vocational Education Training) working with the Technical Training Institute (TTI) to develop EV curriculum. Within the same vein, Thromde is currently implementing the Bhutan Green Transport Project with support from the World Bank. As part of the study, the possibility of EV or hybrid buses for public transport is being studied[14]. UNDP has also been successful in mobilising support for 19 EVs to replace government ICE fleet from the Japanese government including 2 EV buses from UNIDO in line with the SLEUTS project objectives.

[14] Interview with TE respondents

3.2. Project Implementation

3.2.1. Adaptive management

The COVID-19 pandemic presented significant challenges to project delivery. Delays in the implementation of some project activities in Bhutan were observed following lockdowns and other precautionary measures introduced in the country. Examples of cases of delays in project delivery as a result of the pandemic include:

- The international consultant contracted to review policy guidelines and regulations for disposal and recycling of EV batteries conducted a first mission in November 2019 but could not conduct the second mission due to the pandemic;
- Deferral of the endorsed plan of executing the training program for EV drivers;
- Delivery of electric cars into Bhutan was delayed due to COVID-19-induced disruptions in the supply - the pandemic slowed down EV cars manufacturing in China;
- Delays in the installation of fully commissioned EV charging stations in some project sites; and
- The organization of consultation meetings, workshops, capacity building events and monitoring visits within the framework of the project were delayed[15].

The project team in consultation with donors and government agencies responded to the risks posed through the realignment of work plans and budgets and by securing a one-year extension of the project implementation period. While it was unrealistic for the project to exhibit adaptive management to some of the COVID-19 related challenges such as the EV supply chain disruption, it took steps to adapt to the changing times where feasible. For instance, the use of virtual platforms was encouraged and meetings of smaller groups were conducted following the COVID-19 protocols in order to advance project activities. The international consultant for the review policy guidelines and regulations for disposal and recycling of EV batteries had to work with the project team through online platforms and this culminated in the elaboration of the report E-waste disposal and management which was shared with relevant stakeholders and with comments integrated into the report. Furthermore, the PMU was proactive during the COVID-19 era in facilitating coordination with all relevant agencies and ensuring that the project remained on track.

3.2.2. Actual stakeholder participation and partnership arrangements

The project made significant effort to involve all stakeholders throughout the implementation of the project. These included government departments, local administration, private sector such as banks and car dealers, donors, training institutions, beneficiaries amongst others. These stakeholders were engaged depending on their interest and potential contribution to the project. For instance, the Project Board was a multistakeholder project governance structure which brought together all actors to drive project delivery. The technical working group as well, brought in national expertise to support project implementation in the face of technical challenges. Advocacy and outreach activities have been implemented with car dealers and beneficiaries through face-to-face meetings and virtually including the use of social media platforms and messaging applications. Engagement with the UNDP led to facilitated linkages with the Asian Development Bank to support TVET and development of EV curriculum. Other engagement with the Japanese government led to securing support for renewal of the government's fleet while collaboration with the World Bank and UNIDO explored support to other sectors beyond taxis such as buses for scalability of project gains. The project was also able to bring on board organizations such as Bhutan Trust Fund for Environment Conservation (BTFEC), Bhutan for Life (BFL) and other private sectors to contribute towards establishing

[15] 2021 PIR

of the EV charging stations. The planned lesson learning and knowledge sharing workshop in July 2022 provides an opportunity for bringing together Charging Station Operators, Car Dealers, BPC, PMU, UNDP and EV dealers to take stock and draw lessons from this pilot project. When participants were asked to rank the level of stakeholder engagement in the project, 86% of respondents were satisfied to highly satisfied while 14% were moderately satisfied suggesting there were challenges faced.

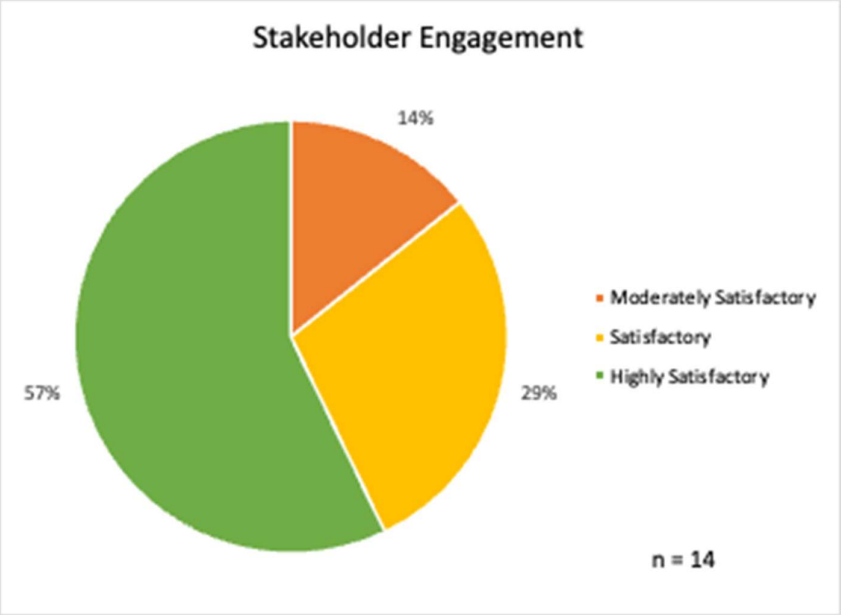


Figure 2: Level of satisfaction with stakeholder engagement

Those who were only moderately satisfied thought that some key agencies and stakeholders could have been consulted from the beginning of the project. For instance, the project could have engaged with the Department of Renewable Energy and the Department of Hydropower and Power Systems more closely because these are the nodal agencies in the energy sector for all plans and policies. Others such as the Disabled People's Association (DPA) thought their engagement could have supported stronger inclusion of the concerns of PWDs. The same for car dealers with some stating that the engagement was not equally done with all dealers. Obviously, those who are satisfied thought that stakeholder engagement was well coordinated and information sharing was done in a timely manner.

3.2.3. Project finance and co-finance

The project was financed by GEF to the tune of USD 2,639,726 with a planned co-financing of USD 10,318,000[16] from the Government of Bhutan (USD 318,000 in kind and USD 10,000,000 in cash). At TE, the total GEF funding utilization is USD 2,586,726. The project attained a co-financing of USD 21,998,398.8 mobilized from the public and private sectors (**Figure 3**), corresponding to 213% achievement of the planned co-financing. The details of the actual co-financing institutions and the activities for which the funds were expended are presented in **Table 5**. The amount of co-financing from the government is USD 14,507,818.4, representing 140% achievement of the committed co-financing.

[16] ProDoc

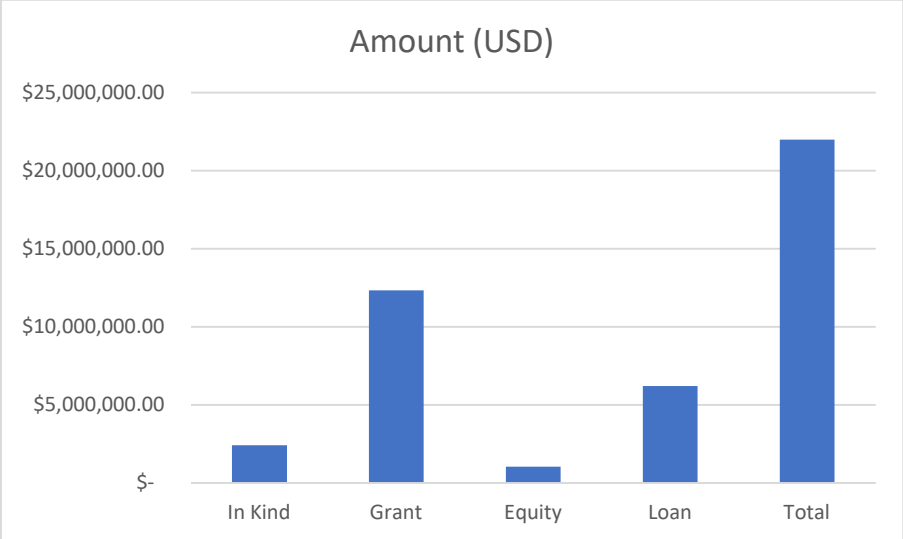


Figure 3: Analysis of project co-financing

Table 5: Source of co-financing disaggregated by institutions (Source: TE co-financing table)

S/N	Source of Co-financing	Name of co-financer	Type of Co-Financing	Investment Mobilized	Total at TE (USD)
1	GEF Agency	UNDP	Grant	Investment Mobilized	36,039.0
2	CSO	Bhutan Trust Fund for Environmental Conservation (BTFEC)	Grant	Investment Mobilized	214,285.0
3	Private	Financial Institutes (BoBL and BNBL)	Loan	Investment Mobilized	6,192,307.7
4	Recipient Country Government	Royal Government of Bhutan (Installation of CCTV for the 15 Charging Stations)	Grant	Investment Mobilized	42,857.0
5	Recipient Country Government	Royal Government of Bhutan (Acquisition of land for the installation of charging stations)	In Kind	Investment Mobilized	2,342,948.7

6	Recipient Country Government	Royal Government of Bhutan (Office rental and operational cost of running office)	In Kind	Investment Mobilized	60,000.0
7	Recipient Country Government	Royal Government of Bhutan (Cost of Technical Working Group)	In Kind	Investment Mobilized	10,000.0
8	Recipient Country Government	Royal Government of Bhutan (Operation and maintenance of charging stations)	Grant	Recurrent Expenditure	1,112,307.7
9	Recipient Country Government	Royal Government of Bhutan (Upfront cost for the BPC spares and capacity development)	Grant	Investment Mobilized	32,705.0
9	Recipient Country Government	Royal Government of Bhutan (Pay and allowances for the staff)	Grant	Recurrent Expenditure	100,000.0
10	Recipient Country Government	Royal Government of Bhutan (Installation of 15DC and 14 AC charger in 14 Dzongkhags)	Grant	Investment Mobilized	884,615.4
11	Recipient Country Government	Bhutan For Life (Installation of Chargers at Sengor and Chazam)	Grant	Investment Mobilized	51,282.1
12	Recipient Country Government	Royal Government of Bhutan (Charging Station Electricity Bills)	Grant	Recurrent Expenditure	667,384.6
13	Private	CSR AC Charging stations	In Kind	Investment Mobilized	9,487.2

14	Recipient Country Government	Royal Government of Bhutan (Tax assumptions on import of Electric Vehicles)	Grant	Investment Mobilized	9,203,717.9
15	Private	Taxi drivers Equity	Equity	Investment Mobilized	1,038,461.5
Total					**21,998,398.8**

Source: Project Team; documents on the above co-financing were checked and verified by the TE Team.

3.2.4. Monitoring and evaluation

The overall assessment of the project's M&E is **Highly Satisfactory**.

M&E design at entry (*)

The SLEUTS project had a well-designed monitoring and evaluation system from the project design phase. The project log frame had objectives and SMART indicators to track gender, environmental, and socio-economic outcomes. The log frame had mid-term and end-of-project targets and baseline values for the output indicators for the different components. An M&E plan was developed annually and contained planning, monitoring and review, quality assurance, evaluation and reporting activities. The annual plans also contained information pertaining to individuals responsible for conducting the M&E activities and the source of funds for the realization of activities[17]. Respondents reported that the designed M&E system did not undergo any revision during project implementation and all the respondents (three from UNDP and the PMU) who were interviewed on the quality of the M&E system design and implementation opined that the M&E design of the project was Highly Satisfactory. The evaluators also rate the design of the M&E system of the SLEUTS to be **Highly Satisfactory**.

M&E implementation (*)

M&E implementation occurred as per the designed system and the TE respondents from UNDP and PMU believed the budget allocated for M&E implementation was sufficient. The implementation of the M&E system within the life of the project occurred through the realization of the following activities:

Planning

- Preparation and planning of Annual Workplans (AWPs) by implementing partners; and
- Organization of Project Board meeting to validate the AWP and budget

Monitoring and review

- First, second, third and fourth quarter progress review;
- Project Board Meeting to discuss on progress realized and for the endorsement of any changes; and
- Field Monitoring to validate reported results and to identify risks/gaps

Quality assurance

- Spot check - implementing partner's financial records, procurement management, assets management among others; and
- Field monitoring visits

[17] 2020 and 2021 M&E plans

Evaluation

- Project mid-term evaluation. The MTR was conducted in 2020 and based on its findings, UNDP elaborated a management response comprising of 13 key action points to be acted upon by the project[18].
- Project terminal evaluation

Reporting

- Project specific reporting to GEF

Data provided on the progress of the different indicators was collected and reported in the quarterly and annual project reports and where relevant, reported data was disaggregated by gender. Implementation of the M&E system was not without challenges. "*The monitoring of the implementation of project activities was severely affected by COVID-19. Also, there was insufficient human capacity for M&E as the PMU comprised of only three (03) staff*", reported a staff of the PMU. With the advent of COVID-19, it is expected that restrictions relating to travel and the organization of physical meetings instituted by the RGoB would disrupt monitoring activities such as the organization of annual planning meetings for the elaboration of AWPs and the conduct of monitoring field visits. However, the project management team was able to track project progress towards indicator targets and comply with their reporting requirements within the framework of GEF-funded projects. It is the opinion of the evaluators that M&E implementation was **Highly Satisfactory.**

Table 6: M&E design and implementation rating

Monitoring and Evaluation	**Rating**
M & E Design	Highly Satisfactory
M & E Implementation	Highly Satisfactory
Overall M & E	Highly Satisfactory

3.2.5. Project implementation and execution

Overall project implementation/execution is **Highly Satisfactory**

UNDP implementation oversight (*)

Rating: Highly Satisfactory

The SLEUTS project implemented under the National Implementation Modality, hence UNDP's role was that of supervision and oversight. Pertaining to its role as GEF Agency, UNDP ensured that project implementation followed the GEF regulations and bore the responsibility for the technical and fiduciary compliance of the project. UNDP took the lead in reporting on the project implementation (technical and financial reporting) to GEF as per the required reporting frequency of the GEF. At TE, two project implementation reports (PIR) had been submitted by UNDP to GEF. Following the completion of the MTR, a management response letter containing action points was elaborated by UNDP to address identified gaps in project implementation and enhance the project's success. Four (04) TE respondents who provided feedback on the role of UNDP as the GEF Agency provided a rating of **Highly Satisfactory** (02) and **Satisfactory** (02).

Project risks were monitored and acted upon. A major unforeseen risk that was the Coronavirus pandemic. With the advent of the COVID-19 pandemic, the RGoB imposed strict measures to

[18] UNDP Management Response to the MTR

contain the spread of the virus including restricting the movements of people, and social distancing. These measures delayed the implementation of some of the project activities and jeopardised the timely completion of some deliverables as per the established timelines. UNDP took measures to ensure continuity of project implementation including encouraging virtual mode of working, for implementation of activities that could be done remotely. In addition, UNDP secured a one-year no-cost extension for the project as an adaptive management measure. A government respondent highlighted the fact that there is a good working relationship that exists between PMO and UNDP and this positively impacted on project implementation. UNDP's internal systems also supported supervision and implementation of the project. "*UNDP has a very rigorous internal process, such as their AWP system, this provided very good progress tracking for the project. It also helped in increasing accountability and transparency*", reported a government staff. Majority of TE respondents who provided feedback on UNDP's role in the implementation oversight and supervision provided a rating of **Satisfactory (Figure 4**).

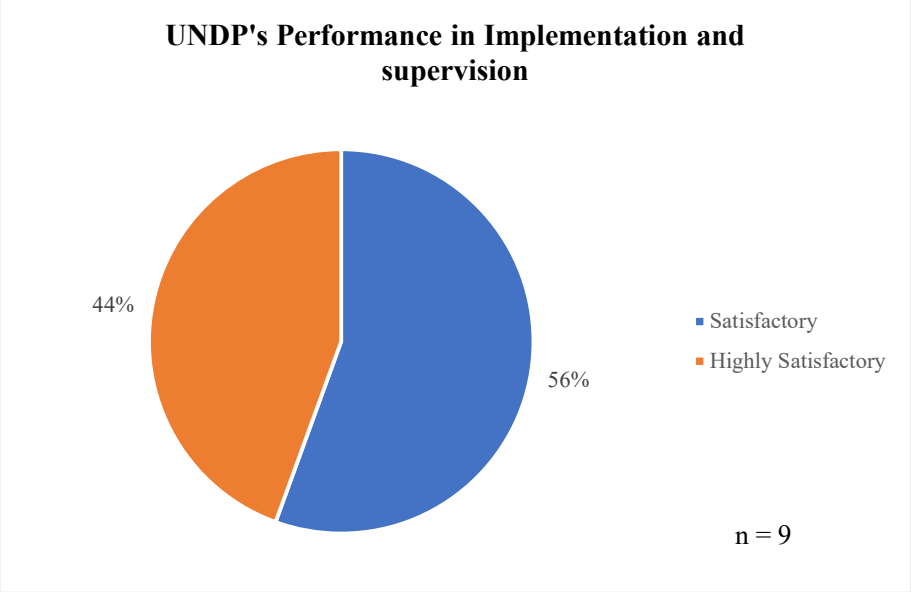


Figure 4: Perception of TE respondents on UNDP implementation oversight

It is the opinion and rating of the evaluators that UNDP's implementation oversight role is **Highly Satisfactory**.

<u>Implementing partner execution (*)</u>

Rating: Highly Satisfactory
MoIC assumed the role of the implementing entity of the project and project implementation was carried out as per the NEX manual agreed upon by RGoB and UNDP. A dedicated PMU was established for the project with the role of ensuring overall coordination, implementation and delivery of the project in a timely and efficient manner and this structure was initially hosted by MoIC, but was transferred to the PMO from August 2020. The PMU is composed of three key staff:

- Project Manager - responsible for operational direction, management and implementation of the project
- Project Administrator – supports administrative-related tasks of the project
- Project Support Officer – provides day-to-day project implementation support

A Project Board (PB) was established within the framework of the project that served as the project's governance body and met regularly to monitor the execution of the project and provide timely feedback and guidance to the Project Management Unit. A Technical Working Group (TWG) comprising of technical experts from various government corporations and agencies was set up for providing technical support and advice to the project. The PMU prepared annual work plans and budgets which were presented to the PB for feedback geared towards their finalization[19]. Once approved, PMU implemented project activities accordingly as per the work plans and budgets. The PB meetings provided the opportunity for project progress to be discussed, and recommendations proposed to address challenges and risks.

The terminal evaluation respondents had mixed views pertaining to role played by the implementing entity in the SLEUTS project. Concerning the role of MoIC in project design, majority of TE respondents opined that the performance of MoIC was **Satisfactory** during design amongst those who were knowledgeable of MOIC's role (**Figure 5**). "*The design of the project was led by MoIC and they took ownership of the entire process*", reported a staff who rated MoIC's intervention in the project design as high satisfactory.

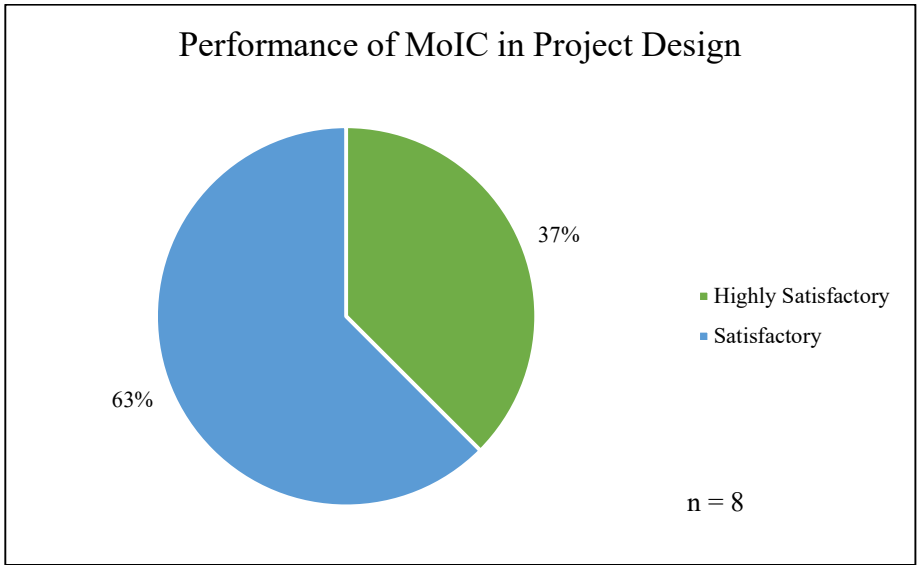


Figure 5: Perception of TE respondents on MoIC's role in project design

Regarding the rating of the role of MoIC in the management role of the project, respondents had diverse views ranging from Moderately Unsatisfactory to Highly Satisfactory (**Figure 6**), with majority of the respondents providing a Highly Satisfactory rating. Respondents who provided a satisfactory and moderately satisfactory rating provided the following justifications: "*We feel that all the different brands of EVs were not given the same platform or level of advocacy in their awareness program*"[20]. "*The charging station site handover was delegated to the Dzongkhags. BPC was not involved in construction monitoring. So, there was a lack of proper coordination and the PMU did not have engineers to look after the quality of the project. The handing over of the charging station was completed without the rectification work and COVID-19 cannot be blamed for substandard work*" reported a respondent[21]. A respondent who provided a rating of moderately satisfactory had this to say: "*MoIC was too bureaucratic,*

[19] Project Steering Committee meetings reports
[20] Interview with TE respondents
[21] Interview with TE respondents

taking too long to decide on issues. They needed to have a higher level of expertise and an empowered group who could take decisions promptly", reported a respondent[22].

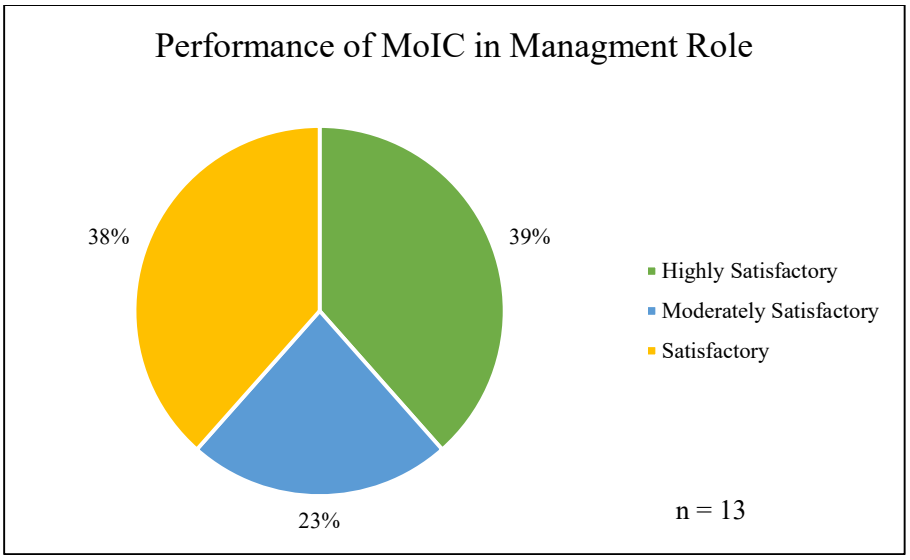


Figure 6: Perception of TE respondents on MoIC's role in project implementation

Respondents provided a rating of Highly Satisfactory to Moderately Satisfactory for the performance of PMU under Prime Minister's Office (PMO) (**Figure 7**). A respondent who rated the role of PMU under PMO in implementation as highly satisfactory believed the organisation was good at resolving issues. "*The PMU has been extremely helpful in resolving any issues and they have kept us informed at every step*" reported a taxi driver. "*There was some lack of clarity during the transition phase of PMU from MoIC to PMO. However, it was resolved. PMU team is very competent*" reported a staff of RGoB[23].

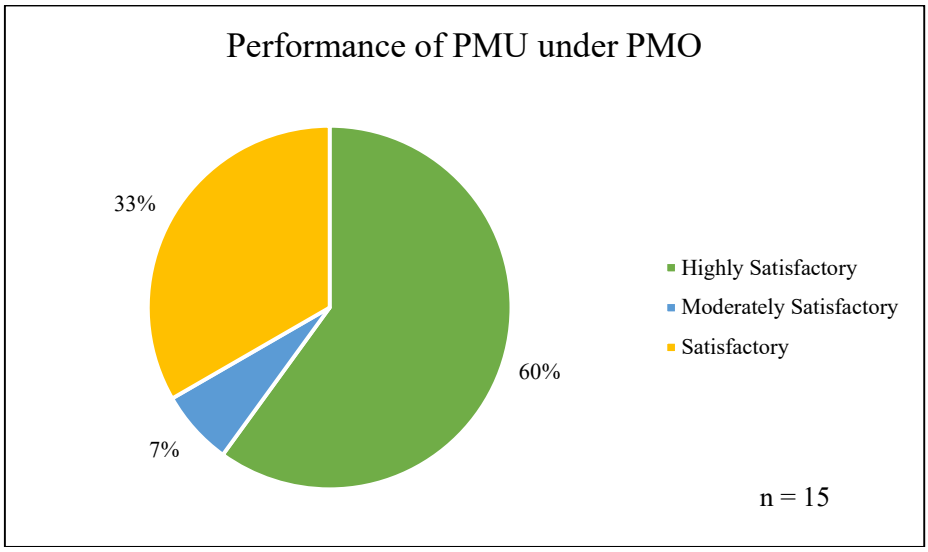


Figure 7: Perception of TE respondents on performance of PMU under PMO

[22] Interview with TE respondents
[23] Interview with TE respondents

The evaluators rate the implementing partner's execution as Highly **Satisfactory**.

3.3. Project results

3.3.1. Progress towards objective and expected outcomes

The SLEUTS project has a total of 10 outputs; three (03) each for outcomes 2 and 3 and four (04) for outcome 1. For outcome 1, 100% of the activities under the different outputs were completely implemented at TE. For outcome 2 and 3, activities were either completed or were on track to be completed. (**Table 7**). As all activities under outcome 2 and 3 are generally on track and consequently progress was assessed as satisfactory.

Table 7: Status of implementation of activities under project outputs and outcomes

Activity	Implementation status at TE
Outcome 1: By the end of the project period required policy and regulatory environments are in place to support the promotion of low emissions transport systems	
Output 1.1: Regulations developed and promoted to enable operations of EVs and EVSE	
Activity 1.1.1: Conduct detailed policy and regulatory gap analysis to identify a package of most suitable and appropriate policy and regulatory measures	**The activity has been completed.** - The Cabinet of Bhutan has issued directives which entails that all procurement or replacement of Government pool vehicles from February 11th 2020 must be electric as per the letter no.C3/49/2020/458. - With several consultations with the Royal Monetary Authority, the loan for the purchase of Electric Vehicles in the country has been increased from 30% to 70% and the loan tenure has been increased from 5 to 7 years.
Activity 1.1.2: Conduct EV sector stakeholder consultations to discuss and agree on the scope and modalities of proposed policy and regulatory measures.	**The activity has been completed** - As per the 16th Thromde Council meeting dated May 24, 2019, the proposal to incorporate dedicated EVs Charging points under the mandatory building codes/permit for the entire upcoming infrastructure has been approved. - PMU and the Road Safety and Transport Authority coordinated several meetings and have revised the Draft National Transport policy, 2017.
Activity 1.1.3: Develop technical norms, standards, regulations and guidelines to enable operations of EVs and EVSE.	**The activity has been completed** - The Project Management Unit has signed a Memorandum of Understanding with the Bank of Bhutan Limited and the Bhutan Taxi Association for a special transport loan scheme. Through this the beneficiaries under

Activity	Implementation status at TE
	the project can avail a collateral free loan (of 70% and 7 years tenure) in lieu of which a group guarantee scheme is instituted (three beneficiaries can serve as a guarantee for one buyer). - There is zero sales tax on the import of Electric Vehicle Charging Station. - All EVs and EVSE attracts zero sales, custom duty, zero Green Tax. - Distinctive number plates (Green) for EVs have been launched including free parking at the charging stations for the EVs.
Output 1.2: Mid-term and long term target for National EV and EVSE developed	
Activity 1.2.1: Conduct technical and economic analysis to establish achievable mid-term and long-term target for transition to EVs	**Activity has been completed**
Activity 1.2.2: Develop road-map for EVs	**Activity has been completed**
Output 1.3: Policy guidelines and regulations developed to address e-waste disposal and management	
Activity 1.3.1: Develop policy guidelines and regulations for disposal and recycling of EV batteries	**Activity has been completed**
Activity 1.3.2: Conduct feasibility study to explore options for batteries' re-use and recycling domestically	**Activity has been completed**
Activity 1.3.3: Support implementation of e-waste disposal and management regulation for EVs of safe disposal and recycling of EV batteries	**Activity has been completed**
Output 1.4: Technical capacity of the relevant agencies and public bodies are enhanced on various aspects of EVs and EVSE	
Activity 1.4.1: Design and support provide the training and capacity development programme.	**Activity has been completed**
Outcome 2: By the end of the project period institutions and consumers are fully aware and knowledgeable on the EVs	
Output 2.1: Awareness campaign supported	
Activity 2.1.1: Conduct awareness/perception survey (baseline)	**Activity has been completed**
Activity 2.1.2: Design and publish relevant awareness and promotional materials	**Activity has been completed**

Activity	Implementation status at TE
Activity 2.1.3: Implement nation-wide marketing and awareness campaign about EVs and their benefits	**Activity is on track**
Activity 2.1.4: Conduct awareness/perception survey to measure the level of awareness and perception (end-of-project)	**Activity is on track as the perception survey is being plan for the end of the project**
Output 2.2: Information Guide developed and technical training implemented on EVs	
Activity 2.2.1: Develop EV user information guide and training package	**Activity achieved**
Activity 2.2.2: Implement capacity and training program	**Activity is on track**
Output 2.3: Effective and functional Coordination mechanism established to promote EVs	
Activity 2.3.1: Support inter-agency coordination mechanism	**Activity is on track**
Outcome 3: By the end of the project period necessary financial support/incentive mechanisms are in place to increase investment in low emission transport systems and support services	
Output 3.1: Financial support mechanism for EVs established and operational	
Activity 3.1.1: Design of financial support mechanisms for EVs: National EV Discount Program for Taxi Drivers	**The Activity is completed** - The Royal Monetary Authority of the country has approved 70% loan for the purchase of EVs for loan tenure from 5 to 7 years.
Activity 3.1.2 Preparing technical specifications and selection of qualified EV suppliers	**The Activity is on Track** - The PMU along with the Technical Working Group has carried out the development of specifications for the Electric Vehicles and the eligibility of the firms to supply EVs under the project to ensure that the best quality EVs are imported in the country. The technical specifications developed for both Charging Stations as well as the EVs are currently in use.
Activity 3.1.3: Implementation of EV Discount Program	**The Activity is on Track** - The PMU has disbursed subsidies to 281 beneficiaries under the project from the targeted 300 EV roll out.
Activity 3.1.4: Independent evaluation of EV Discount Program	**The Activity is on Track** - The criteria for the PD license holders to be eligible for EV discount program has been developed and endorsed by the Project Board.
Output 3.2: Financial regulations are revised to enable implementation of EV Discount Program and its sustainability	

Activity	Implementation status at TE
Activity 3.2.1: Prepare a package of amendments and changes in the existing banking and financial regulations to enable and facilitate implementation of the EV Discount Program	**The Activity is completed** - The Royal Monetary Authority of the country has approved 70% loan collateral free for the purchase of EVs for increase of loan tenure from 5 to 7 years.
Activity 3.2.2: Identify and enable alternative sources of financial support to promote EV market development beyond project duration	**The Activity is on track** - The project has received Nu. 69 M (USD 884,615.38[24]) form the Royal Government of Bhutan and Nu. 15 M (USD 192,307.69) from the Bhutan Trust fund for Environmental Conservation as a co-financing for the project to establish network of charging stations to enhance the uptake of EVs in the country. - The project has also mobilized Nu. 4 million (USD 51,282.05) from Bhutan for Life (BFL) for setting Charging Stations. - The PMU is also implementing a Euro 505,000 (USD 510,656[25]) UNIDO project (United Nations Industrial Development Organization titled "Promoting green electric mobility (e-mobility) solutions for urban transport in Bhutan and the wider Hindukush-Himalaya region".
Output 3.3: Charging infrastructure expanded through demonstrated viable business model to ensure sustainability	
Activity 3.3.1: Prepare cost – benefit analysis and develop business model for network operations (PPP, concession agreement) and develop technical design of the charging network expansion	**The Activity is on track** - The report developed by the International Consultant to develop a viable and sustainable business model for the operation of the charging stations was presented and finalized by the stakeholders of the project.
Activity 3.3.2: Design contractual and financial agreement mechanism for dedicated operator(s) is in place for EVSE	**The Activity is completed** - Based on the findings and recommendations from the International Consultant for the development of charging station business model, the operation and maintenance of the charging stations were handed over to BPC on 12th July 2022. The handing taking of the charging stations were also completed.

[24] Using an exchange rate of USD 1 = Nu. 78
[25] Using an exchange rate of Euro 1 = USD 1.0112

Activity	Implementation status at TE
Activity 3.3.3: Prepare detailed specifications for charging infrastructure, procurement and installation of charging stations	**The Activity is completed**

While the activities and indicators under components 1, 2 and 3 have been achieved or on track, the key question is whether the targeted challenges and barriers identified at project design have been addressed.

Regarding component 1 which intended to establish a favourable policy and regulatory environment, the TE team judges that the identified policy gaps have been addressed and relevant policy instruments introduced. The key now remains to monitor their implementation beyond the initial period and to revise and update in response to the prevailing national and international policy environment on EVs and climate resilient/low carbon growth.

Pertaining to component 2, the project implemented actions to address misperceptions, attitudes and low level technical knowledge among the LEV market/sector stakeholders. Outreach actions were delivered online and face to face and impacted 924 persons out of 1000 targeted. Participants in the evaluation were overall satisfied with the improvements in capacity and knowledge about EVs. However, at the time of the terminal evaluation, the final perception survey to assess the actual changes compared to the baseline situation was yet to be implemented. This is planned for September 2022. This survey will have two objectives: (a) monitor, assess and report on the achieved results and their effectiveness in terms of changes in perception and attitudes; and (b) identify remaining capacity and knowledge gaps where additional awareness/capacity needs could be provided post project. The TE is therefore, unable to conclude on the outstanding challenges if it all. The tender for the implementation of the survey has been floated on e-GP by the PMU.

Component 3, focused on addressing the challenges linked to high upfront costs and inadequate national infrastructure for EV deployment. Through the project interventions, an innovative financial mechanism was implemented which allowed taxi drivers to benefit from a project subsidy from the project, but also loans from the Royal Bank of Bhutan. The network of chargers have also improved through the project's intervention to respond to the increasing number of EVs in the country. Despite the introduction of the financial subsidy, the costs of purchasing EVs in the short term remains high (even though they are lower over the lifetime of the car compared to ICE vehicles). Therefore, the barriers related to reducing the high upfront costs remain in the absence of an already identified mechanism to ensure continuity beyond the project initial period. Regarding the charging networks and relevant infrastructure, this has to be continually developed and maintained to cope with increasing number of EVs introduced by the project but also those acquired by private individuals and government.

In terms of progress towards the project objective, (**Table 8**) below shows that two out of the three project indicator targets were highly exceeded. The GHG targets have been missed in part due to the delays experienced in the delivery of the vehicles and the number effectively plying the roads at the time of the terminal evaluation. The target will not be achieved by the end of the project. Regarding the lifetime direct GHG emissions avoided as a result of

project-facilitated increase in LEVs, the PMU will submit by 27th September, 2022 the complete list of EVs on road till date and GHG emission details calculated.

Table 8: Results analysis of level of attainment of objective indicators

Objective indicators	**End of project target**	**Actual project achievements**	**Rating**
Objective: To facilitate the initial stage of low-carbon transition in the Bhutan's urban transport systems as the preferred choice of mobility in Bhutan			
Lifetime direct GHG emissions avoided as a result of project-facilitated increase in LEVs	3,440 tCO2/year or 43,000 tCO2/ lifetime	348.97 tCO2	Unattained
Number of users of low emission vehicles (including female)	300,000 passengers per year for 300 EV taxis, including at least 50% (150,000) female	813,750 passengers (33.33% female) travelled in EV taxis as of the TE period	217%
Volume of investment mobilized and leveraged by the project for low-emission vehicles, of which: - public (mln US$) - private (mln US$)	Private: 6,545,000$ Public: 10,318,000$:	Private: 7,240,256.4$ Public: 14,757,297.4$	213%

Source: Data from PMU[26]

Table 8 shows that of the three specific objective indicators, 2 of the indicators were exceeded, while the indicator related to GHG ER by EOP will not be achieved. The EVs were only provided to in 2021 and 2022 and therefore, by the terminal evaluation all the 300 EVs were not supplied. According to the project management unit, there has unfortunately been another delay following the Moratorium on Vehicle import notification from the Ministry of Finance on 18th August 2022, which created some confusion among banks and stakeholders delaying the further processing of loans and releasing the remaining working capital to the dealers. Primary recommendation is to ensure that the outstanding vehicles are effectively delivered by end of the project. The recommendation remains for the government and project team to ensure all vehicles are delivered before end of project.

[26] Information from PMU

3.3.2. Relevance

The project's relevance is rated **Highly Satisfactory**.

Relevance to Bhutan national priorities

The SLEUTS project was in line with Bhutan national priorities and related plans listed below. The project's alignment with national policies is described in detail in the Project Document.:

- National Transport Policy
- Revised Nationally Determined Contributions 2021
- National Communications to the UNFCCC
- Bhutan's 12th Five-Year Plan (2019-2024)
- Bhutan's Economic Development Policy (EDP)

The Emission of GHG emission from Bhutan's transport sector are projected to reach 660,000 tCO2[27] in 2030, making EVs a high priority for the Government of Bhutan. Also, Bhutan's Vision 2020 highlights the need for the development of a safe, reliable and comfortable public transport system. The nation depends heavily on the importation of fossil fuels, rendering the transport sector highly vulnerable to external shocks. This is more evident during this era of rising fuel prices experienced in Bhutan and globally caused by the ongoing Russia-Ukraine conflict, enhancing the relevance of the project. The SLEUTS project is therefore highly relevant in reducing GHG emissions and fossil fuel imports in the transport sector[28]. By curbing GHG emissions in the transport sector, the project will support the RGoB towards meeting its international climate change mitigation commitments enshrined in the NDC.

TE respondents opined that the project was overall highly satisfactory as presented in **Figure 8**. The figure shows that the majority of the respondents (77%) rated in favor of highly satisfactory. Some of these respondents had the following to say: "*To achieve Bhutan's carbon neutrality, the low-hanging fruit is the transportation sector. Hence, any intervention in the sector is bound to have a significant effect on meeting the national priorities*" reported a TE respondent. "*This project is seen as the translation of policy and commitment into action"* reported another respondent[29].

[27] Bhutan Vehicle Emission Reduction Road Map and Strategy, 2017–2025. See: https://www.adb.org/sites/default/files/publication/513931/adb-brief-110-bhutan-vehicle-emission-reduction-strategy.pdf

[28] Interviews with TE respondents

[29] Interview with TE respondents

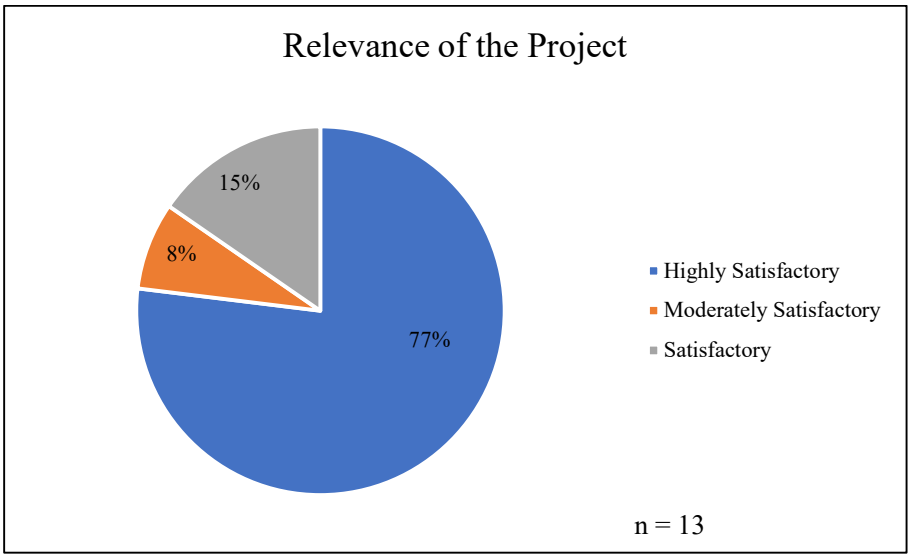


Figure 8: Perception of TE respondents on the relevance of the project

Relevance to GEF Focal Area and/operational program strategies

The Bhutan SLEUTS project aligns well with the GEF-6 programming directions which is focused on climate change mitigation. Specifically, SLEUTS aligns well with the following programs of GEF-6 Focal Area Strategic Framework (**Figure 9**): Program 1 – on financing low carbon technologies; Program 2 – on the development of innovative policy packages; and Program 3 – on promoting low-emission urban systems. Energy is one of the signature areas of UNDP and SLEUTS therefore aligns with UNDP's mandate. This alignment of SLEUTS to UNDP's mandate and GEF-6 programming directions is further corroborated by ratings of Satisfactory and Highly Satisfactory provided by TE respondents (**Figure 10**).

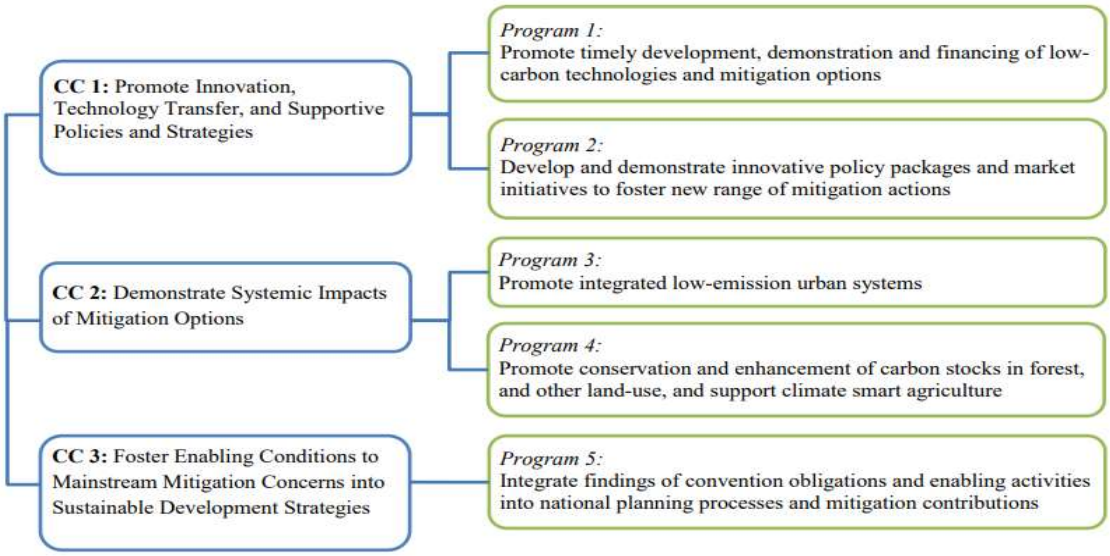


Figure 9: GEF-6 Climate Change Mitigation Focal Area Strategic Framework (Source: GEF, 2014[30])

[30] See: https://www.thegef.org/sites/default/files/documents/GEF-6%20Programming%20Directions.pdf

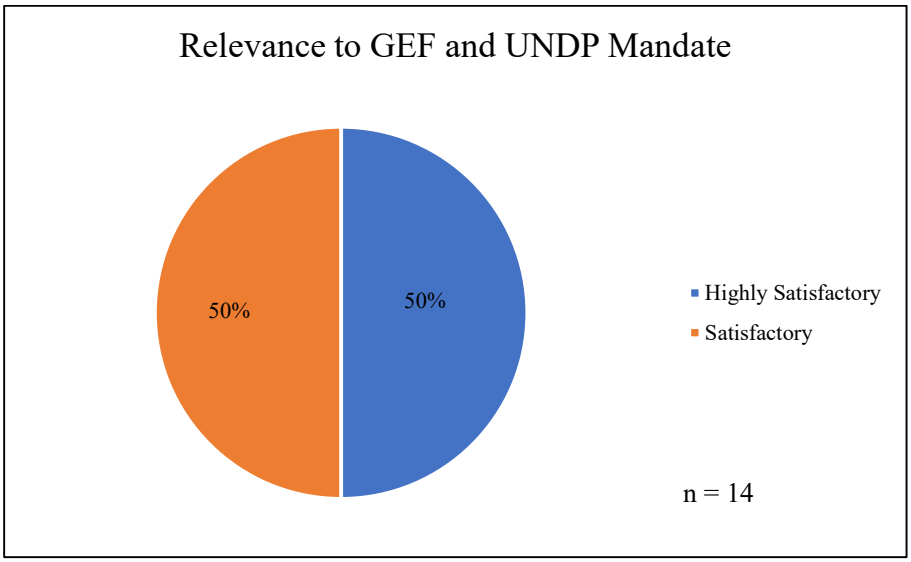


Figure 10: Perception of TE respondents on the relevance of the project to UNDP mandate and GEF focal area

Overall, the evaluators rate the relevance of the project as **Highly Satisfactory**. There is a clear link between SLEUTS and national priorities and equally between SLEUTS and the UNDP and GEF mandate.

3.3.3. Effectiveness (*)

The project's effectiveness is rated **Satisfactory considering most of the output indicators were achieved or are on track** at TE.

***Component 1**: Policy support for low-emission transport*

The first component of the project focused on creating the required policy environment that will enable low-emission transport technologies to thrive. With the support of an international consultant, the project established policy guidelines and regulations for the safe disposal and management of e-waste such as spent batteries that will emanate from the EVs. An international consultant equally supported the project in establishing a Road Map for EV adoption in line with the existing policies in the countries. The roadmap included mid-term and long-term targets for EVs adoption in Bhutan. The project conducted consultations which culminated in proposed and adopted regulations to support operation of EV vehicles.

The level of achievement of outcome 1 targets is presented in Table 9.

Table 9: End of project target vs actual level of outcome 1 achievement

Component 1: Outcome indicators	**End of project target**	**Actual project achievements**	**Rating**
Outcome 1: By the end of the project period required policy and regulatory environments are in place to support the promotion of low emissions transport systems			
Status of national targets for introduction of LEV	National target for LEV adopted	The Low Emission Development Strategy has been developed. The Roadmap recommends converting 100%, 70% and 10% of taxi, private	Achieved

Component 1: Outcome indicators	End of project target	Actual project achievements	Rating
		and heavy vehicles fleet respectively to electric by 2035. This target has been committed and communicated to UNFCCC through its 2nd NDC	
Status of regulations enabling and incentivizing investment in LEV and support infrastructure	At least 3 additional EV enabling regulations proposed and adopted	- Loan for the purchase of Electric Vehicles increased from 30% to 70%. - The PMU and the taxi established a Memorandum of Understanding with the Bank of Bhutan for the purchase of electric vehicles without the requirement for collateral -The PMU has put forth a note to the cabinet for waiving of parking fee for EV vehicles	Achieved
Status of regulations addressing e-waste disposal and management issues	Regulations addressing e-waste disposal adopted and piloted	A report has been prepared on E-waste disposal and management by an international consultant. The guideline on e-waste management has been adopted and currently in use. A new study is currently being facilitate by the project office, outside this project, which will look at ways to manufacture EV components wherein the re-use of spent EV batteries will also be explored. The report that was prepared as part of the project will be useful for this study.	Achieved

Component 1: Outcome indicators	End of project target	Actual project achievements	Rating
Number of public transport policy makers and transport staff and officials trained (including female)	100 (50 female)	91 individuals trained including 22 women. They include officials from RSTA, Royal Bhutan Police and MoIC	91% (44% women)

The results in Figure 11 are largely in line with the table above. The majority of the respondents of the TE rated the achievement of outcome 1 as Satisfactory as presented in **Figure 11**.

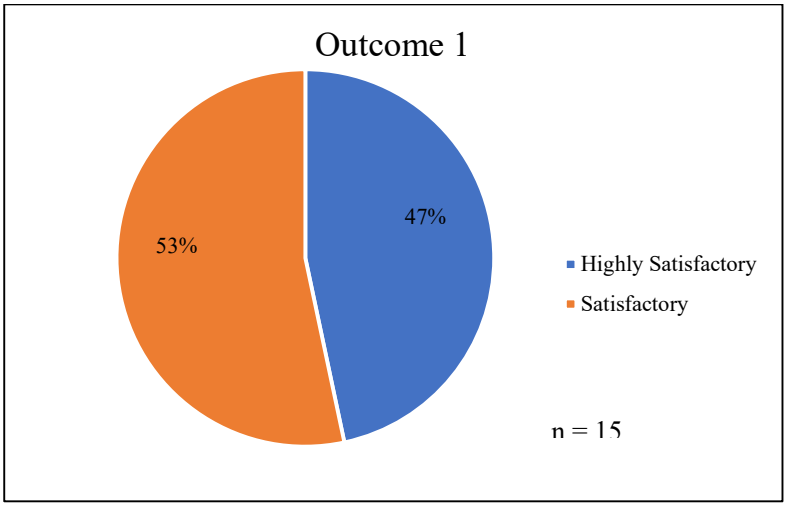


Figure 11: Perception of TE respondents on the level of achievement of outcome 1

The box below shows the significant number of actions taken to develop the policy support environment in the country.

1. Cabinet directives requiring all new/replacement government vehicles to be EVs only (14.02.2020).
2. Cabinet directives transferring the EV project to PMO from MoIC to provide impetus to the project activities, against the backdrop of challenges imposed by COVID- pandemic [June 2020].
3. 70% collateral free loan, for 7 years from BoBL [Special one-time consideration – Central Bank], despite high non-performing loans (NPL) in transportation sector. Group Guarantee Scheme through Bhutan taxi Association. *ICE vehicles – 30% loan for 5 years only.*
4. 20% direct cash subsidy, paid as advance booking.

5. Only 10% upfront cost for buyers.
6. 70% working capital support as short-term loan to local EV dealers through BoBL, with government as guarantor [Special one-time consideration, beyond NCGS mandate of Nu.30m ceiling]. In November 2021, only 16 vehicles on road. With this intervention, 123 EVs delivered, remaining on the way.
7. All EVs and EVSEs are tax exempt [125-180% tax on ICE vehicles].
8. Low Emission Development Strategy for Surface Transport 2021.
9. EV Roadmap 2035.
   Target – EV annual sales of 70% of the total sales by 2035, and reduce 1406 kilotons of CO2. Mid-term target 2030– 50%.
10. Adopted charging standards for public charging stations – CHAdeMO & CCS.
11. Free charging at public charging stations [until 2025].
12. Free parking for EVs in front of charging stations while charging.
13. Pay Commission Act 2019 and Vehicle Import Quota Rules 2019– EV vehicle import quota for eligible civil servants with the option to monetize at Nu. 350,00 as opposed to Nu. 250,000 for ICE vehicles.
14. Moratorium lifted on import of EV and hybrid vehicles costing $40k or more [October 2021].
15. Green number plates for EVs.
16. Technical specifications for EV taxis.
17. Technical specifications for the charging stations.

Source: PMU presentation June 2022

The TE team concludes that the project has successfully addressed the identified legal and regulatory barriers identified in the project document.

Component 2*: Awareness and capacity development*
This component is geared at enhancing the awareness of stakeholders on EVs. The project supported an awareness campaign through the elaboration of advocacy pamphlets and brochures, awareness-raising events for taxi drivers, Bhutan Traffic division, Police, RSTA and public, and conduction of an EV perception survey to generate initial knowledge and understanding of the public on EVs. The team used a combination of face-to-face events and online events to reach citizens stakeholders. Social media platforms and messaging tools such as WeChat and WhatsApp were utilised to maintain regular awareness raising and advocacy.

The project equally supported the Technical and Vocational Education and Training (TVET) program under the Ministry of Labour and Human Resources (MoLHR) to develop a curriculum for EV to be tutored in three TTIs. Three officials were sent to Delhi with support from the PMU to be trained on EV repair and maintenance while nine transport officials and

11 members of Bhutan Taxi Association embarked on a study tour to Korea and Bangkok with support from the project, to learn about best practices in the EV technology.

Table 10 shows that the outcome is on track. As already highlighted in the MTR, the second indicator was not achievable within the timeline being overambitious.

Table 10: End of project target vs actual level of outcome 2 achievement

Component 2: Outcome indicators	**End of project target**	**Actual project achievements**	**Rating**
Outcome 2: By the end of the project period institutions and consumers are fully aware and knowledgeable on the EVs			
Status of coordination mechanism among public and donor agencies involved in low emissions transport	Coordination mechanism in place	Functional/operational co-ordination mechanisms exists at various level.	Achieved
Share of taxi drivers willing to switch to EV	At least 75% of taxi drivers are willing to switch to EV car	The perception survey has been scheduled to take place from 15 – 30 August 2022 before the end of the project.	On track
Number of taxi drivers (including female) benefitting from training and information about technical, safety and financial aspects of LEV ownership	1,000 (and all current women drivers - 35 female)	924 (46 females) have benefitted from advocacy and awareness programs	92% (131% female)

When asked to rank the level of achievement of outcome 2, responses ranked from satisfactory and highly satisfactory as presented in **Figure 12**.

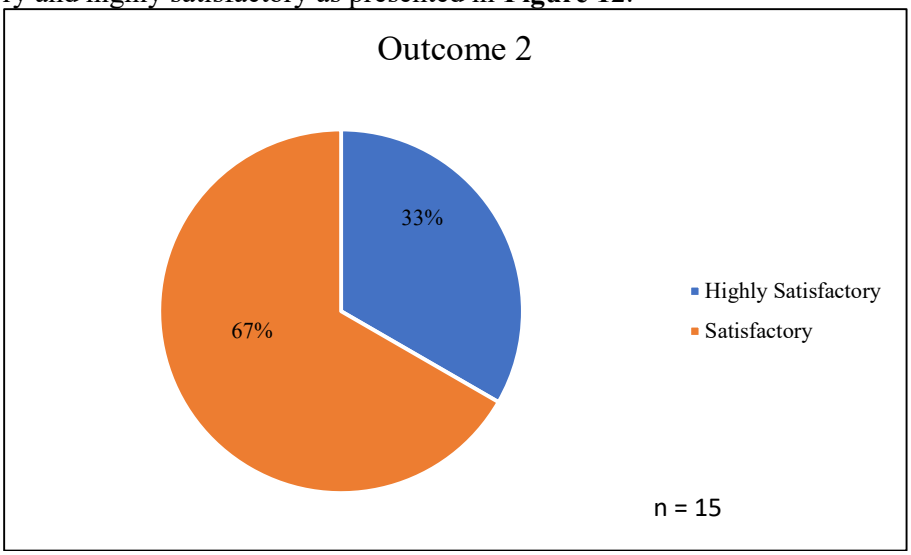


Figure 12: Perception of TE respondents on the level of achievement of outcome 2

Based on responses from evaluation participants and the assessment towards the component's targets, the TE team concludes that the delivery of the expected results and targets have been achieved or are on track to be achieved. This relates to indicator 1 and 3 considering that indicator 2 (At least 75% of taxi drivers are willing to switch to EV car) was already analysed as being unrealistic (see section 3.1.1) considering that the perception survey of 2019 revealed that only 20.4% of respondents reported likelihood to purchase EV[31]. In the absence of this evidence from the survey, the TE team is unable to conclude on the actual change and barriers effectively lifted by the project intervention.

The key outstanding activity (2.1.4) under this component, relates to the implementation of a final perception survey which will compare progress between perceptions and levels of knowledge at the beginning of the project and those obtained at the end of the project. The survey will also identify any outstanding capacity needs that could be addressed beyond the project.

The initial survey was implemented whereby a random 485 sample size drawn from the general public and taxi owners for the five administrative vehicle registration regions in the country were targeted. Activity 2.1.4 proposes using the same approach to ensure comparability of the results. While this approach has its benefits, the team could also apply a control group approach to compare the attitudes, perceptions and knowledge of a sample of project beneficiaries and those who have not benefitted from the project to assess any differences that might emerge. In choosing the control group, the team could use individuals who demonstrated interest in the taxis with similar demographic characteristics as those who took part in the project to compare their views and perception. Improvements amongst beneficiaries would be assessed before and after the intervention with the results obtained from the control group.

Component 3: *Investment supported for low-emission transport system and other services*
This component was focussed on establishing necessary incentive/financial support mechanisms to spur the adoption and uptake of low emission transport technologies in Bhutan. An analysis of the results framework shows that indicators are broadly on track as shown in **Table 11**.

Table 11: End of project target vs actual level of outcome 3 achievement

Component 3: Outcome indicators	**End of project target**	**Actual project achievements**	**Rating**
Outcome 3: By the end of the project period necessary financial support/incentive mechanisms are in place to increase investment in low emission transport systems and support services			
Number of new EV purchases enabled by the project	300	281 (14 female)	94%
Status of the financial support mechanism to promote LEV investment	Financial support mechanism is operational on sustainable basis with the level of investment support	PMU in collaboration with the Bank of Bhutan Limited (BoBL) launched a new transport commercial credit program named	Achieved

[31] PIR 2021

Component 3: Outcome indicators	End of project target	Actual project achievements	Rating
	reflecting changes in market development	transport (electric vehicle)	
Leveraged investment in EV and support infrastructure enabled	Private: 6,545,000$ (80% of 300 EVs) Public: 10,300,000$: (Nu.540.00 million - value of tax incentives/import duty exemption for 300 EVs + 45 charging stations)	PMU ensured the mobilization of total private financing of USD 7,240,256.4 from the taxi operators. USD 14,757,297.4 was also mobilized from the public sector[32]	Achieved

When asked to assess the progress made towards the achievement of outcome 3, **Figure 13** shows an overall satisfaction ranging from moderately satisfactory (13%) to satisfactory (27%) and highly satisfactory (60%).

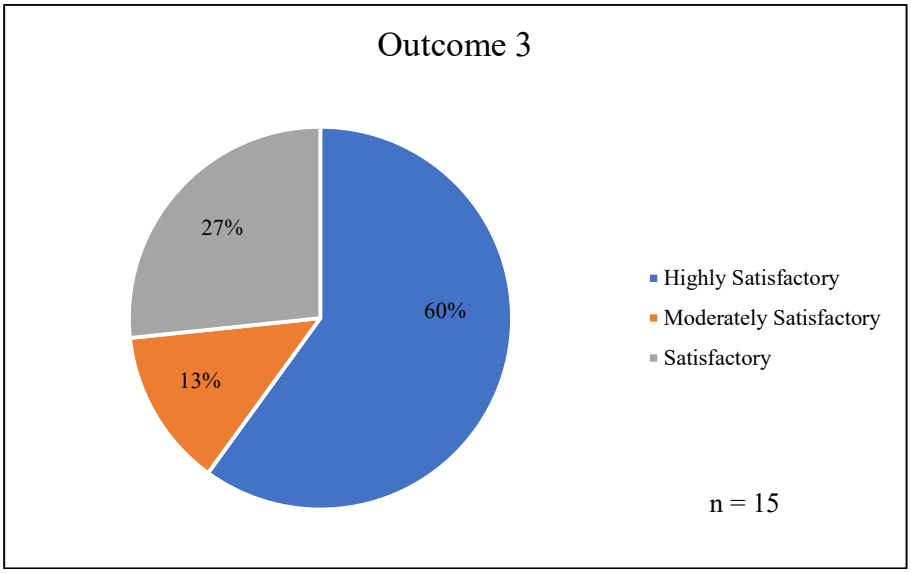


Figure 13: Perception of TE respondents on the level of achievement of outcome 3

At the time of the evaluation, 281 EVs were effectively delivered to taxi drivers representing a 94% level of achievement. As stated below, the delays have been driven by the sizes of the command of cars and the global supply disruptions imposed by the emergence of the Covid 19 pandemic. A key target of this component was to address the challenges linked to high upfront costs and the infrastructure required for deployment of EVs in the country. The analysis, however, shows that despite addressing these challenges for the current beneficiaries, other taxi drivers without a subsidy will still be unable to surmount these costs. While this financial model

[32] This accounts for USD 5,066,090 from the exemptions of tax for the import of electric vehicles. USD 51,282 for the co-financing from Bhutan For Life for the installation of charging stations and the remaining from the Royal Government of Bhutan, UNDP and BTFEC.

has demonstrated its benefits, a longer term view is required and whether government would be able to provide a different type of incentive system to the private sector and banks to continue to provide subsidized loans to interested taxi drivers. It is important to remember that though the upfront costs are high for EVs, the overall/lifetime costs for EVs are cheaper than ICE vehicles. Based on the overall level of achievement of the project and the challenges imposed by the COVID- 19 pandemic, the evaluators rate the effectiveness of the project as **Satisfactory**.

Supporting and constraining factors

Supporting factors

Buy-in from the population and target groups: increased awareness and confidence among drivers and the public about the EV technology. As a matter of fact, consultation with stakeholders during the TE evaluation revealed that more taxi drivers are expressing interest in adopting EVs. Passengers are also showing increased preference in commuting in EVs as they are not only comfortable but offer competitive fare compared to conventional ICE taxis.

Government support: the project received immense support from the government at all levels. The government engaged in the provision of policy support for EVs to thrive. For instance, the government instituted zero sales and import duty taxes on EVs in order to enhance the importation and adaptation of the technology in the country. The government also supported the scaling up of the technology within the framework of the project through the commitment taken towards the replacement of their fleet with EVs. The government/public also mobilised co-financing to support project implementation. The TE team believes the government is in the position to continue providing such policy support to the actors involved with electric vehicles.

Rising fuel prices: the increased fuel prices globally have rendered EVs more attractive. This has enabled EV taxi drivers in Bhutan to provide competitive transport fare to customers as they generate higher earnings than their ICE counterparts. This concords with the increased interest exhibited by taxi drivers to adopt EVs in the country.

PMU support: PMU provided strong coordination support to the implementation of the project. This is evident in the role the unit played in mobilizing co-financing for project implementation and supporting the government to ensure the supply of EV vehicles.

Constraining factors

Coordination: There existed instances of poor coordination of stakeholders/institutions for the realization of some of SLEUTS' activities. Taxi drivers for instance, raised the issue of poor coordination between PMU, Thromde, BPC, and Bhutan Taxi Association in site selection for the construction of charging stations. In the construction of the charging stations, BPC was not involved in the monitoring of the construction process due to lack of proper coordination and the PMU could not monitor the quality of the construction work due to COVID-19. The handing over of the constructed stations happened without the inspection/validation of the infrastructure by a qualified expert. The members of the Technical Working Group was established to ease the coordination issues at the working level and also the members were identified based on their technical expertise to resolve issues related to EVs.

COVID-19 lockdowns: During the COVID-19 lockdowns, taxi drivers could not work and this affected their earnings, culminating in high NPL. The PMU had several rounds of

discussion with the financial institutions based on which the FIs had given the option of spreading out the accumulated EMIs over several months in order to reduce the burden of EMI payment. The repayment period for the NPL were also extended by two months. Since the drivers could not work, they were unable to pay the EMI for their car loan. Also, the pandemic disrupted the supply chains of EVs and this affected the timely availability of EVs in Bhutan. In the meantime, the taxi drivers were getting impatient as they had already sold their old taxis to buy the new EVs and their livelihoods were affected. Installation of charging stations was also affected as the equipment had to be brought in from various countries. Furthermore, the pandemic also affected the project as planned visits of international experts had to be either cancelled or had to resort to virtual means which were not as effective.

Import challenges: A challenge faced by Bhutan and the project was related to the volume of orders for EVs which was much lower compared to other customers. As such, priorities were given to other customers with larger orders.

Insufficient training: Taxi drivers expressed the need for training especially given that they were all new to the technology. Some of the drivers did not receive any formal training as the delivery of their cars took place during the height of the pandemic and there was heavy movement restriction imposed by the government in Phuentsholing around the same time. The PMU had proposed virtual training sessions, but the drivers expressed their reservations on the effectiveness of such virtual training in addition to their lack of experience as well as equipment (laptops, tablets, etc.) required to attend such training.

Insufficient charging stations: Taxi drivers expressed concerns over insufficient charging stations as well as the increased malfunction of the ones that are there, especially in Paro and Haa. Both the DC charger in Paro and Haa were out of service for weeks and the EV drivers have been taking turns to charge from the one AC charger that is there in Paro town. A female driver expressed their safety concerns on having to wait for long hours into the night to charge their car. Given the increased number of EVs plying the Thimphu-Paro highway, the need to increase the number of charging stations in these two locations is seen to be critical. Major issue was the O&M of the charging stations as the MOIC and the PMU did not have physical presence in various districts. These has now been resolved through handing over of the responsibilities of the O&M of charging stations to BPC which has its establishment in all 20 districts. The insufficient charging stations has been resolved through mobilization of additional co-financing for construction of 15 charging stations across the country.

3.3.4. Efficiency

The efficiency of the project is rated **Satisfactory.**

The UNDP supported GEF financed Project on Bhutan SLEUTS was signed between UNDP CO, the GNHC and the MoIC on September 28, 2018. The inception meeting was expeditiously organized on the 30th of October 2018. To ensure that the project started off efficiently, the implementing partners discussed on modalities for implementation of the project and prepared the annual work plan in line with the approved project document. The PB were constituted to drive project delivery and oversight. In the absence of sufficient technical expertise on EVs within PMU or government, the TWG was instituted to provide technical oversight and direction. There was a feeling that as a new area, a lot was done through learning on the job.

As the project is delivered through the NEX Manual agreed between the RGoB and UNDP, management aspects of the project have been the responsibility of the national authority with accountability lines to UNDP CO. UNDP CO in turn remains accountable for the use of resources to the UNDP Executive Board and the GEF. The project was well resourced in terms

of administrative, governance structure and the project management unit as highlighted in the 2018 inception meeting report. The team demonstrated its ability to leverage external resources and consultants to support project delivery though this was not always possible due to COVID-19. However, the MTR recommended the PMU to be strengthened to include communications and advocacy staff to enhance its outreach and communications impact. The team was also subsequently strengthened with technical expert to support its delivery. Support from external consultants provided necessary additional expertise which enabled the project management unit to deliver the project. As presented in section 3.2.2, strong stakeholder engagement at all levels further strengthened the efficiency of the action through leveraging expertise and experiences from a wide range of actors.

A review of all PB meeting reports clearly demonstrates a coherent project with a functional governance, oversight and project management structure. The meeting reports demonstrated that the project unit was responsive and actioned the recommendations of the PB leading to the significant progress achieved in this project. The project also demonstrated efficiencies through the application of transparent processes for selection of project beneficiaries and the identification of sites for construction of charging stations[33].

The project faced significant challenges with the COVID- 19 pandemic in terms of the ordering, procurement and delivery of EV vehicles and charging station equipment, and the delivery of capacity strengthening and awareness raising activities which led to the project being extended for a year. Stakeholders also stated that part of the challenge for securing the vehicles was the size of the order. For instance, the size of Bhutan's order of 300 EVs was insignificant in comparison to millions of cars being ordered elsewhere. As such, the local dealers had a tough time delivering the orders on time. Regarding the procurement and delivery of vehicles, the PMU worked closely with UNDP and other government agencies to explore options and modalities for importing vehicles into the country. This included the PMU constantly following up with Ministry of Foreign Affairs, car dealers, liaising with customs officials in India amongst others. The government also engaged measures to ease the financial burden on car dealers to support their ability to order the vehicles. The government's strategic intervention (30/12/2021) of working closely with the Bank of Bhutan (BoB) and with the National Credit Guarantee Scheme (NCGS) enabled local EV dealers to avail short term loans which proved essential and timely.

With all these challenges, delays in the delivery of cars were inevitable. As one EV owner stated: *I ordered my EV in September 2019 and got the car only in December 2021. I had to wait a long time to get my car and it impacted my family's livelihood. I have been told that the delivery was impacted due to COVID-19.*

The various views from respondents support the crucial role played by government to address the delay of vehicles supplied to beneficiaries which it must be said was a key risk for the project. Delays caused anxiety for beneficiaries and could have tarnished the image of the government, donors and the project if the vehicles were not delivered:

Government ownership is extremely high in this area, which is why the project despite facing a lot of challenges in the initial phase has successfully delivered all its objectives.

Support was received from the highest political leadership to ensure that the project results were delivered. For example, when the Dealers didn't have any working capital mainly

[33] Royal Government of Bhutan and UNDP 2018. Feasibility study and identification of sites for installation of Quick Charging Stations (QCS) March 2018

because of the COVID-19, the government made NCGS stand as a guarantee by making an exception in its ceiling limit to get working capital loans from the Bank to the Dealers.

With the delivery of the first few batches of EVs, the confidence in the technology became widespread which helped in increasing the EV uptake.

Government also played a critical role in setting up the charging stations and also in their troubleshooting by bringing on board various agencies with the technical capability. The government's decision to also bring in the operations and maintenance of all public EV charging stations under the management of the BPC could yield efficiencies and reduce transaction costs of external management but this will be tested over time compared to the current private operated models.

Regarding capacity building and awareness raising activities, the project demonstrated efficiencies through pivoting to online delivery even though this was not always appreciated by beneficiaries. The project also demonstrated significant efficiencies and value for money, through strong stakeholder engagement, the use of online/social media platforms to sensitize and provide support to stakeholders. Adoption of a training of trainers approach enabled the project to train nationals out of the country who in turn provided training to others, hence improving on the pool of people with necessary expertise on EVs. The development of national training curriculum on EVs between the PMU and the MoLHR's TVET program is likely to yield far more significant benefits through training national workforce as opposed to constant dependence on external consultants.

The contributions from car dealers through construction of charging stations as part of their CSR obligations provide value for money for the project but there have been calls for stronger coordination between the dealers, the PMU and RSTA to ensure transparency and the viability of these initiatives. The role of private sector is of critical importance if the EV ecosystem is to flourish in the country. The already demonstrated commitment under this project could be replicated with other target groups such as buses, train, manufacturing of EV spare parts in the future.

The overall project budget was realistic for the scale of the project. The government demonstrated excellent ability to mobilize and report on match funding as seen in Figure 14.

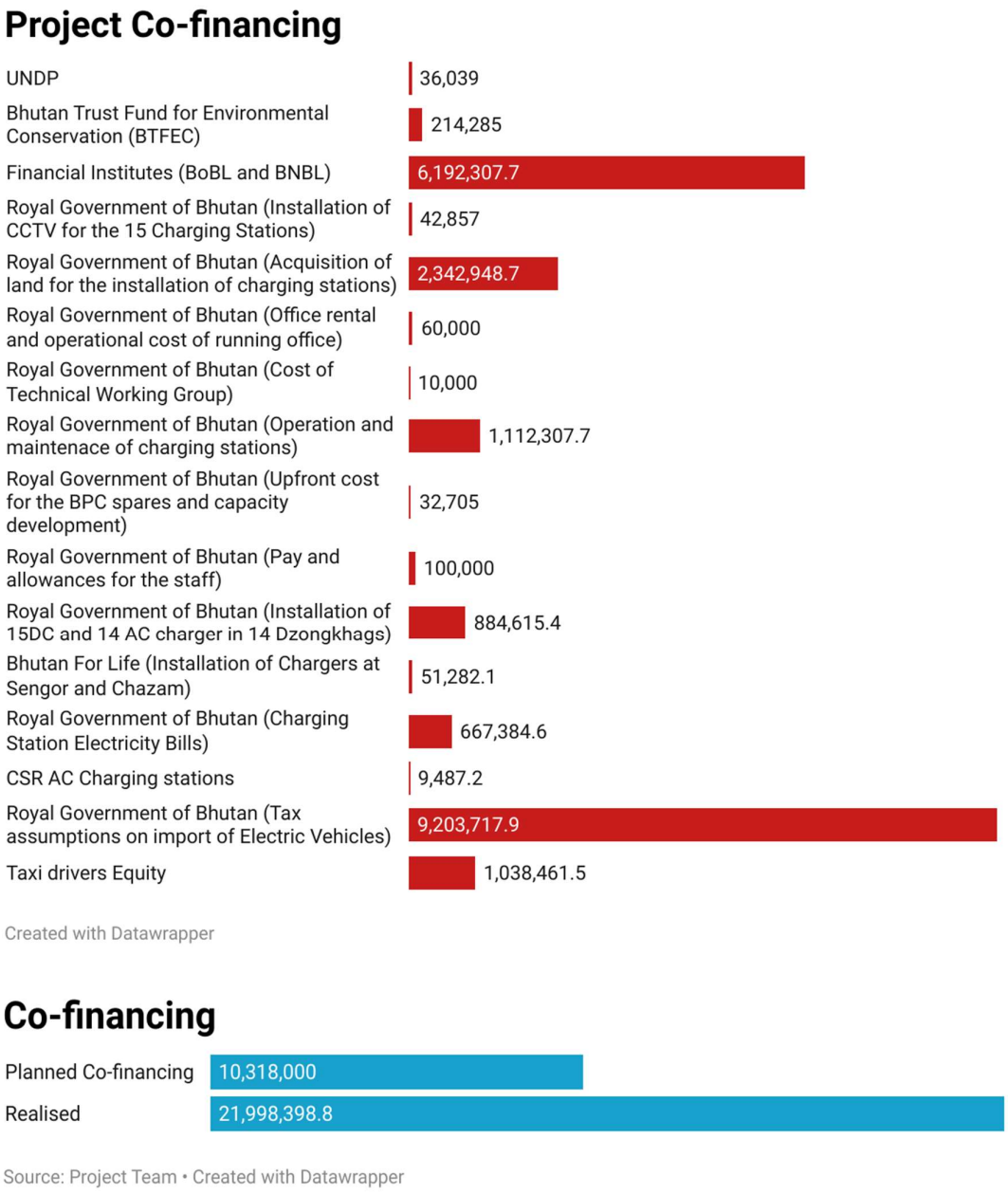


Figure 14: Materialisation of co-financing

The total expenditure rate as of 30.06.2022 was US$ 15,016,207.6 which shows a high burn rate both for the GEF grant and the co-financing, showing high delivery rate.

The project followed the RGoB financial rules and regulations in addition to UNDP and GEF reporting requirements. Annual auditing was implemented by the Royal Audit Authority. In terms of ongoing financial management, the quarterly FACE forms were submitted to UNDP on a quarterly basis. These were reviewed and entered into the system. Spot checks were done by UNDP Bhutan by outsourcing to an empaneled private audit firm. The Nature, Climate and

Energy unit in Bangkok (Regional Technical Advisor and Regional Programme Associate) provided second layer of oversight.

Overall, the government delivered on its mandate and maintains significant commitment to the project. For instance, H.E the Prime Minister, stated that government had delivered on its policy obligations creating a favorable environment and ecosystem for the roll out of EVs in the country. The decision to move the PMU into PMO was also identified as an efficiency and impact measure by the honorable Prime Minister. It was argued that the PMO has both the authority as well as the benefit of reach in terms of pushing for policies and regulations more efficiently than individual line ministries. It also sends a message to national stakeholders regarding government priorities with the benefit of promoting more buy-in and ownership of the project and hence its future sustainability. When respondents were asked to rate their satisfaction with project efficiency, Figure 15 shows that stakeholders were very satisfied with the delivery of the project despite its challenges.

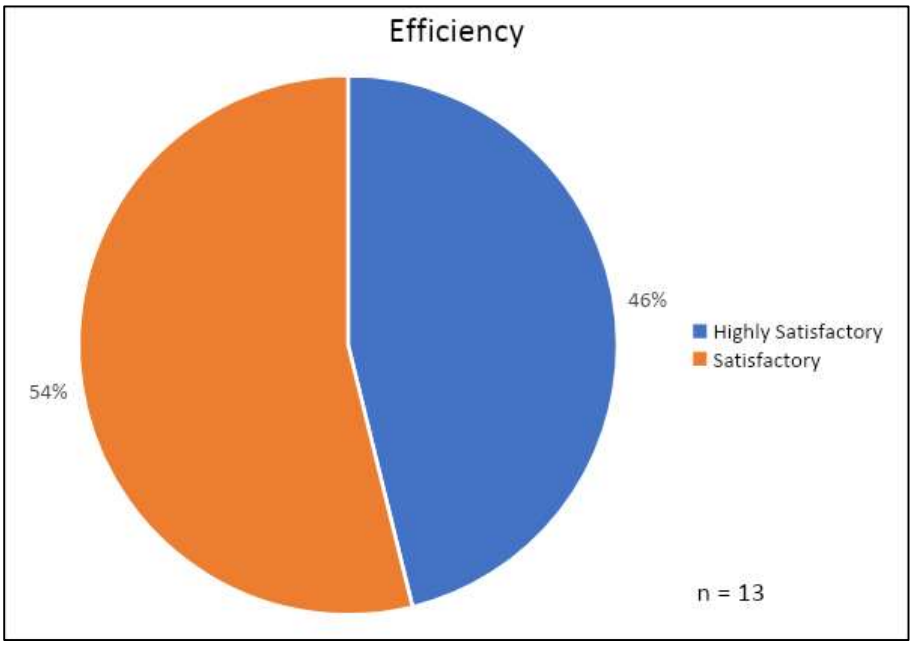


Figure 15: Perception of TE respondents on the efficiency of the project

3.3.5. Overall Outcome (*)

The overall outcome rating is **Satisfactory**. This is based on the assessment/rating of efficiency, effectiveness and relevance.

3.3.6. Country ownership

Country ownership of the SLEUTS project was achieved through the involvement of national stakeholders in the project design and implementation. Also, the project witnessed the engagement of policymakers in some of its activities. Policy and regulatory frameworks for supporting the adoption of sustainable low emission transport technologies in Bhutan have been strengthened by the project. Furthermore, the project is aligned with national priorities including the country's ambition to attain carbon neutrality and to reduce dependence on the importation of fossil fuel for its transport sector.

Government ownership is extremely high and it is for this reason that despite the project facing a lot of challenges in the initial phase, it has successfully delivered all its objectives[34]. The government is 100% committed to this project, that's why the PMU was brought under the PMO in the first place[35], an exhibition of country ownership.

3.3.7. Gender

Gender mainstreaming is rated **Highly Satisfactory**.

The gender-related issues have been given close attention right from the project design stage including the formulation of the Gender Action Plan (GAP) to address various gaps that were identified.

During the implementation of the project, keen attention was been given to promoting the role of women in the project considering gender was a significant objective of the project. Some of the notable gender mainstreaming actions implemented by the project are as follows:

1. The criteria for distribution of subsidy have been keenly strategized to offer priority to female taxi drivers.
2. The policy to give preference to the female drivers from the subsidy allocation wait-list in the event of any cancellation is also being practiced.
3. The installation of CCTV in the charging stations was initiated from the safety aspects for female drivers.
4. The site selection of charging stations was guided by the safety criteria in order to make it safe for female drivers during off-hour charging.
5. By ensuring the import of good quality cars, the safety and reliability of the EVs have additional benefits to women drivers as well as passengers, especially during long-distance travel. Additionally, a trip-booking app is being developed for the safety of the passengers and drivers.

The M&E process tracked the participation of women in the project activities and the information was regularly updated in the quarterly Reports and Project Implementation Reports. The TE also carried out an assessment of gender mainstreaming during the design, implementation, and M&E stage of the project. Out of 13 respondents, 12 responded that the gender issues were mainstreamed to a great extent, as presented in Figure 16.

[34] Interview with a staff of UNDP
[35] Interview with a staff of GHNC

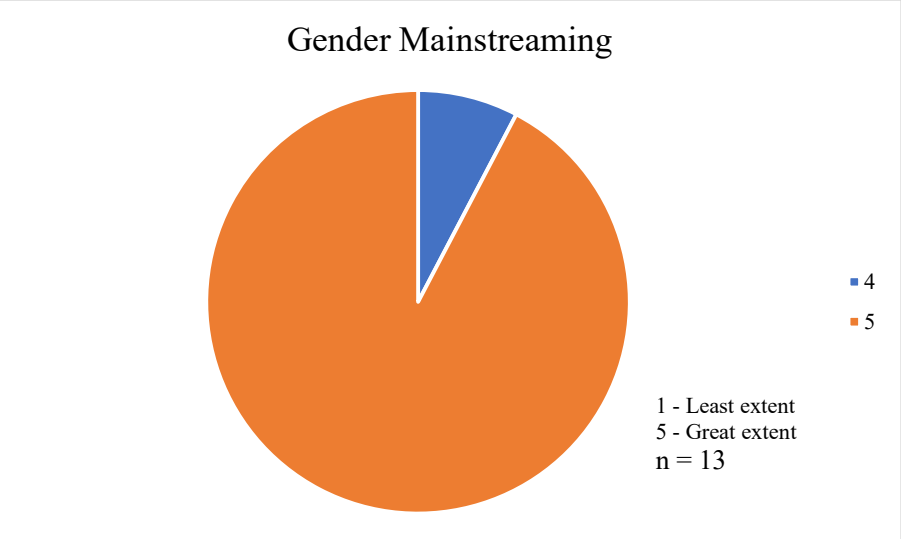


Figure 16: Perception of TE respondents on the level of gender mainstreaming in the project

On the implementation of the GAP, the update is as provided below:

Objective	Activities	Indicators and Targets	Status
Component 1. Policy support for the promotion of low emissions modes of transport			
Create an equal opportunity for female taxi drivers to benefit from the low emission transport initiative	Offer first priority to current female registered taxi drivers to avail the subsidy for purchase of EV taxis	4 female taxi drivers purchased EV taxis	Of the 300 EV beneficiaries through the project, 14 are women.
Component 2. Awareness and institutional capacity development			
Ensure due considerations of gender issues and analysis in project planning, design and implementation procedures.	Raising awareness and building capacity for gender mainstreaming	100 (50 M,50 F) public transport policy makers and transport staff and officials trained. 100 males and all 35 female taxi drivers trained	942 taxi drivers made aware on EV technology, battery management, repair and maintenance (40 women). Capacity developments of 91 transport officials (22 women) has been carried out.
Encourage Taxi drivers, specifically women taxi operators to switch to EV	Capacity building of Tax Drivers on EVs	500 taxi drivers trained in EV repair and maintenance All 35 female taxi operators in	942 taxi drivers made aware on EV technology, battery management, repair and maintenance (40 women).

		Thimphu trained in EV.	
Component 3. Investments in Low Emissions Transport Systems and Support Services			
Develop Intelligent Transport System to enhance safety in public transport, specifically taxis drivers	Partner NEC or MoIC to create linkages with ongoing projects on development of transport app	1000 taxis registered in the intelligent transport system	The PMU is collaborating with Druk Ride (an app to book online services for taxis and bus). The app shall also be used to locate the nearest charging stations and its availability. There are 2100 taxi drivers registered with Druk Ride as of 6th July, 2022.

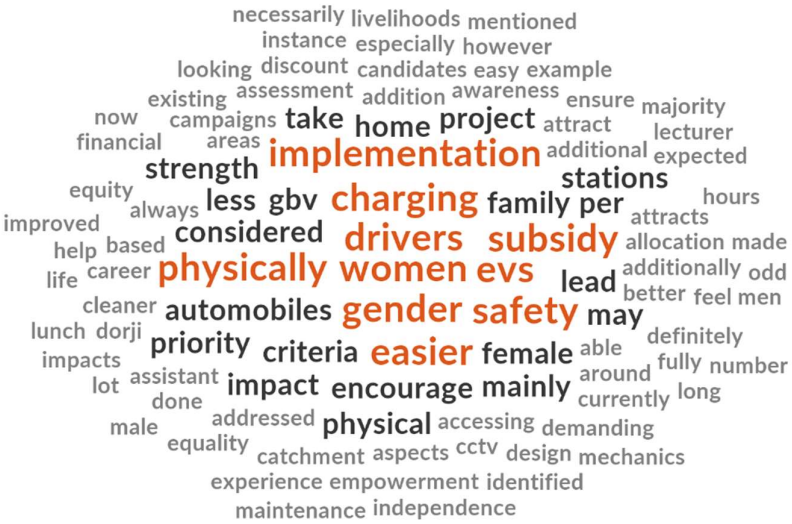
The key lesson from such targeted and deliberate action is the need to ensure the participation of both men and women in project activities. The project progress picked up only during the latter half of 2021 and during that time the restrictions on traveling and indoor gatherings were still in force due to the pandemic. As such, the project could not implement much of their planned training and workshops. Despite these challenges, as reported in the GAP update, the project has ensured gender mainstreaming in all its activities during its implementation.

Support to women's economic and socio-cultural empowerment

In the area of mobility, gender roles require or demand that women manage the house, and take care of children, limiting their access to key resources and consequently, women have more mobility demand – women's dual roles as mothers and wage earners constrain their time use and activity space[36]. Understanding the differences between men and women, the project took steps to strengthen women's empowerment through enabling greater opportunities for women, providing more consideration and support. This was evidenced in strengthening economic and socio-cultural empowerment. Regarding economic empowerment, the project sought to facilitate access to the project subsidy and loans required to strengthen their livelihoods through acquisition of EV taxis. The project developed criteria which advantaged interested women whereby, they were given an 18-point advantage in the selection of beneficiaries. The female EV drivers reported around 30%[37] increase in their net income compared to their earlier ICE taxis which led to higher disposable income for the entire family. A female EV driver also mentioned that she is able to supplement her husband's income due to her increased earning. The word cloud below shows the different ways in which respondents felt women were being empowered and could be empowered by the project.

[36] Sovacool, B. K., Kester, J., Noel, L., & de Rubens, G. Z. (2019). Are electric vehicles masculinized? Gender, identity, and environmental values in Nordic transport practices and vehicle-to-grid (V2G) preferences. Transportation research part D: transport and environment, 72, 187-202.

[37] Interview with female taxi drivers (EV and ICE taxis)



Compared to ICE vehicles EV is easier to drive, therefore EV taxi could lead to more women taking up EV taxi driving as a profession. The same was said for women engaging in repairs and maintenance considering EVs have fewer moving parts compared to ICE vehicles. This would consequently strengthen their financial independence. Other respondents felt that EV driving was physically less demanding. In addition, the EVs also have the potential to raise the socio-cultural status of the taxi drivers in general and women drivers in particular as stated by one of the TE respondents – "*in general taxi driving is seen as a lower class job, however this perception is changing with the EVs as these cars are luxurious cars and we feel a sense of pride driving and ferrying people in it*".

Safety is also a key empowerment concern for women. Respondents stated that "*we feel safe traveling with women taxi drivers, especially at odd hours*". To further address security concerns; *the setting up of CCTV in the charging stations was done mainly from the safety aspects of women drivers.* As Sovacool et al (2019) reveal from a European study, women tend to emphasise safety and environmentally friendly attributes of cars which supports earlier studies in India and Bhutan[38]. An unexpected effect of this project from anecdotal evidence was that EV drivers were also reporting spending more time with their families compared to the past because they were able to earn more and hence reduce time out driving. For instance, when charging the car, some drivers go home, spend time with family and help with chores at home providing their wives and partners with much needed respite. Other specific studies could be carried out to further explore the gendered impacts of this action and the extent to which these anecdotes are widespread.

3.3.8. Other Cross-cutting Issues

Disability

The evaluators also carried out assessments to understand the level of engagement of the persons with disability, both during the design phase as well as the implementation phase.

It was found that the project design did not have any deliberate attempts to consult and meaningfully involve people with disabilities in the project planning and design stage. As highlighted by members of the Disabled People's Association (DPA), engagement of PWDs early on in such project would have greatly enhanced the opportunity for the project to be more

[38] Prakash, N., Kapoor, R., Kapoor, A. & Malik, Y. (2014). GENDER PREFERENCES FOR ALTERNATIVE ENERGY TRANSPORT WITH FOCUS ON ELECTRIC VEHICLE. Journal of Social Sciences, 10(3), 114-122. https://doi.org/10.3844/jssp.2014.114.122

inclusive. The key challenges faced by people with disabilities using taxi and public bus services were identified as follows:

- People who have never dealt with PWD are often awkward around PWD and they lack basic knowledge on how to engage, or how to handle equipment like wheelchairs, etc. Lack of awareness amongst drivers and public bus drivers eventually lead to exclusion of PWD from taking up public transportation.
- For people in wheelchairs, drivers lack knowledge on how to handle the equipment often leading to the mobility equipment being mishandled.
- PWD also face discrimination as drivers do not often want to pick them up because it leads to extra effort of having to assist them within their wheelchair and/or assisting in and out of the car.
- For persons who are blind or deaf, respondents highlight the gaps in provision of basic assistance such as mentioning arriving at destination or providing any direction or guidance to orient the passengers.

Nevertheless, the respondents mentioned that the quality of EVs that were imported for the project ensured high safety standards to offer a more comfortable and a safer ride to people with disability as well as to the public. Therefore, disability equity awareness to taxi drivers such as Disability Equality Training (DET) and Disability Awareness Training (DAT) are critical to address the specific needs of PWDs. At the time of finalizing this report, the PMU in coordination with the UNDP had organized a one day DET on 27th July 2022 for the EV drivers in order to sensitize the drivers on the needs and challenges of the PWDs. In addition, given the driving ease of the EVs, the TE respondents also opined that EV uptake could be encouraged among people with lower disability so long as the licence is issued by RSTA.

Knowledge Management

Knowledge management was included in the project design and was constantly tracked during the project implementation period. However, most of the training and awareness program was either cancelled or moved to an online platform due to the COVID-19 restrictions. Some of the knowledge management products generated and information platforms established as part of the project were as follows:

- Information on the project, and comparison of EV vs ICE Vehicle EV Brochure
- Content on Promotion and Awareness of EVs https://www.cabinet.gov.bt/
- Content on Project information and promotion of EVs https://www.pmo.gov.bt/programs-under-pmo/electric-vehicle-project/
- Project information, awareness, and EV promotion contents https://www.facebook.com/BhutanSustainablelowemissionurbantransportsystems/

News coverage

- https://thebhutanese.bt/usd-3-mn-project-under-implementation-to-convert-300-taxis-to-electric-vehicles/#:~:text=Under%20the%20Government's%20project%2C%20Bhutan,sector%20in%20Thimphu%20by%202021.&text=GEF%20supported%20the%20project%20with,reduce%20emission%20in%20the%20country.
- https://www.eco-business.com/news/road-to-electric-vehicles-in-bhutan-is-paved-with-hurdles/
- http://www.businessbhutan.bt/2019/01/29/a-major-push-to-promote-electric-vehicles/
- http://www.bbs.bt/news/?p=114044
- https://kuenselonline.com/26-taxis-register-for-electric-vehicles/

- https://www.moic.gov.bt/en/events-inauguration-of-electric-vehicle-charging-station-at-thimphu/
- https://kuenselonline.com/special-loan-scheme-for-electric-taxis/

In addition to these initiatives, the new EV drivers were also given a half-day training by the dealers, prior to hand over of the cars, on safety aspects and basic running and maintenance of the EV. Learning and sharing of lessons also took place over the social media and WhatsApp/WeChat groups created by the respective car dealers and the drivers.
The PMU has also planned a series of knowledge management workshops from first week of August 2022 by engaging all relevant stakeholders. The result of the workshop will be the documentation of the lessons learned based on which recommendations will be drawn up for future reference.

Despite the challenges due to COVID-19, the evaluators find that the project has taken significant steps to learn and share this learning by adopting new innovative means. Nevertheless, based on the interaction with the stakeholders, the need for further hands-on training especially for the EV Master Trainers of the Technical Training Institute is felt both necessary and urgent.

3.3.9. Social and Environmental Standards

The overall environmental and social safeguard rating is **Highly Satisfactory.**
The social and environmental considerations were well considered right from the design phase of the project using the UNDP SESP. Based on the screening, three (3) risks were identified – improper management of EV battery disposal, inappropriate site selection of charging stations without due environment consideration and the lack of equal opportunity for women in the transportation sector. The management of these risks was also clearly articulated in project document.

In order to mitigate the identified risks, the following safeguard measures were carried out during the project implementation:

1. A study was carried out on the development of Rules and Regulations for the Handling, Recycling and Disposal of EV Batteries.
2. A feasibility Study is currently underway to understand the opportunities for Bhutan to Produce EV components.
3. Carried out awareness and advocacy on how to minimize or avoid any community health risk and safety issues stemming from batteries related issues including safety risks and hazards due to battery fires etc.
4. Competent Environmental Authorities were engaged during the feasibility studies for construction of Charging Stations.
5. Safety aspects such as fire, accident, crime prevention, safety of drivers and pedestrians were adopted as the criteria during the selection of sites for the charging stations.
6. Gender Action Plan was implemented and monitored throughout the project implementation.

As shown in Figure 17, the TE respondents provided an environmental safeguard rating of Highly Satisfactory and Satisfactory, with the majority of the respondents going for Highly Satisfactory. Safe disposal of used EV batteries was seen as one of the biggest environmental risks by the majority of the respondents for which the project has already initiated two different studies to explore ways to deal with battery disposal issues. As the EV number keeps growing,

the need to study the impact of EVs on grid stability was also highlighted by some of the respondents. While the pressure on the already congested urban centers is likely to increase, it has been informed that the government is currently working on a scrappage policy for older cars.

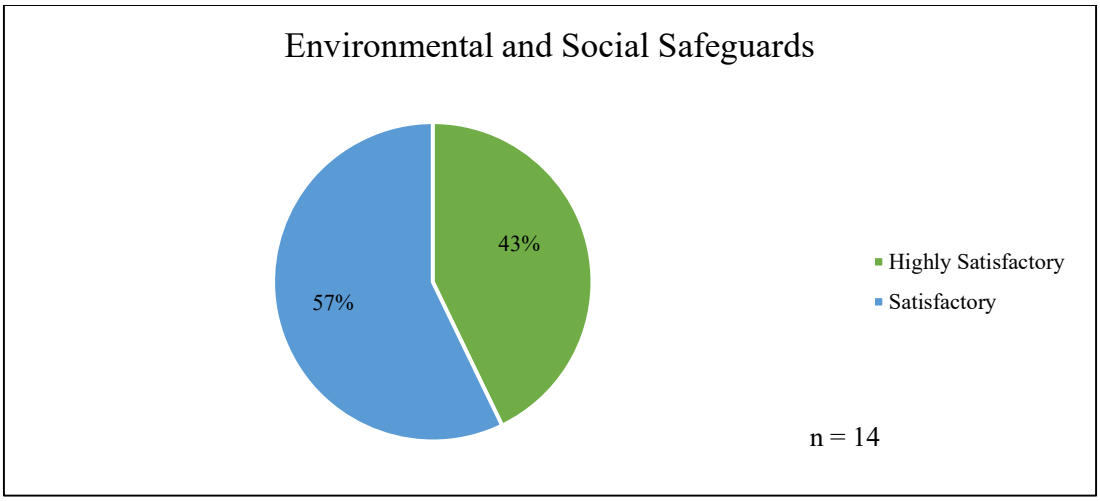


Figure 17: Perception of TE respondents on the environmental and social safeguards

Based on the assessment of socio-environmental aspects, the evaluators have rated the environmental safeguards as **Highly Satisfactory**.

Accountability and Grievance Mechanism (AGM)
The AGM is rated **Highly Satisfactory.**

The project design has identified a three-tier system for grievance redressal - the PMU, the PB, and the arbitration before seeking legal support in case of any disputes.
The project has sought innovative ways of dealing with issues and grievances in light of the pandemic where close physical interactions were highly limited. The PMU has used social media apps like WhatsApp and WeChat to create groups by bringing all key stakeholders onboard. Any issues raised in the group chats were either immediately acted upon by the PMU or assigned to the relevant stakeholder to attend to. In addition, the phone numbers of the PMU staff were also shared widely across the stakeholders so that they can reach them directly by phone. It has been found that the PMU gets on average around 30 calls and messages in a day seeking their support.

Additionally, the respective Dealers and the taxi drivers also have their WeChat group to address any technical issues related to the EVs. The technical experts of the EV car companies are also part of their respective group chats to address any technical issues faced by the EV drivers. The TE respondents have expressed their satisfaction in the way the project has addressed their grievances. Based on the assessment of the grievance and accountability mechanism in place, the evaluators rated the AGM Highly Satisfactory.

3.3.10. Sustainability

Project Sustainability is rated **Moderately Likely** – implying that there are moderate risks to sustainability of the project. The risks to the sustainability of project results are discussed below.

Financial risk

With support from the project, taxi drivers have been able to obtain EVs from car dealers without any advance deposit payment. The PMU selected eligible taxi drivers for the EVs scheme based on a set of eligibility criteria and made payments of the 20% subsidy of the vehicle amount directly to the dealers on behalf of the selected drivers. This has been an effective approach in facilitating taxi drivers' access to EVs. However, a number of financial sustainability risks emerged from the TE and falls under three categories: future funding; loan repayment; and high upfront cost.

Future funding and high upfront cost: from consultations with project stakeholders as part of the TE, it emerged that lack of clarity on future funding will constitute an impediment for the sustainability of the project. At TE, stakeholders mentioned that there is no evidence that a next phase of the project will be designed and they felt this was an issue as continued support of the donor will be required. While there is full support from both the government and the private sector, financial assistance from donors in any form would be critical to the sustainability of the current project's success. The scaling up of the project is noticeable through the Japanese Government's support to replace the government's fleet with EVs. Equally, for buses, the World Bank is working on urban transportation feasibility study and under the UNIDO support, the government is buying one bus for public transportation[39]. Conversely, the support (subsidies) provided to taxi drivers in accessing EVs was conceived as a demonstration project to mainstream EV uptake, implying that such support will be unavailable after the life of the project. The EV popularity could end with the 300 taxis as the upfront cost is still extremely high for majority of the people to afford without being granted subsidies. Without subsidy, affordability is still the biggest hurdle in EV promotion for average Bhutanese people[40].

The World Bank is currently undertaking a feasibility study for the *Bhutan Green Transport Project (BGTP)* geared toward providing reliable, safe, and green transportation. The feasibility study is expected to be completed by mid-2023, based on which, the project proposal will be submitted for funding in keeping with the government's priorities. Given the body of knowledge gained from the current project, it would be helpful to ensure that the feasibility study of BGTP also takes on board the lessons that have been learned from the current project (SLEUTS). In addition, the PMU is also implementing the procurement of buses and installing charging stations under UNIDO funding, therefore, some synergies could be drawn from current experiences for creating sustainable ecosystem in the long run.

Pertaining to the sustainability of SLEUTS' achievements, sustainability of the 300 taxis will be dependent on having operational charging station infrastructures across the country at all strategic locations. Setting up such infrastructures and their operation and maintenance (O&M) will largely depend on the availability of funds. Currently, the government is extremely strapped for funds and if external funding is not available for such activities, the internal government funds will not be sufficient. For existing charging stations constructed by the project, there is lack of clarity on the source of funds for their maintenance and in the absence of adequate maintenance, the charging stations could break down.

[39] From TE stakeholder consultations/interviews
[40] Interview with a staff of BICMA

Loan repayment: Financial institutions posed the issue of very high non-performing loans (NPL). Currently, out of 117 clients there are 15 NPLs originating from the defaulting of equated monthly instalment (EMI) payment. During the last lockdown, which lasted for almost three months across the country, the drivers were unable to and consequently, could not pay the EMI for their car loan repayment. They requested government's support to defer the loan repayment but the support was not secured. Should a similar lockdown situation arise in the future, the situation may not be any different as the drivers would be unable to comply with their EMI payment. The PMU is however making an all-out effort to ensure the NPLs are kept as low as possible by closely liaising with the taxi driver, Bhutan Taxi Association and the Bank. At the time of finalizing this report, it has been informed that the NPL has been brought down from fifteen (15) to one (01).

The financial risk to sustainability can be rated as **Moderately Likely**

Socio-economic risk

The project faces a socio-economic risk to the sustainability of its outcomes due to the COVID-19 pandemic outbreak. The inability of the taxi drivers to pay the loan during the three months of lockdown due to COVID-19 emerged as a concern should a similar situation arise in the future. The pandemic caused the tourism sector to shut down, leading to no tourist business for the taxi drivers. Overall, taxi ridership was extremely low during the pandemic era and the situation will not be any different in the event of subsequent lockdowns. If the number of EV cars on the road does not increase beyond 300, the taxi drivers worry that the dealers may not want to invest much in maintaining spare part inventories given the limited demand. Therefore, the need to further support more EVs in the country is seen as critical to ensure the sustainability of the existing 300 EVs from the current project.

The project's socio-economic risk to sustainability is **Moderately Likely**.

Institutional framework and governance risk

Taxi drivers expressed concerns over the lack of a dedicated unit to ensure sustainability of the project results. The drivers are extremely worried knowing that the project will be ending in September 2022 and they are not sure which agency to approach in case of any issue when the project ends. The operation and maintenance of the established charging stations beyond the life of the project is critical for the successful functioning of the existing EVs. An official from PMU confirmed to the evaluators that the O&M of all Charging Stations across the country is to be handed over to BPC starting July 2022. However, a TE respondent highlighted that BPC's expertise is in the distribution and transmission of electricity and not the operation and maintenance of charging stations. The PMU had organized a five (05) days training in June 2022 to build the capacity of BPC to ensure that their staff are in possession of necessary skills for the effective O&M of the charging stations.

Institutional framework and governance risk is **Moderately Likely**

Environmental risk

While EVs could achieve climate benefits through GHG emission reduction in the transport sector, they could also negatively impact the environment should the e-waste not be properly managed and disposed. The project recognised this and hired an international consultant as part of the implementation of the project activities, who supported Bhutan in drafting a guideline for the management and disposal of e-waste from EVs.

Environmental sustainability risk is **Moderately Likely**

3.3.11. GEF additionality

The GEF funding played a critical role to the achievement of the project outcomes. Prior to the commencement of the project, affordability of EVs remained one of the constraining factors for Bhutanese due to their high upfront cost. Without the subsidy for EVs provided by the GEF funding, the taxi drivers would not have been able to afford the EVs. Even with a 70% loan and 20% subsidy, some of the drivers are having a difficult time paying up the 10%. Therefore, the subsidy from GEF played a critical role in making EVs affordable to taxi drivers. The promotion of EV taxis incentivized the government of Bhutan to establish a policy in favor of the procurement of EV cars for new purchases or as a replacement of retired vehicles within their fleet. In this light, the Japanese Government is supporting the RGoB to replace 19 of its fleet with EVs. The cars acquired within the framework of the project will likely generate GHG emission reductions in the nation's transport sector.

3.3.12. Catalytic Role / Replication Effect

The GEF funding enabled the use of EV taxis within Bhutan's taxi sector. These taxis are now serving as demonstration which could influence further adoption and uptake or deter potential EV adopters as the case may be. Some scaling up has been recorded within the project relating to the replacement of the RGoB fleet with EVs, an initiative supported by the Japanese Government. However, it is unclear whether scaling up will occur in the taxi sector as respondents raised concerns that taxi drivers will be unable to afford EVs without subsidies. The TE team did not identify evidence or plan pertaining to the replication of the project activities (such as promotion of EV taxis or EV buses) in other parts of Bhutan.

3.3.13. Innovation

The project was highly innovative through actions stipulated in its outcomes such as the introduction of new policy frameworks and incentives, strengthening national awareness and supporting the delivery of the ambitions on the ground. While these contributions have already been presented under effectiveness, other examples are summarised here.

Design Phase

The project has produced innovative financial instruments such as provision of 70% collateral free loan and extension of the vehicle loan repayment period from 5 to 7 years to enhanced the affordability of the EVs by reducing the upfront cost and the EMI burden. Due to high loan default in the transport sector, the financial institutes were not willing to give collateral-free loans to the EV Drivers. The government made special considerations by discussing with the RMA and making a special concession for the project. Most of the EV drivers who participated in the TE expressed that the EMI for 70% loan on their EV is already quite high as compared to the EMIs they were paying for the ICE vehicle. Therefore, without the increase in loan repayment period, the EV uptake would have hampered due to high EMI.

With concerns around low repayment rates, the project also innovated through introduction of a mechanism of Group Guarantee Scheme working with the Bhutan Taxi Association. Such design are seen as an innovative ways of allowing beneficiaries to invest in EVs and overcome the barriers to entry all the while reducing the risks to the financial institutes.

Implementation Phase

As stated, COVID- 19 brought about challenges in the EV supply chain. The overall number and size of the EV orders were also not significant which only compounded the challenges faced by the Bhutanese dealers as it made it harder for manufacturers to prioritise in the face of global supply chain disruption. The Kolkata port in West Bengal has been customarily the port for transshipment of all goods including vehicles and heavy machineries imported into

Bhutan. The officials from Bhutan's Department of Revenue and Customs are permanently stationed there to facilitate the transshipment. However, during the heights of the pandemic, the already limited shipment line available with the feeder vessel in Kolkata port became more infrequent leading to significant delays in the of the EVs. Faced with such challenges, for the first time, through excellent action of PMU and a whole of government approach, imports of EVs were achieved through Chennai Port in Tamil Nadu, India. A key benefit of this route is that transshipments incur lower freight charges due to the Roll-On/Roll-off vessel service. Besides achieving faster delivery of the EVs, the new route also provided crucial cost saving in shipment which essentially helped the car dealers to absorb the losses due to increasing USD exchange rate which otherwise would have to be transferred to the beneficiaries. The amount of saving for the import of EV through Chennai port has been reported as anywhere from Nu. 100,000.00 (USD 1,282) to Nu. 80,000.00 (USD 1,025)[41] for each car. This was crucial considering the already high costs of the EVs to taxi owners.

The power of national ownership was also demonstrated in this project through addressing credit and cash constraints faced by the car dealers due to the slowing down of the economy. The NCGS was brought in as the government's guarantee to provide 70% loan to the Dealers as they faced acute working capital shortage due to COVID-19. Other ecosystem actors also introduced new schemes to cater for the new business actors. This was the case of the Royal Insurance Corporation of Bhutan (RICB) which offered 50% discounts on insurance while some dealers offered to bear 50% of the comprehensive insurance payment of the car for the first year.

In order to strengthen the EV ecosystem, the project started working with an App developer to have real-time information on EV charging features such as location, operational status, etc. This app will help taxi drivers to plan their day and reduce time. The setting up EV desk at the Airport, and other border areas such as Paro, Phuentsholing, and Gelephug also shows that measures are being introduced to support development of the EV market. Access to free charging from the public charging stations have also helped to encourage EV uptake. These innovations are particularly important to boost uptake and market development considering the government's commitment to move beyond consumer status of EVs to become a global player in the EV value chain. These efforts are already yielding fruit in some ways through the support received from the Government of Japan in strengthening the national government fleet and charging stations under the "Leveraging Nationally Determined Contributions (NDCs) to achieve net-zero emissions and climate-resilient development, in response to the climate emergency" project.

The dealers and the EV drivers have a social media group (technical group) where they can immediately refer any issues with the car to the Dealer and resolve it right away. In case their staff is not able to do it, they arrange a conference call with the manufacturer and get the issues resolved. The creation of an EV Facebook page and the use of WeChat/Whatsapp chat groups between PMU and beneficiaries created an atmosphere of collegiality, mutual learning, and self-help. Respondents stated that these approaches helped them to address their concerns in a timely manner while learning and sharing experiences with peers. PMU also uses a demonstration EV to show case the technology to interested individuals by providing test drives. This is crucial to overcome some of the challenges and barriers to adoption.

[41] Figure reported by the Car Dealer

The PMU in collaboration with the MoLHR co-opted the expertise of a Master Trainer from Thailand, who was working with the TTIs, to attend to the issues of charging station as the project could not bring their external experts due to Covid-19 restrictions. It was reported that the Master Trainer was able to resolve most of the issues that were plaguing the changing stations. Such instances emphasizes the agility of the project to adapt to the changing scenarios and challenges.

3.3.14. Progress to impact

SLEUTS has contributed toward creating an enabling environment for low-emission urban transportation in Bhutan. The project promoted the use of EVs in Bhutan's taxi sector which generates emission reductions compared to the baseline. This is a step in the right direction for Bhutan to attain carbon neutrality. Bhutan produces clean energy and increasing the number of EVs translates into reduced dependence of the country on fossil fuel importation from India, thereby enhancing Bhutan's energy security and reducing its trade deficit. The impact of the project is even more evident in the current context of spiking fuel prices caused by the Russia-Ukraine conflict.

The EV taxi drivers are satisfied with the EV taxis and attest that they are easy to drive, more comfortable and keep them less tired at the end of the day after work. Since they do not rely on fuel, the EV taxi drivers offer competitive rates and make higher daily/monthly earnings compared to their ICE counterparts. This has culminated in higher preference to commute in EV taxis exhibited by passengers. "*The maximum limit of fare set by the RSTA from Thimphu to Phuntsholing is Nu. 950/person. The EVs are currently offering Nu. 750/person as they do not have to pay for fuel. The average earning per EV in a day has been reported to be around Nu. 4000/driver. Average income on a monthly basis is around Nu.90,000/driver and the monthly EMI is around 30,000/-. Therefore, if there is no lockdown due to COVID-19, then the loan repayment is not an issue*", reported a member of the Bhutan Taxi Association.

The project has also had an impact in the generation of employment. Currently, Kuenphen is able to employ 90 people handling different tasks related to import as well as in the provision of After Sales Services for the EVs. Dealerships have also been motivated to support the low-emission transport system transition course. Kuenphen Motors for instance had been involved in the donation of several AC charging equipment as part of their CSR. It is likely that these impacts will be sustained beyond the life of the project as the EVs procured within the SLEUTS project will continue to operate for the next couple of years, keeping the EV sector vibrant. However, the continued importation of EVs by dealers will be based on the effective demand of the consumers.

Unintended effects

Limited evidence of negative impacts arising from this project exists. As Bhutan is yet to implement the scrapping policy, the import of 300 EVs has put further pressure on the already congested road, especially in the capital city[42]. Also, huge loan EMI burden was cited by a taxi driver as an unintended negative impact. The liability of the EV taxi drivers has increased a lot which can be quite stressful on a personal level. This loan burden impact is not directly associated with the project but rather, a consequence of the COVID-19 lockdowns which made it impossible for the EV taxi drivers to operate, rendering them incapable to comply with their EMI payments back then. If further lockdowns are imposed in the case of a future outbreak,

[42] Interview with a TE Respondents

this could worsen the situation. However, as the mastery of the pandemic improves, the risk of NPL will continue to decline.

4. MAIN FINDINGS, CONCLUSIONS, RECOMMENDATIONS & LESSONS

4.1. Main findings

The main findings from this TE are presented below.

Relevance: the objective and design of the project aligns strongly with the priorities of Bhutan. The nation has a high reliance on the importation of fossil fuel to drive its transport sector. The RGoB is committed to achieve carbon neutrality and to reduce importation of fossil fuel. The SLEUTS project supports the nation towards meeting these commitments. The relevance of the project is further strengthened by the fact that the country is powered by 100% clean renewable hydroelectricity which makes the transportation sector one of the low hanging fruits for cutting down its emission.

Effectiveness: irrespective of the COVID-19 pandemic, the SLEUTS project has made significant progress towards the realization of its objective and outcomes. At TE, 75% of the outcome 1 indicator targets were achieved while the rate of achievement for those of outcomes 2 and 3 were at 66% each. The remaining targets are however on-track to be achieved by the end of the project period. The project intended to address three key challenges and barriers linked to the promotion of EVs and their uptake in Bhutan: the lack of an enabling policy and regulatory environment for EVs, misperceptions and low level of technical knowledge amongst market/sector stakeholders, and high upfront costs and limited infrastructure for deployment.

The barrier pertaining to the lack of regulatory framework and enabling policies for LEVs in Bhutan was addressed by the project through the adoption of a national target for LEV, establishment of EV enabling policies such as zero import duty and sales tax on EVs and increase in the loan for the purchase of EVs from 30% to 70% and a suite of other policy instruments. Based on the stated expected results, the TE team concludes that a favourable policy and regulatory environment for LEVs has been established to address the barriers identified. The high-upfront cost barrier for LEVs adoption was addressed through the provision of subsidies for the purchase of EVs demonstrating that specific financial support interventions can address financial barriers to EV adoption. It is important to note that this was piloted amongst the qualifying taxi drivers and as such this barrier will remain beyond the EOP in the absence of a follow-on subsidy mechanism.

The low level of stakeholders' technical knowledge, misperceptions and negative attitudes against EV was addressed through capacity building initiatives delivered faced to face and online due to the Covid 19 pandemic reaching 924 of the target 1000 stakeholders. While respondents in the evaluation reported improved knowledge and awareness, a planned end of project perception survey is expected to provide evidence of the effective level of improvement in knowledge and awareness achieved compared with the baseline[43]. This survey will provide evidence on the level of removal of constraints and the outstanding issues that could be

[43]Based on the project team/prodoc, activity 2.1.4, this will be an analogous awareness/perception survey conducted following the same survey techniques and methodology as the baseline survey. The purpose is to monitor, assess and report on the achieved results and their effectiveness in terms of changes in perception and attitudes as well as identify remaining capacity and knowledge gaps were additional awareness/capacity needs could be provided post project.

addressed beyond the initial project period. At the level of the specific objective, the Greenhouse gas emissions reductions target will not be achieved by the end of the project due to most EVs only delivered towards the end of 2021 and 2022 given the impact of the Covid 19 pandemic on global supply chains. The two other indicators linked to numbers of citizens using EVs for transport and the mobilization of financial resources for EV promotion were significantly overachieved (217% and 213% respectively). The overall achievement of the project specific objective is moderately satisfactory.

Efficiency: the project was efficiently delivered in a satisfactory manner. The project management team was able to leverage additional resources from the public and private sector. In the wake of COVID-19, implementation of activities virtually and the one-year no-cost extension were introduced as adaptive management measures.

Sustainability: the sustainability of the project is moderately likely. Financial, environmental, socio-economic and institutional framework and governance risks were identified to potentially hamper the sustainability of the project outcomes.

Environmental and social safeguards: environmental and social issues of the project were identified through screening conducted during the design phase of the project. Mitigative measures were identified for each identified risk. A well-established AGM was part of the project and phone numbers of the PMU were widely circulated to project stakeholders who were able to channel their grievances to the PMU through telephonic conversations.

Gender: gender mainstreaming was ensured in the project from the design phase. A gender action plan was elaborated to address the gender gaps identified. Project implementation and reporting paid particular attention to gender reflected by participation of women in activities and the reporting of gender disaggregated statistics.

Disability: the project design and implementation did not have any deliberate attempts to include the needs of PWD. This is seen as a missed opportunity.

Impact: while it takes time for impact to manifest, competitive fares offered by EV taxi drivers and higher earnings made by EV taxi drivers are some of the indicators of the project's positive impact.

4.2.Conclusions

The Bhutan SLEUTS project was aimed at facilitating a transition towards a low-carbon urban transport system through the promotion of wider uptake of low emission vehicles, with special focus on electric vehicles (EVs) and taxi sector. The project is highly relevant for the country as it aligns with the nation's commitment to strengthen energy security through the reduction in the reliance of fossil fuel importation. The project also aligns strongly with Bhutan's goal to maintain its carbon neutrality, a commitment taken by the nation at the international level within the framework of the UNFCCC. The project was implemented by MoIC/PMO with oversight provided by the UNDP Bhutan Country Office. Both institutions worked collaboratively to ensure timely and quality delivery of the project and took necessary measures to ensure that imminent risks to project implementation were managed accordingly. The project team succeeded in mobilizing additional resources from both the private and public sectors.

The project is well on track to achieve its outcome targets by the end of the project. A favourable legal and regulatory framework for EV development has been achieved and awareness and technical knowledge of stakeholders improved. Financial incentives were introduced to overcome the challenge of high upfront costs for taxi drivers. By the end of the project, a perception survey is required to conclude on the actual levels of change in perceptions, attitudes, and technical knowledge on EVs resulting from the project's intervention. Additionally, the challenge of high upfront costs will remain beyond the project initial period in the absence of a specific follow-on project to scale up the financial support model piloted in this project.

Pertaining to the specific objective target of 3,440 tCO2/year or 43,000 tCO2/ lifetime of avoided GHG ER, this will not be attained by end of the project. This is due to the impact of the Covid 19 pandemic which affected global supply chains and the delivery of cars to the country. Consequently, cars were only delivered to beneficiaries in 2021 and 2022. The project team has to deliver on all the 300 EVs by end of the project and secure additional support post project to be able to achieve the stated GHG ER target.

Gender considerations were well-integrated into the project design and implementation. Efforts were made to involve female participants in project activities and the reporting of project progress was done in a gender-friendly manner, through the disaggregation of statistics. Environmental and social safeguards issues were equally taken into consideration in the course of project design and implementation. Environmental and social risks were identified and steps were taken for their mitigation during project implementation. While deliberate attempts were not made early-on in the project design to include the needs of PWD, the project has implemented a workshop to sensitize the EV drivers on the needs and challenges of PWD.

SLEUTS is already demonstrating some indicators of impacts such as preference for EV demonstrated by passengers due to competitive fares offered by EV taxi drivers. The income of EV taxi drivers is also enhanced. However, an analysis of the project's sustainability revealed that there are moderate financial, socio-economic, environmental, governance and institutional framework risks which could impede the continuity of project gains beyond the project's initial period. These include the continuous need for subsidies to address outstanding financial barriers, concerns about loan default from taxi drivers, application of waste disposal and management and continuous performance of institutional coordination between government agencies amongst others. The following sections provides recommendations to stakeholders.

4.3.Recommendations

NO.	FINDING/CHALLENGE	RECOMMENDATIONS
	Operation and maintenance of EVs and associated infrastructures	
1.	Inadequate capacities in the country for operation and maintenance of EVs and associated infrastructures such as charging stations. The charging stations are out of order most of the time.	Platforms and opportunities for knowledge-sharing and lessons learned should be established. Such forums would provide an opportunity for different stakeholders including but not limited to the Charging Station Operators, Car Dealers, Bhutan Power Corporation Ltd, PMU, and the EV drivers, to come together and resolve any issues and clarify doubts about the future sustainability of the project achievement. The RoGB and UNDP should create this platform prior to project closure and designate a unit within MoIC that will oversee the functionality of the platform beyond the life of the project. **Responsibility**: RGoB **Timeline**: By project closure
2.		The capacity of BPC should be strengthened on the maintenance of charging stations to ensure that these are functional at all times. The PMU and UNDP should identify key staff within BPC who are less likely to be influenced by staff turnover and capacitate them with the necessary skills required for the maintenance of charging stations. These staff should be trained as trainers so that they could in turn train other staff of BPC. In addition, the training should be accompanied by the provision of manuals/materials for charging stations' maintenance which the staff can always make reference to in case of need. **Responsibility**: RGoB and UNDP **Timeline**: By the end of the first quarter of 2023
3.		Capacity building opportunities for PMU and the lead government agency responsible for EV promotion to keep abreast of changing technologies and assessing policies options that will be needed to ensure that EV import and the battery end-of-life treatment to contributes towards sustainability and the ultimate objective of CO2 emissions reductions. **Responsibility:** RGoB and UNDP **Timeline**: By end of the first quarter of 2023
4.		Prior to project closure, the project should work with the RGoB to explore options and devise strategies necessary after the life of the SLEUTS project for the enhancement of the supply and availability of EVs alongside

NO.	FINDING/CHALLENGE	RECOMMENDATIONS
		accompanying support facilities including inter alia, repair and maintenance of charging stations, supply, recycling and disposal of battery. **Responsibility:** RGoB and UNDP **Timeline**: Before project closure
5.	Limited evidence at TE of actual change in attitudes, perceptions, knowledge and awareness on EVs by stakeholders	Carry out the proposed perception survey in line with outcome 2. The purpose will be to monitor, assess and report on the achieved results and their effectiveness in terms of changes in perception and attitudes as well as identify remaining capacity and knowledge gaps where additional awareness/capacity needs could be provided post project. A control group methodology with beneficiaries and non-beneficiaries of the project will provide insights into the project's contributions. **Responsibility:** PMU **Timeline:** Before project closure
6.	Failure to achieve GHG emissions reductions target by end of the project	The project should ensure that the 300 EVs are fully delivered by end of project to selected taxi drivers. While this will not immediately address the gap in terms of the GHG ER target by EOP, the objective will rather be achieved over time through direct and indirect ERs. Future projects to scale up the initiative through provision of additional taxis to individuals on the current waiting lists could further the GHG ER targets **Responsibility:** RGoB/UNDP **Timeline:** Before project closure
	Sustainability – clarifying institutional ownership and agency in charge after project ends	
7.	Taxi drivers expressed concerns that after the project ends, they are not sure on the institution they could go to when they have issues.	A dedicated agency should be given the mandate for EVs in Bhutan. In this way, project beneficiaries will know exactly where to report their issues to after the life of the project. The RGoB should designate a government agency/institution that will have the mandate over EVs in the country. **Responsibility**: PMU/PMO **Timeline**: Before the end of the project (September 2022)
8.	Lack of policy prescription on recycling of batteries.	While battery recycling has been studied, no policy directives exist. There is need for the government to develop a policy directive on the recycling of spent batteries in the long run. The project should support the

NO.	FINDING/CHALLENGE	RECOMMENDATIONS
		government to initiate the process elaborating a recycling policy directive for used batteries. An immediate step could entail setting up a task force prior to project closure for the elaboration of the policy directive. **Responsibility**: RGoB **Timeline**: By the end of 2023
9.	Lack of a clearly defined exit strategy for the project and concerns from stakeholders about continuity.	The government should work towards a second phase of the SLEUTS Project to build on its specific achievements and enable more uptake of EVs. This will enable the country not only to secure gains particularly in terms of the financing/subsidy model for EVs, but also upscale to other areas such as public transport while continuing to strengthen the national EV ecosystem. An immediate action will entail the government working with UNDP for the elaboration of a second phase of the project targeting an eligible climate financier such as the Green Climate Fund and GEF. Part of the exit strategy would include a future long term impact evaluation to assess the economic viability of the financial model developed and pilot tested by this project. **Responsibility**: RGoB and UNDP **Timeline**: By the end of 2023
	Charging stations	
10.	Inadequate amount of charging stations. This increases the wait times for EV taxi drivers to charge their cars	There is need for the network of charging stations to be strengthened especially in areas with high number of EVs. This will translate into shorter wait times for taxi drivers who can spend more time working. Prior to project closure, the project should work with the RGoB to explore options and devise strategies that will ensure expansion of network of charging stations after the life of the SLEUTS project. Responsibility: RGoB **Timeline**: By the end of 2023

4.4.Lessons learned

Significant lessons can be drawn from this project:

The ownership and leadership of local and national government authorities – a whole of government approach

The project demonstrates the importance of local and national government/authorities buy in and ownership in the delivery of such high innovation, high risk and high value project. The RGoB was able to use all levers of government in developing the policy framework and facilitating the financial framework required for delivery. The strategic positioning of the PMU within the PMO sent a strong message about the commitment and ownership of government. The government was pragmatic and demonstrated strong willingness to engage with a wide range of stakeholders to ensure the success of the project. The importance of ownership and government commitment was demonstrated in overcoming the procurement and supply chain issues brought about by the COVID-19 pandemic working across government. As most respondents acknowledged, this project would have failed without this intervention. The decision by H.E Prime Minister to take part in this evaluation is further evidence of the high-level support for the success of this project which is fully aligned with the government's vision and ambition for EV expansion in the country and for becoming an active player in the global EV supply chain. Local authorities were involved throughout which ensured that local charging stations and related infrastructure was installed. The continuous operation and security of the stations depends on strong local support from authorities.

The private sector can play a key role in achieving the country's climate change goals

The private sector injected the match funding while car dealers mobilised resources and engaged in CSR activities supporting the delivery of the project. Even though the loan repayment rate in the taxi sector is low, banks provided much needed support with the backing of government and national guarantee scheme. While the project can be seen as a pilot, the support of private sector provides the framework for scalability. There is demand for this project to be expanded to other target sectors such as government fleet and public transport amongst others. The GEF project provided the start-up capital for this initiative working together with government. In the long run, private sector can play a more substantial role and hence contribute towards the achievement of government development and climate goals. One of the crucial co-benefits from this action would be a reduction in the country's trade deficit as Bhutan spent around Nu. 8.34 billion (USD 106.92 million[44]) annually on the import of fossil fuels[45]. Based on an analysis carried out by the evaluators, the savings in terms of fuel import by the current EV taxis up until June 2022 works out to over Nu. 9 million (USD 115,384.62). Alternatively, the amount spent for charging these EVs taxis for the same duration works out to Nu. 213,165 (USD 2,732.89) which translates to 98% cost saving in fuel[46].

Awareness raising and capacity strengthening crucial to strengthen the adoption of new technologies and innovations

The project was able to bring innovation by working on the factors facilitating or constraining the adoption of EVs. The project carried out awareness raising and advocacy actions to enhance interest and adoption of EVs. A combination of approaches was adopted including the

[44] Exchange Rate: USD 1 = Nu. 78

[45] Bhutan Trade Statistics 2021

[46] The total km covered by 133 EVs until June 2022 is 2,319,897 km. The assumption used are as follows: ICE vehicle milage = 24.34km/l (Wagon R); EV average km for full charge = 350km; and electricity tariff of Nu. 2.68/unit

use of social media and messaging applications. By adopting a bottom-up approach, the project ensured that taxi drivers were regularly informed and updated on progress. The social media tools applied ensured that the project listened and responded in real time to concerns while providing necessary assurances to taxi drivers in case of problems. Developing the educational and cognitive environment of the project proved successful through training, training of trainers and work with TTIs to develop an EV curriculum.

Multipronged approach to delivery

The project adopted an evidence-based approach to decision making. For instance, implementation of feasibility studies, production of technical specificities drawing on world class experiences and research to inform the design and implementation of charging stations, identification of EV specifications amongst others. Obviously as an innovative project, initial focus included working with international consultants, but as progress was achieved in project delivery, the development of national capacity was also prioritised. Adopting a multi-pronged approach to supporting the roll out of innovations enhanced adoption with consequent positive efforts for sustainability.

An ecosystem approach is required

This project also highlights the need for an ecosystems approach to the promotion of EVs. The key is not only to focus on the importation of cars, but also strengthen the policy environment and local infrastructure for its expansion. Developing local capacity for operations and maintenance while building trust with the private sector and banks is critical. Further, it is also important to constantly ensure that the citizens understand the merit of the action to bring them along through adoption of EVs or green e-mobility. This obviously requires a long-term perspective as opposed to a projectized approach. The development of the EV Roadmap; revision of building codes to integrate home charging facilities; facilitating access to credit etc. are all aspects of the country's institutional environment for effective EV deployment. Signaling and modelling also emerged as a key factor with the PM and UNDP staff using EVs themselves to promote the new technology. The issuance of directives regarding the renewable of government fleet with EVs is another relevant piece but has to be monitored to ensure compliance.

UNDP comparative advantage and convening power

GEF catalytic funding has enabled the government to deliver on this project. The Project respondents were unanimous that the introduction of subsidies to taxi drivers was the key tipping factor considering the prices of EVs. Considering the sustainability of this project is moderately likely, the benefits of this funding are likely to be felt for decades. The effectiveness of this support required an organisation like UNDP with the global comparative advantage to deliver. It showed great ability to work with government and drew from its global network of experts and knowledge base to support the PMU and government. Its neutrality and convening partner ensured that it was listened to by government and other national stakeholders.

Awareness and Training on Inclusive Public Transport Service

The inclusion of PWD in the project design and implementation could have led to a more inclusive development of public transport sector. However, the project design did not undertake any deliberate attempts to include the needs of the PWDs in the project design. However, based on the findings of the TE, at the time of finalization of this report, a one day DET was organized for the EV drivers by the PMU in coordination with the UNDP. Such initiatives highlight the adaptive and openness of the project to incorporate activities that will ultimately benefit the larger stakeholders. In order to ensure a more inclusive development of public services, the

needs and challenges of PWDs should be incorporated in the future project design and implementation right from the planning stage.

ANNEXES

Annex A: Terms of reference of the Terminal Evaluation

TERMS OF REFERENCE

Empowered lives.
Resilient nations.

Terminal Evaluation of Bhutan Sustainable Low-emission Urban Transport Systems Project

Project Title: Bhutan Sustainable Low-emission Urban Transport Systems (SLEUTS) Project
Functional Title: International Consultant for Terminal Evaluation
Duration: Estimated 25 days (per consultant) over a period of May-June 2022, including field mission to Thimphu, Paro, Punakha, Wangdue, Haa and Chukha

1. INTRODUCTION

In accordance with UNDP and GEF M&E policies and procedures, all full- and medium-sized UNDP-supported GEF-financed projects are required to undergo a Terminal Evaluation (TE) at the end of the project. This Terms of Reference (ToR) sets out the expectations for the TE of full-sized project titled Bhutan Sustainable Low-emission Urban Transport Systems project (EV) (PIMS 5563) implemented through the Ministry of Information and Communications. The project started on 28 September 2018 and is in its final year of implementation. The TE process must follow the guidance outlined in the document 'Guidance For Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects' (http://web.undp.org/evaluation/guideline/documents/GEF/TE_GuidanceforUNDP-supportedGEF-financedProjects.pdf).

2. PROJECT BACKGROUND AND CONTEXT

Between 2000 and 2015, the number of Bhutanese living in urban areas has doubled from around 150,000 in 2000 up to 300,000 in 2015. The population in the capital city of Thimphu has expanded even faster: in 2000, roughly 43,479 people lived in Thimphu compared to approximately 122,242 people today. It is expected that Thimphu will further double its population by 2040. An increase in the urban population results in larger city areas which in turn increases the demand for urban mobility, for instance, due to workers' commutes, and leads to increases in private motorized transport.

As a result, Bhutan is facing an alarming growth rate of private vehicles. Keeping aside the vehicle import restriction period from 2012 until July 2014, the numbers of light vehicles including taxies were increasing on a Compounded Annual Growth Rate {CAGR} of 11.5% per annum tripling from slightly less than 25,000 in 2000, to over 75,000 in 2015 and reaching up to 89,300 in August 2017.

Consequently, Bhutan, especially the capital Thimphu, is facing some of the typical problems associated with traffic growth, i.e., growing distances traveled, traffic congestion, local air pollution, negative impact on health, decreasing road safety, social exclusion and inefficient land use. Further, since the transport sector is entirely reliant on imported fossil fuel, the rapid increase of private internal combustion engine {ICE} vehicles results in increasing fossil fuel imports.

The objective of the project is to facilitate low-carbon transition in 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.

Component 1 "Policy support for low-emission transport" will remove policy and regulatory barriers hampering growth of LEV market. Component 2 "Awareness and capacity development" aims at addressing awareness, misperception and capacity gaps and constraints regarding LEVs among wide range of transport market stakeholders. Component 3 "Investment in low-emission transport systems and support services" will tackle barriers related to affordability of and access to finance for LEVs, as well as investment in electric vehicle supply equipment (EVSE).

The project will, in partnership with local financial institutions and regulators, design and implement an innovative financial support mechanism and financial product for EVs. It will also support expansion of the charging infrastructure network and the establishment of a viable business model to ensure its sustainability, reliability and further growth. The ambition and the expected scale of market transformation is to ensure that, by the end of this 3-year long project, the fleet of EVs (taxis) in Bhutan to increase 4-fold, i.e., from 99 vehicles today up to 399 by the project end.

The project faced significant challenges from the COVID-19 pandemic and evolving landscape of electric vehicle technology. There has been a significant delay in the delivery of electric vehicles due to supply chain disruption following the COVID-19 Pandemic. As a result, the project has been extended by a year until the 28th of September 2022 to achieve its objectives.

PROJECT SUMMARY TABLE:

<table>
<tr><td colspan="3">Project title: Bhutan Sustainable Low-emission Urban Transport Systems</td></tr>
<tr><td>Country: Bhutan</td><td>Implementing Partner: Ministry of Information and Communications</td><td>Management Arrangements: National Implementation Modality {NIM}</td></tr>
<tr><td colspan="2">UNDP Social and Environmental Screening Category:
Moderate</td><td>UNDP Gender Marker:
GEN2: Gender equality as a significant objective</td></tr>
<tr><td colspan="2">Atlas Project ID/Award ID number: 00094488</td><td>Atlas Output ID/Project ID number: 00098606</td></tr>
<tr><td colspan="2">UNDP-GEF PIMS ID number: 5563</td><td>GEF ID number: 9367</td></tr>
<tr><td colspan="2">Planned start date: September 2018</td><td>Planned end date: September 2022</td></tr>
<tr><td colspan="3">LPAC date: 4 January 2018</td></tr>
<tr><td colspan="3">FINANCING PLAN</td></tr>
<tr><td colspan="2">GEF Funds</td><td>USD 2,639,726</td></tr>
</table>

(1) Total Budget administered by UNDP	USD 2,639,726
PARALLEL CO-FINANCING {*all other co-financing that is not cash co-financing administered by UNDP)*	
Government	USD 10,318,000
(2) Total co-financing	USD 10,318,000
(3) Grand-Total Project Financing (1) +(2)	USD 12,957,726

3. TE PURPOSE

The TE report will assess the achievement of project results against what was expected to be achieved and draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. The TE report promotes accountability and transparency and assesses the extent of project accomplishments. The TE is part of UNDP Bhutan Country Office Evaluation Plan (2019-2023).

Detailed objectives of the terminal evaluation are as follows:

- Assess to what extent the SLEUTS Project has contributed to address the needs and problems identified during programme design, i.e., to remove barriers to low-carbon transition in the Bhutan's urban transport sector and in the wider uptake of low emission vehicles (LEVs);
- Assess how effectively the project has achieved its stated development objective or purpose;
- Measure how efficiently the outcomes were realized, and outputs delivered in attaining the development objective/purpose of the project;
- Assess both negative and positive factors that have hampered and facilitated, respectively the progress in achieving the project outcomes, including external factors/environment, weakness in design, management and resource allocation;
- Assess the extent to which the application of the rights-based approach and gender mainstreaming are integrated within the planning and implementation of the project;
- Identify and document substantive lessons learned, good practices and also opportunities for scaling up in future;
- Provide forward-looking programmatic recommendations for the project and the relevant portfolio of UNDP

The evaluation will focus on six key evaluation criteria: relevance, efficiency, effectiveness, potential impact, sustainability, and coherence. The evaluation should provide credible, useful, evidence-based information which enables timely incorporation of its findings, recommendations and lessons into decision making processes of UNDP and key stakeholders. It will also assess the potential of the next phase of the project. The evaluation will cover the time span from September 28, 2018 (the beginning of the project) to date.

The primary users of the evaluation results will be UNDP and GEF, but the evaluation results will equally be useful to the relevant ministries of the Government of Bhutan, development partners and donors. The TE will be conducted according to the guidance, rules and procedures established by UNDP and GEF as reflected in the UNDP Evaluation Guidance for GEF Financed Projects.

4. TE APPROACH & METHODOLOGY

The TE report must provide evidence-based information that is credible, reliable and useful. All relevant evidentiary documents must be presented/provided to the TE evaluators to confirm the reported results of the project's baseline/co-financed and incremental activities, delivery of agreed component outputs and levels of achievement of the end-of-project targets of the objectively verifiable indicators that are set out in the project results framework (log frame). It is important to also provide explanations/justifications of the attribution of any indirect results (e.g., energy savings, GHG emission reductions, etc.) of parallel/associated activities of the project. In this regard, the TE Team must state in the TE report if the team has checked, evaluated, verified and confirmed all the evidentiary documents during the terminal evaluation and provide comments regarding, and where necessary, pertinent recommendations to improve, the credibility, reliability and usefulness of such documents.

The Project Management Office/Unit and the commissioning UNDP country office must provide all the relevant sources of information that the TE Team must review including documents prepared during the preparation phase (i.e. PIF, UNDP Initiation Plan, UNDP Social and Environmental Screening Procedure/SESP) the Project Document, project reports including annual PIRs, project budget revisions, lesson learned reports, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based evaluation. The TE team shall review all of these sources of information, including the baseline and midterm GEF focal area Core Indicators/Tracking Tools submitted to the GEF at the CEO endorsement and midterm stages and the terminal Core Indicators/Tracking Tools that must be completed before the TE field mission begins.

The evaluation will adopt mix methods of qualitative and quantitative approach in data collection and analysis, including key informant interviews (KII) and focus group discussions (FDG) in project's intervention sites. Collected data and information will be triangulated by multiple data sources and evidence.

The TE team is expected to follow a participatory and consultative approach ensuring close engagement with the Project Team, government counterparts (the GEF Operational Focal Point), Implementing Partners, the UNDP Country Office(s), the Regional Technical Advisor, direct beneficiaries and other stakeholders.

Engagement of stakeholders is vital to a successful TE. Stakeholder involvement should include interviews with stakeholders who have project responsibilities, including but not limited to Gross national Happiness Commission, UNDP, Prime Minister's Office, Ministry of Information and Communication, Ministry of Labour and Human Resources, Ministry of Finance, National Land Commission, Road Safety and Transport Authority, Department of Renewable Energy, Bhutan Power Corporation, Royal Monetary Authority and Financial institutions, Thimphu Thromde, Bhutan Taxi Association and beneficiaries, Car dealers, executing agencies, senior officials and task team/component leaders, key experts and consultants in the subject area, Project Board, project beneficiaries, academia, local government and CSOs, etc.

If the situation allows, the Consultants are expected to conduct field missions to Thimphu, Paro, Punakha, Haa, Chukha and Wangdue, including the following project sites (Changlimethang, Farmers Market, Jigme Namgyel, Lungtenzampa, Paro town, Khuruthang, Bajo). Key Informant Interviews and Focus Group Discussions are expected for the collection of data and information from local stakeholders at the project sites, including project beneficiaries and local administrations.

As of 11 March 2020, the World Health Organization (WHO) declared COVID-19 a global pandemic as the new coronavirus rapidly spread to all regions of the world. Travel to the country has been restricted since March 2020 and travel in the country is also restricted with mandatory two weeks of quarantine. The team is expected to collect data in the field as mentioned above, if situation allows. But if it is not possible to travel to or within the country for the TE mission then the TE team should develop a methodology that takes into account the conduct of the TE virtually and remotely, including the use of remote interview methods and extended desk reviews, data analysis, surveys and evaluation questionnaires. This should be detailed in the TE Inception Report and agreed with the Commissioning Unit. In particular, data collection should consider the COVID-19 situation in the country at the time of evaluation. In case part of the evaluation is to be carried out virtually then consideration should be taken for stakeholder availability, ability or willingness to be interviewed remotely. No stakeholders, consultants or UNDP staff should be put in harm's way and safety is the key priority.
The specific design and methodology for the TE should emerge from consultations between the TE team and the above-mentioned parties regarding what is appropriate and feasible for meeting the TE purpose and objectives and answering the evaluation questions, given limitations of budget, time and data. The TE team must, however, use gender-responsive methodologies and tools and ensure that gender equality and women's empowerment, as well as other cross-cutting issues and SDGs are incorporated into the TE report.
The final methodological approach including interview schedule, field visits and data to be used in the evaluation must be clearly outlined in the TE Inception Report and be fully discussed and agreed between UNDP, stakeholders and the TE team.
Evaluation Criteria Matrix (evaluation criteria with key questions, indicators, sources of data, and methodology) and KII checklist need to be developed as part of the TE Inception Report. Refer to Annex D of this ToR for the evaluation criteria matrix template.

The final report must describe the full TE approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses about the methods and approach of the evaluation.

GENDER AND HUMAN RIGHTS-BASED APPROACH
Gender and Human Rights-based Approach Gender analysis must also be incorporated in the terminal evaluation to measure how gender aspects have been incorporated in the project design/implementation and to what extent the project contributes to the promotion of gender equality and empowerment in the project areas, which are geographically isolated in the country. Interviews must cover and focus on female beneficiaries to see the impact of the projects on their livelihood and socio-economic status. The consultant team is also expected to develop a detailed methodology on gender analysis and incorporate it in the inception report. In addition, the methodology used in the terminal evaluation, including data collection and analysis methods should be human rights and gender-sensitive to the greatest extent possible, with evaluation data and findings disaggregated by sex, ethnicity, age, etc. Detailed analysis on disaggregated data will be undertaken as part of terminal evaluation from which findings are consolidated to make recommendations and identify lessons learned for the enhanced gender-responsive and rights-based approach of the project. These evaluation approaches and methodology should consider different groups of beneficiaries in the project intervention, including women, minorities, vulnerable groups, and people in hard-to-reach areas. The evaluators are requested to review UNEG's Guidance in Integrating Human Rights and Gender Equality in Evaluation during the inception phase.

5. DETAILED SCOPE OF THE TE

The TE will assess project performance against expectations set out in the project's Logical Framework/Results Framework (see ToR Annex A). The TE will assess results according to the criteria outlined in the Guidance for TEs of UNDP-supported GEF-financed Projects (http://web.undp.org/evaluation/guideline/documents/GEF/TE_GuidanceforUNDP-supportedGEF-financedProjects.pdf). The Findings section of the TE report will cover the topics listed below.
A full outline of the TE report's content is provided in ToR Annex C.
The asterisk "(*)" indicates criteria for which a rating is required.
Findings

i. Project Design/Formulation

- National priorities and country driven-ness
- Theory of Change
- Gender equality and women's empowerment
- Social and Environmental Safeguards
- Analysis of Results Framework: project logic and strategy, indicators
- Assumptions and Risks
- Lessons from other relevant projects (e.g., same focal area) incorporated into project design
- Planned stakeholder participation
- Linkages between project and other interventions within the sector
- Management arrangements

Evaluate whether the project design (e.g., approach, activities and outputs) was adequate/sufficient and appropriate to achieve the project objective and outcomes that were set out in the project results framework.

ii. Project Implementation

- Adaptive management (approved changes to the project design and project outputs during implementation), whether such changes were adequately and properly implemented, and impacts/results of the implemented changes)
- Actual stakeholder participation and partnership arrangements (in addition, also cite issues/challenges encountered, impacts of such issues/challenges on project implementation and results; and the resolution of these)
- Project Finance and Co-finance (evaluate actual project financing, actual realization of committed co-financing, and any leveraged financing – provide evidentiary documents to support the evaluation)
- Monitoring & Evaluation: design at entry (*), implementation (*), and overall assessment of M&E (*)
- Implementing Agency (UNDP) (*) and Executing Agency (*), overall project oversight/implementation and execution (*)
- Risk Management, including Social and Environmental Standards

Evaluate whether the actual project implementation did or did not facilitate the provision of the necessary resource inputs for the implementation of project activities and the delivery all the required project outputs.

iii. Project Results

- Assess the achievement of outcomes against indicators by reporting on the level of progress for each objective and outcome indicator at the time of the TE and noting final achievements
- Evaluate the following: (a) whether all the approved project outputs were delivered. These include outputs in the original project design and other approved outputs that were included based on adaptive management; (b) how these outputs contributed to the achievement of the end-of-project targets of the project; and (c) actual resource inputs that were utilized to deliver each output.
- Evaluate the results of the project activities (i.e., GEF-funded and baseline/co-financed activities that were carried out by project partners) that are contributing towards the end-of-project target of the objective indicator and each outcome indicator. This may also include monitored results from indirect activities that were facilitated, enabled or influenced by the Bhutan SLEUTS Project's activities. The relevant evidentiary documents on these activities must be evaluated to verify and confirm potential attribution of the results to the Bhutan SLEUTS Project.
- Relevance (*), Effectiveness (*), Efficiency (*) and overall project outcome (*) - For "effectiveness", evaluate to what extent the barriers that the project is designed to remove were actually removed.
- Sustainability: financial (*) , socio-political (*), institutional framework and governance (*), environmental (*), overall likelihood of sustainability (*) – For overall likelihood of sustainability, evaluate whether the removed barriers will recur or not, and suggest ways of ensuring that the removed barriers will not recur.
- Country ownership
- Gender equality and women's empowerment
- Cross-cutting issues (poverty alleviation, improved governance, climate change mitigation and adaptation, disaster prevention and recovery, human rights, capacity development, South-South cooperation, knowledge management, volunteerism, etc., as relevant)
- GEF Additionality
- Catalytic Role / Replication Effect
- Progress to impact

One important issue that must be considered in the reported results that are contributing to the achievement of the project targets is their attribution to the Bhutan SLEUTS Project. Make sure that all declared results are attributable to the Project. Where necessary, explain the attribution or non-attribution.

Project finance / co-finance

The Evaluation will assess the key financial aspects of the project, including the extent of co-financing planned and realized. Project cost and funding data need to be well analysed, including annual expenditures. Variances between planned and actual expenditures need to be assessed and explained. Results from recent financial audits, as available, should be taken into consideration. The evaluator(s) will receive assistance from the Country Office (CO) and Project Team to obtain financial data in order to complete the co-financing table below, which will be included in the terminal evaluation report.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount (USD)
Total Co-financing				

iv. Main Findings, Conclusions, Recommendations and Lessons Learned

- The TE team will include a summary of the main findings of the TE report. Findings should be presented as statements of fact that are based on analysis of the data, and evidentiary documents. One important issue that must be considered in the reported results that are contributing to the achievement of the project targets is their attribution to the Bhutan SLEUTS Project. Make sure that all declared results are attributable to the Project. Where necessary, explain the attribution or non-attribution.
- The section on conclusions will be written in light of the findings. Conclusions should be comprehensive and balanced statements that are well substantiated by evidence and logically connected to the TE findings. They should highlight the strengths, weaknesses and results of the project, respond to key evaluation questions and provide insights into the identification of and/or solutions to important problems or issues pertinent to project beneficiaries, UNDP and the GEF, including issues in relation to gender equality and women's empowerment.
- Since the Bhutan SLEUTS Project strategy is barrier removal, one of the main conclusions of the TE must be on the extent of barrier removal that the Project has achieved. Explain in detail (based on the project results) for each project component of the barrier(s) is/are removed, and to what extent the barrier removal was achieved.
- Recommendations should provide concrete, practical, feasible and targeted recommendations directed to the intended users of the evaluation about what actions to take and decisions to make. The recommendations should be specifically supported by the evidence and linked to the findings and conclusions around key questions addressed by the evaluation.
- The TE report should also include lessons that can be taken from the evaluation, including best and worst practices in addressing issues relating to relevance, performance and success that can provide knowledge gained from the particular circumstance (programmatic and evaluation methods used, partnerships, financial leveraging, etc.) that are applicable to other GEF and UNDP interventions. When possible, the TE team should include examples of good practices in project design and implementation.
- It is important for the conclusions, recommendations and lessons learned of the TE report to include results related to gender equality and empowerment of women.

The TE report will include an Evaluation Ratings Table, as shown below:

ToR Table 2: Evaluation Ratings Table for Bhutan Sustainable Low-emission Urban Transport Systems project

Monitoring & Evaluation (M&E)	Rating[47]
M&E design at entry	
M&E Plan Implementation	
Overall Quality of M&E	
Implementation & Execution	Rating
Quality of UNDP Implementation/Oversight	
Quality of Implementing Partner Execution	
Overall quality of Implementation/Execution	
Assessment of Outcomes	Rating
Relevance	
Effectiveness	
Efficiency	
Overall Project Outcome Rating	
Sustainability	Rating
Financial resources	
Socio-political/economic	
Institutional framework and governance	
Environmental	
Overall Likelihood of Sustainability	

6. TIMEFRAME

The total duration of the TE will be 25 working days over a time period of 2-3 months starting on (03/05/2022). In case if stakeholder interviews are done virtually, the timeframe may be revised. It shall be detailed in the inception report. The tentative TE timeframe is as follows:

Timeframe	Activity
(22/04/2022)	Application closes
(25/04/2022)	Selection of TE consultants (individually not as team)
(28/04/2022)	Preparation period for TE team (handover of documentation)
(03-04/05/2022) 2 days	Document review and preparation of TE Inception Report
(09-11/05/2022) 3 days	Finalization and Validation of TE Inception Report; latest start of TE mission
(14-24/05/2022) 10 days	TE mission: stakeholder meetings, interviews, field visits, etc.
(25/05/2022) I day	Mission wrap-up meeting & presentation of initial findings; earliest end of TE mission
(01-06/06/2022) 6 days)	Preparation of draft TE report
(07/06/2022)	Circulation of draft TE report for comments
(22-24/06/2022) 3 days	Incorporation of comments on draft TE report into Audit Trail & finalization of TE report
(27/06/2022)	Preparation and Issuance of Management Response
(TBD)	Concluding Stakeholder Workshop (optional)
(08/07/2022)	Expected date of full TE completion

[47] Outcomes, Effectiveness, Efficiency, M&E, I&E Execution, Relevance are rated on a 6-point rating scale: 6 = Highly Satisfactory (HS), 5 = Satisfactory (S), 4 = Moderately Satisfactory (MS), 3 = Moderately Unsatisfactory (MU), 2 = Unsatisfactory (U), 1 = Highly Unsatisfactory (HU). Sustainability is rated on a 4-point scale: 4 = Likely (L), 3 = Moderately Likely (ML), 2 = Moderately Unlikely (MU), 1 = Unlikely (U)

Options for site visits should be provided in the TE Inception Report.

7. TE DELIVERABLES

#	Deliverable	Description	Timing	Responsibilities
1	TE Inception Report	TE team clarifies objectives, methodology and timing of the TE	No later than 2 weeks before the TE mission: *(by 11/05/2022)*	TE team submits Inception Report to Commissioning Unit and project management
2	Presentation	Initial Findings	End of TE mission: *(by 25/05/2022)*	TE team presents to Commissioning Unit and project management
3	Draft TE Report	Full draft report *(using guidelines on report content in ToR Annex C)* with annexes	Within 3 weeks of end of TE mission: *(by 07/06/2022)*	TE team submits to Commissioning Unit; reviewed by BPPS-GEF RTA, Project Coordinating Unit, GEF OFP
5	Final TE Report* + Audit Trail	Revised final report and TE Audit trail in which the TE details how all received comments have (and have not) been addressed in the final TE report *(See template in ToR Annex H)*	Within 1 week of receiving comments on draft report: *(by 24/06/2022)*	TE team submits both documents to the Commissioning Unit

*All final TE reports will be quality assessed by the UNDP Independent Evaluation Office (IEO). Details of the IEO's quality assessment of decentralized evaluations can be found in Section 6 of the UNDP Evaluation Guidelines.[48]

8. TE ARRANGEMENTS

The principal responsibility for managing the TE resides with the Commissioning Unit. The Commissioning Unit for this project's TE is UNDP Bhutan Country Office.
The Commissioning Unit will contract the evaluators and ensure the timely provision of per diems and travel arrangements within the country for the TE team. The Project Team will be responsible for liaising with the TE team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

9. TE TEAM COMPOSITION

A team of two independent evaluators will conduct the TE – one international team leader (with experience and exposure to projects and evaluations in other regions) and one national team expert from Bhutan. Recruitment will be done individually. The consultants shall have prior

[48] Access at: http://web.undp.org/evaluation/guideline/section-6.shtml

experience in evaluating similar projects. Experience with GEF financed projects is an advantage. An international consultant will be designated as the team leader and will be responsible for overall evaluation process, including evaluation design and reporting. A national consultant will be designated as a team expert and responsible for conduct of evaluation, particularly data collection in the country.

The evaluator(s) cannot have participated in the project preparation, formulation and/or implementation (including the writing of the project document), must not have conducted this project's Mid-Term Review and should not have a conflict of interest with the project's related activities.

As of 11 March 2020, the World Health Organization (WHO) declared COVID-19 a global pandemic as the new coronavirus rapidly spread to all regions of the world. Travel to the country has been restricted. Due to international travel restrictions, an international consultant (team leader) is expected to conduct evaluation remotely, while a national consultant shall take the lead in on-site data collection, including KIIs and FGDs as well as verification of the results in the project's intervention sites in case of travel restriction being relaxed. Division of roles will be clearly defined before the conduct of the TE and discussed and finalized during the inception phase in consultation with UNDP and relevant stakeholders. The Team members must present the following qualifications. Any individual who has had prior involvement in design, implementation, or Mid-term Review (MTR) of SLEUTS Project or those who have been directly or indirectly related to the SLEUTS Project are not eligible for this consultancy due to conflict of interests.

A. International Lead Consultant

Education

- Master's degree in engineering (preferably transport engineering or mechanical engineering) environmental science, renewable energy, environmental engineering, transport planning, climate change or other closely related fields;

Experience

- Minimum 7 years of relevant professional experience of project evaluation, particularly GEF financed project evaluations, with proven knowledge of evaluation methodologies;
- Previous experiences in project design/implementation/ evaluation in relevant thematic areas (i.e., renewable energy, low emission transport, environmental science, environmental engineering;
- Experience of working in Asia especially South Asian countries having technical knowledge in the targeted focal area(s) is an advantage;
- Demonstrated understanding of issues related to climate change & sustainable transport; experience in gender-sensitive evaluation and analysis;
- Excellent communication skills;
- Demonstrable analytical skills;
- *Experience with implementing evaluations remotely will be considered an asset.*
- No involvement in design, implementation, or Mid-term Review (MTR) of Bhutan SLEUTS Project
- Fluency in written and spoken English.

Responsibilities:

- Conduct document review and data gathering;
- Design and develop appropriate, detailed evaluation methodologies for TE;

- Lead the TE Team in planning, conducting, and reporting on the evaluation remotely with clear division of labour within the Team, ensuring timeliness of reports;
- Lead drafting and finalization of the Inception Report for the Terminal Evaluation;
- Use of best practice methodologies in conducting evaluation;
- Lead presentation of the draft evaluation findings and recommendations remotely;
- Organize the de-briefing to the UNDP Bhutan Country Office, Project Management Team and Evaluation Reference Group;
- Lead the drafting and finalization of the Terminal Evaluation Report

10. DUTY STATION

Travel:

- International travel **might** not be possible for the team leader given the current situation with the COVID-19 pandemic and travel restriction imposed by number of countries in the region and globally;
- In case of travel, the BSAFE course must be successfully completed prior to commencement of travel. Herewith is the link to access the training: https://training.dss.un.org/course/category/6;
- Individual Consultants are responsible for ensuring they have vaccinations/inoculations when travelling to certain countries, as designated by the UN Medical Director.
- Consultants are required to comply with the UN security directives set forth under: https://dss.un.org/dssweb/
- All related travel expenses will be covered and will be reimbursed as per UNDP rules and regulations upon submission of an F-10 claim form and supporting documents.

11. EVALUATOR ETHICS

The TE team will be held to the highest ethical standards and is required to sign a code of conduct upon acceptance of the assignment. This evaluation will be conducted in accordance with the principles outlined in the UNEG 'Ethical Guidelines for Evaluation'. The evaluator must safeguard the rights and confidentiality of information providers, interviewees and stakeholders through measures to ensure compliance with legal and other relevant codes governing collection of data and reporting on data. The evaluator must also ensure security of collected information before and after the evaluation and protocols to ensure anonymity and confidentiality of sources of information where that is expected. The information knowledge and data gathered in the evaluation process must also be solely used for the evaluation and not for other uses without the express authorization of UNDP and partners.

12. PAYMENT SCHEDULE

- 20% payment upon satisfactory delivery of the final TE Inception Report and approval by the Commissioning Unit
- 40% payment upon satisfactory delivery of the draft TE report to the Commissioning Unit
- 40% payment upon satisfactory delivery of the final TE report and approval by the Commissioning Unit and RTA (via signatures on the TE Report Clearance Form) and delivery of completed TE Audit Trail

Criteria for issuing the final payment of 40%:

- The final TE report includes all requirements outlined in the TE TOR and is in accordance with the TE guidance.
- The final TE report is clearly written, logically organized, and is specific for this project (i.e., text has not been cut & pasted from other TE reports).
- The Audit Trail includes responses to and justification for each comment listed.

In line with the UNDP's financial regulations, when determined by the Commissioning Unit and/or the consultant that a deliverable or service cannot be satisfactorily completed due to the impact of COVID-19 and limitations to the TE, that deliverable or service will not be paid. Due to the current COVID-19 situation and its implications, a partial payment may be considered if the consultant invested time towards the deliverable but was unable to complete to circumstances beyond his/her control.

13. APPLICATION PROCESS[49]

Recommended Presentation of Proposal:

a) **Letter of Confirmation of Interest and Availability** using the template[50] provided by UNDP;
b) **CV** or a **Personal History Form** (P11 form[51]);
c) **Technical proposal** - Brief description **of approach to work/work plan** of why the individual considers him/herself as the most suitable for the assignment, and a proposed methodology on how they will approach and complete the assignment; (max 1 page)
d) **Financial Proposal** that indicates the all-inclusive fixed total contract price and all other travel related costs (such as flight ticket, per diem, etc.), supported by a breakdown of costs, as per template attached to the Letter of Confirmation of Interest template. If an applicant is employed by an organization/company/institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the applicant must indicate at this point, and ensure that all such costs are duly incorporated in the financial proposal submitted to UNDP.

All application materials should be submitted to UNDP, Peling Lam, Kawajangsa, Thimphu, Bhutan in a sealed envelope indicating the following reference "Consultant for Terminal Evaluation of Bhutan Sustainable Low-emission Urban Transport Systems project" or by email at the following address ONLY: procurement.bt@undp.org by (**22 April, 2022, before 5.30 pm**). Incomplete applications will be excluded from further consideration.

Criteria for Evaluation of Proposal: Only those applications which are responsive and compliant will be evaluated. Offers will be evaluated according to the Combined Scoring method – where the educational background and experience on similar assignments will be weighted at 70% and the price proposal will weigh as 30% of the total scoring. The applicant receiving the Highest Combined Score that has also accepted UNDP's General Terms and Conditions will be awarded the contract.

Technical Criteria for Evaluation for International Consultant (Maximum 70 points):

[49] Engagement of evaluators should be done in line with guidelines for hiring consultants in the POPP https://popp.undp.org/SitePages/POPPRoot.aspx

[50] https://intranet.undp.org/unit/bom/pso/Support%20documents%20on%20IC%20Guidelines/Template%20for%20Confirmation%20of%20Interest%20and%20Submission%20of%20Financial%20Proposal.docx

[51] http://www.undp.org/content/dam/undp/library/corporate/Careers/P11_Personal_history_form.doc

- Criteria-01: At least Master's degree in environmental science, renewable energy, environmental engineering, transport planning, climate change or other closely related fields - Max Point 5;
- Criteria-02: Minimum 7 years of relevant professional experience of project evaluation, particularly GEF financed project evaluations, with proven knowledge of evaluation methodologies - Max Point 25;
- Criteria-03: Previous experiences in project design/implementation/ evaluation in relevant thematic areas (i.e., renewable energy, low emission transport, environmental science, environmental engineering -Max Point 25;
- Criteria-04: Experience of working in Asia especially South Asian countries having technical knowledge in the targeted focal area(s) is an advantage - Max Point 10;
- Criteria-05: Demonstrated understanding of issues related to gender and forestry & climate change; experience in gender-sensitive evaluation and analysis - Max Point 5.

Financial Evaluation (Total 30 marks)
Only technically qualified proposals will be considered for 30% financial evaluation. The maximum points (30) will be assigned to the lowest financial proposal. All other proposals received points according to the following formula: $p = y (\mu/z)$
Where:

- p = points for the financial proposal being evaluated;
- y = maximum number of points for the financial proposal;
- μ = price of the lowest-priced proposal;
- z = price of the proposal being evaluated

14. TOR ANNEXES

- ToR Annex A: Project Logical/Results Framework
- ToR Annex B: Project Information Package to be reviewed by TE team
- ToR Annex C: Content of the TE report
- ToR Annex D: Evaluation Criteria Matrix template
- ToR Annex E: UNEG Code of Conduct for Evaluators
- ToR Annex F: TE Rating Scales
- ToR Annex G: TE Report Clearance Form
- ToR Annex H: TE Audit Trail

Annex B: TE Mission Itinerary
Field visit and Stakeholder Consultation Program

Sl#	Program	Purpose	Date
1	Visit to Phuntsholing	Visit charging stations (CSs) at Chuzom, Gedu, Wangkha and Gedu Meeting with Thromde Officials Meeting with Taxi Drivers (incl. both male & female) Visit the CSs in the Thromde area	12h – 13th June 2022
2	Visit to Paro	Visit to: Paro Airport CSs in Paro KI interview (female taxi driver) Local taxi association members	15th June 2022

Stakeholder Meeting (16th June – 24th June 2022)

Sl#	Stakeholder	Key Official/Staff
1	Project Management Unit (PMU), Prime Minister's Office (PMO)	Project Manager
2	Gross National Happiness Commission (GNHC)	Dhendup Tshering
3	Ministry of Information and Communication (MoIC)	Secretary and Project Director
4	Road Safety and Transport Authority (RSTA)	Director and team
5	Department of Renewable Energy (DRE), Department of Hydropower and Power Systems (DHPS)	Director/Chief
6	Ministry of Labor and Human Resource (MoLHR) Department of Technical Education, Technical Training Institute (TTI), Thimphu	EV Curriculum development officers
7	National Environment Commission (NEC) - Climate Change Division and Waste Management Division	Division Chief
8	Govt. Motor Transport Officer (MTO)	PMU, PMO
9	UNDP	RR and Project Officer

Sl#	Stakeholder	Key Official/Staff
10	Druk Holdings and Investments (DHI)	Uwjal Deep Dahal, Director, Inotec
11	Bhutan Power Corporation (BPC)	Ghana Shyam Tamang, Executive Engineer
12	Bank of Bhutan (BoB)	Director, Credits Department
13	Taxi Association, Thimphu	
14	Female Taxi Drivers	
15	Car Dealers	Kuenphen Motors, Karjung Motors, Samdhen Vehicles, Bhutan Hyundai Motors
16	Consultant – EV Curriculum Development	
17	Disabled People's Association	

Annex C: Stakeholders Consulted

S/N	Name	Organization	Email/Mobile Number
1	His Excellency Lyonchhen Dasho (Dr.) Lotay Tshering	Prime Minister, PMO	lotaytshering@cabinet.gov.bt
2	Dasho Phuntsho Tobgay	Secretary, Ministry of Information and Communication	ptobgay@moic.gov.bt
3	Dasho Uttar kumar Rai	Thrompon/Mayor, Phuentsholing Thromde	ukrai@pcc.bt
4	Mr. Phanitsiriprapha Apiwat	Master Trainer, MoLHR	apiwat1144@gmail.com Ph# 77714550
5	Mr. Dendrup Tshering,	Program Officer, GNHC, RGoB	dtshering@gnhc.gov.bt
6	Mr. Dorji Wangchuk	EV Taxi Driver, Thimphu	17600014
7	Mr. Ghana Sham Tamang	EE, BPC	gstamang@bpc.bt
8	Mr. Govinda Sharma	Executive Architect, Development Regulatory Division, Phuentsholing Thromde	gsharma@pcc.bt
9	Mr. Jigme Wangchu:	EV Taxi Driver, Phuentsholing	17668592
10	Mr. Karma P Dorji,	Director, Department of Hydropower and Power Systems, MoEA	kpdorji@moea.gov.bt
11	Mr. Leki Dorji,	Sr. Instructor, Thimphu TTI	tekissorjee@gmail.com Ph# 17685712
12	Mr. Nawaraj Chhertri	Program Manager, UNDP	nawaraj.chhetri@undp.org
13	Mr. Ngawang Norbu	Sales Manager, Karjung Motors	
14	Mr. Phub Gyeltshen	Chief, BICMA	pgyeltshen@bicma.gov.bt
15	Mr. Prem Bdr. Moktan	Director, Credits and Trade Finance, Bank of Bhutan	prem.moktan@bob.bt
16	Mr. Sonam Dorji	Taxi Driver, Paro	17620416
17	Mr. Sonam Dorji	EV Driver, Paro Taxi	17620416
18	Mr. Sonam Tobgye	Project Manager, PMO	stobgye@cabinet.gov.bt
19	Mr. Sonam Yeshey Tshering	Instructor, Thimphu TTI	s.y.tshering@gmail.com Ph# 17471255

20	Mr. Tashi Choejay	Trainer, Khuruthang TTI	tashittik2017@gmail.com Ph# 17864605
21	Mr. Tashi Dawa	Director, RSTA, RGoB	tdawa@rsta.gov.bt
22	Mr. Tashi Tenzin	Chief Credit Officer, Bank of Bhutan	tashi.tenzin@bob.bt
23	Mr. Tenzin Dorji	EV Taxi Driver, Phuentsholing	17759240
24	Mr. Tenzin Penjor	Instructor, Thimphu TTI	tenzinp@tti.gov.bt Ph# 77419687
25	Mr. Thinley Dorji	Taxi Driver	17756047
26	Mr. Thinley Norbu	Chief Urban Planner, Thimphu Thromde	tnorbu@thimphucity.gov.bt
27	Mr. Thukten	CEO, Kuenphen Motors	
28	Mr. Tshering La	EV Taxi Driver, Phuentsholing	17550745
29	Mr. Tshering Tashi	Chief, Climate Change Division, NEC	ttashi@nec.gov.bt
30	Mr. Tshewang Dorji	EV Taxi Driver, Phuentsholing Taxi Association Tshogpa	17604899
31	Mr. Ugyen	Chief, Planning and Coordination Division, DHPS, MoEA	ugyen@moea.gov.bt
32	Mr. Uwjal Deep Dahal	Director, Department of Innovation and Technology, DHI	ujjwaldeepdahal@dhi.bt
33	Ms. Asuza Kubota	Resident Representative, UNDP	azusa.kubota@undp.org
34	Ms. Dechen Dema,	Executive Engineer, DRE, MoEA	ddema@moea.gov.bt
35	Ms. Dorji Wangmo	Assistant Lecturer, Thimphu TTI	dezang249@gmail.com Ph#17470643
36	Ms. Sonam Pem	Sales Manager, Karjung Motors	17129117
37	Ms. Sonam Wangmo	Principle, TTI Thimphu	swangmo@tti.gov.bt
38	Ms. Tashi Yangzom	EV Taxi Owner, Paro	17884677
39	Ms. Thinley Choden	Head, Green Banking, Bank of Bhutan	thinley.choden@bob.bt
40	Mr. Phurpa Wangchuk	DPA Member	phurpa.wangchuk@undp.org
41	Mr. Yonten Jamtsho	DPA Member	jamtsho@unfpa.org
42	Ms. Sangay Wangmo	EV Driver	17696968
43	Ms. Yangzom	EV Driver	17807402

44	Ms. Tshering Lham	EV Driver	17606793
45	Ms. Kezang Choki	EV Driver	17946414
46	Ms. Chechey	ICE Taxi Driver	77807833
47	Ms. Karma Wangmo	ICE Taci Driver	17358634
48	Mr. Rinzin Chophel	Chairman, Bhutan Taxi Association	17946414
49	Ms. Shruti Vijayakumar	World Bank	svijayakumar@worldbank.org
50	Ms. Muneeza Mehmood Alam	World Bank	malam5@worldbank.org
51	Mr. Brendan Finn	World Bank	brendanmfinn@yahoo.com

ANNEX D: List of documents reviewed

Project Document (ProDoC)
Project Mid-Term Review Report
M&E Plan
Gender Action Plan
Project Implementation Report (PIR, 2020 and 2021)
Project Board Meeting Reports`

Annex E: Summary of field visits

Site Visit to the Charging Stations – Thimphu, Phuntsholing and Paro
Date: 12th June 2022

1. Chunzom Charging Station

   While traveling to Phuntsholing, this is the first charging station on the Thimphu-Phuntsholing highway. It is a DC charging station. The charging station is well kept and is operational.


2. Wangkha Charging Station

The Second station is located in Wangkha. It has two DC charging stations. The charging station is set up on private land which is owned by the restaurant owner. The government does not have to pay lease rent for the land as the owner has willingly given it for free to set up the charging stations. The resturant owners also benefits from this arrangement as they get more customers from the EVs. The charging station is well kept and is fully operational.

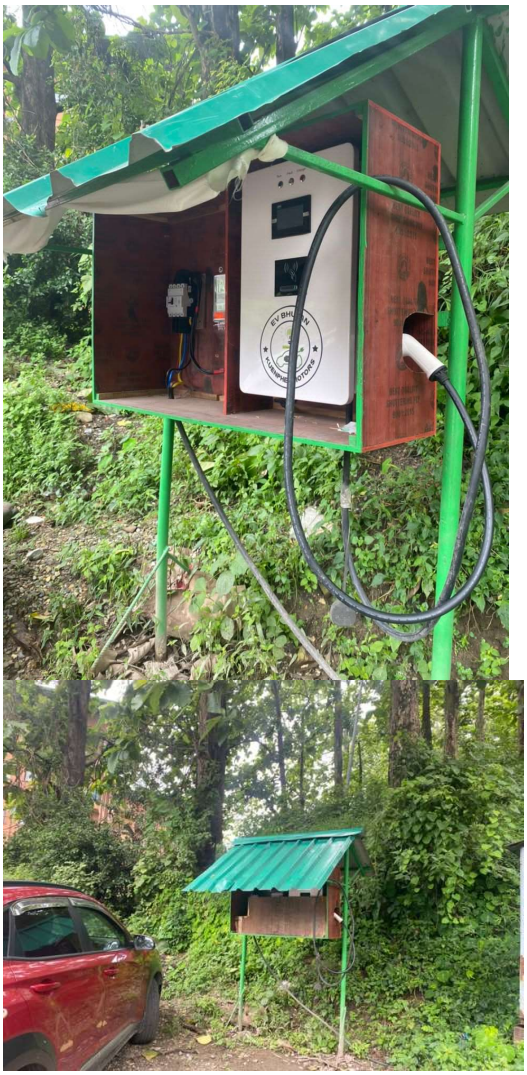
3. Gedu Charging Station

This is the third charging station along the Thimphu-Phuentsholing highway. It has two DC charger.
Similar to Wangkha charging station, this charging station is also set up next to a restaurant on private land for free. While the charging station is well kept, the station was down due to some technical problem on the day of visit.

4. Charging Stations in Phuntsholing Thromde Area
    a. AC charger near RSTA Office
    This is an AC charger near the Phuntsholing RSTA office. This charging station was set up by the Kuenphen Car Dealer as a CSR (corporate social responsibility).

b. Near Pemaling

This is an AC charger in the Thromde area.



c. Near Multi Car Park

This is a DC charging station. The charging station has been vandalized with broken plastic panels and broken floor tiles. The surrounding is not well kept with overgrown bushes and lots of litters around the area. The charging equipment is operational.

D. Near Vegetable Market

This is a DC charging station. While the charging station itself is operational, the charging station has been vandalized with broken plastic panels and broken floor tiles. The station itself is also not well kept with lots of litters in and around the area.

2. Charging Station in Paro town

Annex F: Evaluation Question Matrix

Evaluation Questions	Sub-Questions/Indicators	Sources	Methods/Informants
1. Relevance: The extent to which program objectives and design meet the needs of the country/recipient and continue to do so if circumstances change; the degree of alignment with country needs, UNDP, GEF mandates, existing national strategies and policies, international conventions and SDGs Was project design/conception appropriate to reach intended results?			
Question 1.1: Has the program responded to the country's main development priorities as defined in the country's development plans on low carbon transition in the transport sector, UNDP-GEF mandates, SDGs, sectoral policies and international conventions?	1a. Was the project design appropriate to achieve the intended results?	Project documents, Inception reports National Policy documents GEF strategic goals and objectives	Documentary review and thematic analyses
	1b. Was the project design consistent with the GEF focal area objective and program, country priorities, and the UNDP portfolio of actions in Bhutan?		
	1c. Was the project design consistent with the SDGs?		
Question 1.2: Did the project respond to needs of beneficiaries and evolving context?	1d. Was the project design relevant to the final beneficiaries?	Interviews and FGDs with beneficiaries and stakeholders	Thematic analysis of primary data from interviews and FGDs Content analysis of MTR and progress reports
	1e. Have there been any changes in the relevance of the project since the mid-term evaluation that affect the relevance of the project objectives and goals?	MTR report Progress reports	
Question 1.3: Is the programme sensitive to gender development concerns?	1f. To what extent has the program addressed immediate and long-term gender development concerns?	Gender action plan Results framework	Documentary Review: Interviews with beneficiary groups and stakeholders

		Project stakeholders	
2. Effectiveness: To what extent has the intervention met or is expected to meet its objectives and outcomes			
Question 2.1: How has or will the project objective be achieved?	2a. To what extent and how effectively has the project objective " to facilitate initial stage of low-carbon transition in Bhutan's urban transport sector by promoting wider uptake of low emission vehicles, in particular electric vehicles as the preferred fuel source for transport sector in Bhutan" been achieved? 2b. Did the project produce any positive or negative unintended/unexpected results? (applicable equally to each outcome)?	PIRs MTR Project teams, partners, beneficiaries	Documentary review: comparison of project targets (indicators) and level of realization Interviews and FGDs
Question 2.2: Does the project add value to ongoing efforts at the country level, and to what extent?	2c. What is the added value of the project's approach? 2d. To what extent can the achievement of these outcomes (including any spillover effects) be attributed to the GEF funding: GEF additionality)? 2e. Were there synergies between the project and other initiatives in the same country and/or region? If so, to what extent and how did the project take advantage of them (e.g., by establishing partnerships)? 2f. What other contextual factors and actors contributed to the results achieved and how? 2g. Did the project develop or adopt innovative solutions to achieve its results?	Prodoc Stakeholder engagement plan PIRs, progress reports Project stakeholders	Documentary review Interviews: FGDs
Results, Outcome level			
Question 2.3.: Did the project remove or lower policy and	2h. To what extent has the project been successful in strengthening the policy and enabling environment for low emissions transport in Bhutan?	PIRs Progress reports MTR	Documentary review Interviews:

regulatory barriers hampering growth of LEV market?		Project stakeholders - Bhutan Taxi Association, Royal Monetary Authority, Bank of Bhutan, Dealers, Taxi drivers.	FGDs
Question 2.3.: Has the project addressed awareness, misperception and capacity gaps and constraints regarding LEVs among wide range of transport market stakeholders?	2i. To what extent has the project contributed to raising awareness, addressing misperceptions and strengthening local capacity for a transition towards LEVs amongst market stakeholders?		Documentary review Interviews: FGDs
Question 2.3.: Has the project tackled barriers related to affordability of and access to finance for LEVs, as well as investment in electric vehicle supply equipment (EVSE)?	2j. How effective has the project been in strengthening investment in low-emissions transport systems and support services?		Documentary review Interviews: FGDs
3. Efficiency: To what extent was the project delivered in an efficient manner in terms of outcomes, outputs and goals			
Question 3.1: How did government agencies deliver on their mandates and what was the impact of their actions (inaction)?	3a. To what extent did the government deliver on their roles and responsibilities in terms of management and project management.?	MOIC and relevant government agencies Project team members Financial reports Project stakeholders - Bhutan Taxi Association, Royal Monetary Authority, Bank of	Documentary review – Interviews: Efficiency analysis comparing burn rate and output achievement rate
	3b. To what extent was the project implemented in an efficient and valuable manner?		
Question 3.2: How did the project adapt to evolving external context and how did this affect implementation?	3c. To what extent was the leadership able to adapt to changing context to improve on the efficiency of delivery?		
Question 3.3: To what extent was the project budget realistic and	3d. Was the budget sufficient to deliver on the objectives of the project?		

co-financing mechanisms realistic and how did this impact project delivery?	3e. Were the co-financing arrangements feasible and how did this affect delivery? 3f. What budget adjustments have been made and why?	Bhutan, Dealers, Taxi drivers.	
Question 3.4: Were the human and material resources sufficient in quality and quantity and how did this inform delivery?	3g. Did the project team have sufficient technical, financial and human resources? 3h. What is the level of participation of beneficiaries and external stakeholders in the project and what was the impact?		
4. Sustainability: To what extent are project achievements likely to continue beyond the project and what risks could constrain extension, replicability and up scaling of this project			
Question 4.1: Are project achievements likely to live beyond the project initial period?	4a. What is the likelihood that the results of the project will continue to be useful or remain even after the project has ended?	Government agencies Project team and GEF focal point UNDP team Project stakeholders Project reports MTR report	<u>Documentary review</u> – <u>Interviews:</u> <u>Focus group discussions</u>
	4b. What results, lessons or experiences have been replicated?		
Question 4.2: What evidence exists that the government is committed to low carbon transport?	4c. What level of ownership has been demonstrated by the national government and is this likely to continue?		
Question 4.3: Does the government demonstrate ownership and commitment to securing project gains?	4d. To what extent can the government of Bhutan ensure wider adoption of project activities and results (through sustaining progress, scaling up, mainstreaming, replication and market change) after the project ends? (applies to all results)?		
Question 4.4: What factors are likely to impact the sustenance of project achievements?	4e. What are the main risks that may affect the sustainability of the project benefits (considering		

	financial, socio-economic, institutional and environmental and governance aspects)?		
5. Factors affecting performance: To what extent did the M&E design and implementation, and management and supervision mechanisms affect project performance? How did the project document best practices, manage knowledge and ensure inclusive participation of beneficiaries and stakeholders			
Question 5.1: To what extent did the M&E design and implementation, and management and supervision mechanisms affect project performance? How did the project document best practices, manage knowledge and ensure inclusive participation of beneficiaries and stakeholders?	**Monitoring and evaluation (M&E)** 5a Was the monitoring and evaluation plan practical and sufficient? 5b. Did the monitoring and evaluation system function according to the M&E plan? Was information systematically collected and used to make timely decisions and promote learning during project implementation? 5c. Were the recommendations provided by the MTR implemented and what was the impact of this implementation (or lack of it) in the implementation of the project?	Prodoc M&E Plan and results framework MTR report MTR management response Interviews with project teams	Documentary review Interviews:
	Project supervision, implementation role: 5d. To what extent did UNDP provide project identification, concept preparation, appraisal, preparation, approval and start-up, monitoring and supervision (technical, administrative and operational)?	Project team Prodoc MTR Stakeholders	Documentary report: Interviews:
	Project implementation and management: 5e. How effectively did UNDP carry out its role and responsibilities in the management and administration of the project? What were the main challenges in terms of project management and administration? To what extent were risks identified and managed?	Project team Stakeholders Progress reports, PIRs, prodoc	Documentary report: Interviews:

	Financial management and mobilization of expected co-financing 5f. To what extent did the expected co-financing materialize and did this affect the project results? 5g. What funding management challenges did the project face?	Co-financing table Project team UNDP team	Review: Interviews with all stakeholders on the funding management challenges of the project
	Knowledge management, communication and public awareness 5h. How does the project evaluate, document and share its results, lessons learned and experiences? 5i. To what extent are communication products and activities likely to support the sustainability and scaling up of project results?	PIR reports, training reports, MTR, publications, studies, project website (if exist)	Documentary report: Interviews:
	Project partnership and stakeholder engagement (including the degree of stakeholder ownership of project results): 5j. Which stakeholders were involved in the design and/or implementation of the project? What was the effect of this involvement on the project results and to what extent do the project results belong to the stakeholders involved?	Project document, PIR, MTR report	Review: Interviews with all stakeholders
6. Social and environmental safeguards: To what extent were environmental safeguard concerns effectively identified and addressed during project implementation?			
Question 6.1: To what extent were environmental safeguard concerns effectively identified and addressed during project implementation?	6a. To what extent were environmental and social concerns taken into account in the design and implementation of the project? 6.b. where there are unintended impacts created by this project? 6c. Was there a complaints and redress mechanism and how did it work?	Project document, PIR, MTR report	Review: Interviews with all stakeholders

7. Gender and rights based approaches: To what extent were gender, vulnerable or marginalized groups involved in project implementation?			
Question 7.1: To what extent were gender, vulnerable or marginalized groups involved in project implementation?	7a. To what extent have gender equality and women's empowerment considerations been taken into account in the design and implementation of the project, and has the project been implemented in a way that ensures equitable participation and benefits for both sexes?	Project document, PIRs, MTR report Project stakeholders	Documentary review Interviews Focus group discussions
	7b. Were there any missed opportunities or lessons learned with regard to gender mainstreaming?		
	7c. To what extent were vulnerable and marginalized groups involved in the project?		
	7d. Has there been any unintended effects on women, men and vulnerable groups		
Disability	7e. Were people with disabilities consulted and meaningfully involved in project planning and implementation?		
	7f. What proportion of the project beneficiaries were persons with disabilities		
	7.g What barriers did the project face in this process and what actions were undertaken by the project		
8. Progress to Impacts: What evidence exists that the project is contributing to project and GEF strategic goals and targets			
Question 8.1: What evidence exists that the project is contributing to project and GEF strategic goals and targets?	8a. Is the project contributing to expected impacts?	GEF tracking tools PIRs Prodoc MTR report	Compare trends regarding GEF indicators

9. Lessons to be learned to inform future programming: To what extent have the lessons learned been documented and available to inform future project design?			
Question 9.1: To what extent have the lessons learned been documented and available to inform future project design?	9a. What lessons learned from the design and implementation of the project could be useful for improving the implementation and/or design of future projects?	Project stakeholders Project teams PIRs, progress reports MTR reports	Interviews: Documentary review

Annex G: Questionnaire used for data collection

Bhutan Sustainable Low-emission Urban Transport Systems (SLEUTS) Project - (PIMS 5563)

Data collection protocol for UNDP/MOIC Teams/PMU

The interviewees will be given a brief introduction of the project and the Terminal Evaluation before the start of the interview. The confidentiality of the information shared and anonymity of the interviewees will be clearly stated.

Respondent's Information

Respondent's Name:
Institution:
Job title:
Email:
Gender:
Country of institution:

What has been your institution's role in the project?

Relevance

1. How appropriate was the project design in delivering the expected outcomes?
2. Has the evolving project context affected the relevance of the project in anyway? (for instance, Covid-19, rising fuel prices, global supply chain issues, COP 26, War in Ukraine, etc.)?
3. If so in what ways and how did the project adjust?
4. How would you rate the overall relevance of this project in terms of alignment with national priorities, UNDP, GEF mandates and international climate commitments of the country? – use table below

Relevance	***Level of achievement***	***Explanation/justification of factors that affected achievement***
The extent to which program objectives and design meet the needs of the country/recipient and continue to do so if circumstances change; the degree of alignment with country needs, existing national strategies and policies and SDGs	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

Relevance	***Level of achievement***	***Explanation/justification of factors that affected achievement***

The extent to which program objectives and design meet UNDP, GEF mandates, and international conventions on climate to which the government is engaged	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

Effectiveness:

5. In your opinion, how satisfied are you with the achievement of project objectives (use the Table below)? What are those factors[52] that affected the achievement/under achievement of the objectives?

Outcomes	***Level of achievement outcomes***	***Explanation/justification of factors that affected achievement***
Outcome 1: Required policy and regulatory environments are in place to support the promotion of low emissions transport systems	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	
Outcome 2: Institutions and consumers are fully aware and knowledgeable on the EVs	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	
Outcome 3: Necessary financial support/incentive mechanisms are in place to increase investment in low emission transport systems and support services	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

6. What types of innovations were introduced by this project – *could be in terms of products, services, processes, organizational, marketing etc.)?*
7. To what extent can the achievement of these outcomes (including any spillover effects) be attributed to the GEF funding: GEF additionality) – 1 to the least extent and 5 to a great extent
8. Please give an example of GEF additionality if at all

52 E.g., project design, project's linkages with other activities, extent and materialization of co-financing, stakeholder involvement

9. What were the contributing factors to project success?
10. What were the constraining factors to project success *(internal or external to the project – political, economic, social, technological, environment, environmental?*
11. What measures were taken to address shortcomings?
12. What synergistic relationships were established with other ongoing initiatives? Give examples
13. Were there any modifications or changes to proposed outputs and why, particularly following the MTR?
14. Considering the above answers, how would you rate the overall effectiveness of this project?

Effectiveness	***Level of achievement***	***Explanation/justification of factors that affected achievement***
How would you assess the level of achievement of the project goals and objectives	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

Efficiency

15. How would you assess the role of government in the delivery of this project and how did it affect the achievement of the project objectives. Please kindly explain briefly.
16. Did the project team have sufficient human resources for efficient delivery of project outcomes?
17. Was the budget sufficient in line with the expected results?
18. What financial management controls[53] were in place to ensure good financial management of project funds and timely submission of financial management reports to the GEF?
19. How did the project adjust and adapt to the changing context (COVID-, war in Ukraine, fuel price increases etc.) and how did this affect project results?
20. How would you rate the overall efficiency of the project? Use Table below

Efficiency	***Level of achievement***	***Explanation/justification of factors that affected achievement***
How satisfied are you with the efficiency of the project in delivering on its outcomes, outputs and goals?	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory	

53 For instance, budget monitoring, timely flow of funds and payment of satisfactory project deliverables

	Unsatisfactory Highly Unsatisfactory	

Sustainability

21. Was there an exit strategy?
22. How do you assess the likelihood of the achievements of this project to continue beyond the end of the project – give some examples of why you think so?
23. What are the most likely risks to sustainability?
24. How would you assess the level of government ownership and commitment to this project?
25. Overall, how would you rate the likely sustenance of the project achievements?

Sustainability	***Level of achievement***	***Explanation/justification of factors that affected achievement***
To what extent are project achievements likely to continue beyond the project?	Highly Likely Likely Moderately unlikely Highly unlikely	

Impact

26. What in your view are the long term impacts of this project:
    a. At individual level
    b. at the level of your community?
    c. at national level?
27. Are there any negative or unintended consequences of this project at any of these levels? Please explain

Performance Factors

Assessment of Monitoring & Evaluation Systems

28. Did the M&E system operate as per the M&E plan?
29. Did the M&E plan undergo revision in the course of the project implementation? If yes, comment on the timeliness of the revisions.
30. Were the resources allocated for M&E sufficient?
31. Have the recommendations of the MTE been implemented? If no, why not?
32. Considering the above, how would you rate the overall design and implementation of the M&E system?

M&E Design	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Adequacy of M&E design	Highly Satisfactory Satisfactory Moderately Satisfactory	

	Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

M&E Implementation	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Adequacy of M&E implementation	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

Assessment of Implementation and Execution

33. How would you assess the role of UNDP in the project cycle Use table below

UNDP role in the design of the project	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Performance of UNDP as the GEF agency	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	
UNDP role in the implementation of the project	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Performance of UNDP as the GEF agency	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	
UNDP role in supervision of overall implementation of the project	***Level of achievement***	***Explanation/justification of factors that affected achievement***

Performance of UNDP as the GEF agency	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

34. What can you recommend to improve UNDP's role?
35. How would you assess the role of the national implementing agency – MOIC?

MOIC role in the design of the project	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Performance of MOIC	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	
MOIC management role	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Performance of MOIC	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	
Performance of PMU under Prime Ministry	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Performance of implementation under Prime ministry	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

Assessment of the Environmental and Social Safeguards

36. Please explain how environmental and social concerns were taken into account in the design and implementation of the project?
37. Where there any unintended impacts created by this project?

Environmental and social safeguards	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Assess how environmental and social safeguards were implemented in this project	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

Gender

38. To what extent was gender mainstreamed into the project cycle?
    a. At design phase? – 1 to the least extent and 5 to a great extent
    b. During implementation: – 1 to the least extent and 5 to a great extent
    c. During monitoring and evaluation: – 1 to the least extent and 5 to a great extent

Please explain with some examples.

39. To what extent has the project promoted positive changes in gender equality and women's empowerment
40. Has there been any unintended effects on women, men and vulnerable groups

Disability

41. Were people with disabilities consulted and meaningfully involved in project planning and implementation?
42. What barriers did the project face in this process and what actions were undertaken by the project

Stakeholder engagement

43. In what ways did the project engage with national stakeholders to deliver on this action? Were there any challenges?
44. What actions were taken to ensure no one was left behind?
45. How satisfied are you with your participation in this project?

Level of consideration of views and concerns by the project	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Level of satisfaction	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory	

	Highly Unsatisfactory	

Accountability and Grievance Mechanism (AGM)

46. What measures were put in place to ensure stakeholders were aware about the project's grievance mechanism if at all?
47. Were any grievances received and dealt with?

Other Assessments

Knowledge Management

48. Please kindly explain how knowledge management took place in this project.
49. Were there opportunities for experience sharing, were lessons documented?
50. How did the project share its results and lessons?

Lessons learned and recommendations

51. In your view, what are some of the lessons that can be learned from this project?
52. What are your recommendations for the future?

Bhutan Sustainable Low-emission Urban Transport Systems (SLEUTS) Project - (PIMS 5563)

Data collection protocol for individual interviews – for Sectoral and stakeholders

The interviewees will be given a brief introduction of the project and the Terminal Evaluation before the start of the interview. The confidentiality of the information shared and anonymity of the interviewees will be clearly stated.

Respondent's Information

Respondent's Name:
Institution:
Job title:
Email:
Gender:
Country of institution:

How did you first become aware of this project and how have you been involved?

Relevance

1. In what ways was the project trying to address national priority needs?
2. Do you think the project addressed your priority needs as an organization/community? In what ways if at all?
3. Based on your answers and knowledge of the project, how would you rate the overall relevance of this project?

Relevance	***Level of achievement***	***Explanation/justification of factors that affected achievement***
The extent to which program objectives and design meet the needs of the country/recipient and continue to do so if circumstances change; the degree of alignment with country needs, existing national strategies and policies and SDGs	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

Relevance	***Level of achievement***	***Explanation/justification of factors that affected achievement***
The extent to which program objectives and design meet UNDP,	Highly Satisfactory Satisfactory	

GEF mandates, and international conventions	Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

Effectiveness:

4. How satisfied are you with the level of achievement of project objectives (use the Table below)? What are those factors[54] that affected the achievement/under achievement of the objectives?

Outcomes	***Level of achievement outcomes***	***Explanation/justification of factors that affected achievement***
Outcome 1: Required policy and regulatory environments are in place to support the promotion of low emissions transport systems	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	
Outcome 2: Institutions and consumers are fully aware and knowledgeable on the EVs	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	
Outcome 3: Necessary financial support/incentive mechanisms are in place to increase investment in low emission transport systems and support services	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

5. What types of innovations were introduced by this project – could be in terms of products, services, processes, organizational, marketing etc.)?
6. What were the contributing factors to project success?
7. What were the constraining factors to project success (internal or external to the project – political, economic, social, technological, environment, environmental?

54 E.g., project design, project's linkages with other activities, extent and materialization of co-financing, stakeholder involvement

8. Considering the above answers, how would you rate the overall effectiveness of this project?

Effectiveness	***Level of achievement***	***Explanation/justification of factors that affected achievement***
How satisfied are you with the overall achievement of the project outcomes, outputs and goals	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

Efficiency

9. How do you assess the role of government in the delivery of its roles and responsibilities under this project and how did this affect the project?
10. Do you think project activities were generally implemented on time?
11. How did the project adjust or adapt to the evolving project context (COVID- 19, war in Ukraine, etc.) and how did this affect the project results
12. How would you rate the overall efficiency of the project?

Efficiency	***Level of achievement***	***Explanation/justification of factors that affected achievement***
How satisfied are you with the use of project resources (financial, HR, material etc.) to achieve project outcomes, outputs and goals?	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

Sustainability

13. In what ways do you think the achievements of this project will continue after it ends?
14. What are the most likely risks to sustainability?
15. Given another chance, would you still be interested to be involved?
16. Overall, how would you rate the likely sustenance of this project achievements?

Sustainability	***Level of achievement***	***Explanation/justification of factors that affected achievement***
To what extent are project achievements likely to continue beyond the project?	Highly Likely Likely Moderately unlikely	

	Highly unlikely	

Impact

17. What in your view are the long term impacts of this project:
    a. At individual level
    b. at the level of your community?
    c. at national level?
18. Are there any negative or unintended consequences of this project at any of these levels? Please explain

Performance Factors

Assessment of Implementation and Execution

19. Based on your knowledge of this project, how would you assess the role of UNDP in terms of project implementation, management and supervision?

UNDP role in the design of the project	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Performance of UNDP as the GEF agency	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	
UNDP role in the implementation of the project	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Performance of UNDP as the GEF agency	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	
UNDP role in supervision of overall implementation of the project	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Performance of UNDP as the GEF agency	Highly Satisfactory Satisfactory Moderately Satisfactory	

	Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

20. What can you recommend to improve UNDP's role?
21. How would you assess the role of the national implementing agency – MOIC?

MOIC role in the design of the project	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Performance of MOIC	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	
MOIC management role	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Performance of MOIC	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	
Performance of PMU under Prime Ministry	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Performance of implementation under Prime ministry	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

22. Do you have any recommendations to improve the performance of the Project Management Unit under the Prime Ministry?

<u>Assessment of the Environmental and Social Safeguards</u>

23. Please explain how environmental and social concerns were taken into account in the design and implementation of the project?
24. Where there any unintended impacts created by this project?

Environmental and social safeguards	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Assess how environmental and social safeguards were implemented in this project	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

Gender

25. To what extent was gender mainstreamed into the project cycle?
    a) At design phase? – 1 to the least extent and 5 to a great extent
    b) During implementation: – 1 to the least extent and 5 to a great extent
    c) During monitoring and evaluation: – 1 to the least extent and 5 to a great extent

Please explain with some examples

26. To what extent has the project promoted positive changes in gender equality and women's empowerment
27. Has there been any unintended effects on women, men and vulnerable groups

Disability

28. Were people with disabilities consulted and meaningfully involved in project planning and implementation?
29. What barriers did the project face in this process and what actions were undertaken by the project

Stakeholder engagement

30. How satisfied are you with your participation in this project?

Level of consideration of views and concerns by the project	***Level of achievement***	***Explanation/justification of factors that affected achievement***
Level of satisfaction	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory	

	Highly Unsatisfactory	

31. How would you assess the way in which the project brought in other stakeholders?
32. Are there any groups that were left behind or not involved – which ones?

Accountability and Grievance Mechanism (AGM)

33. Were you aware whether the project had an accountability and grievance mechanism?

Other Assessments

Knowledge Management

34. Did you take part in any training events?
35. Were there opportunities to share experiences and learn from others during this project?

Lessons learned and recommendations

36. In your view, what are some of the lessons that can be learned from this project?
37. What are your recommendations for the future of this project?

Bhutan Sustainable Low-emission Urban Transport Systems (SLEUTS) Project - (PIMS 5563)

Guidelines for Focus group discussions

The focus group discussions will focus on implementing two participatory assessment tools: SWOT and a force fields analysis.

SWOT ANALYSIS

This analysis will identify the achievements and strengths the project has but also weaknesses, opportunities and threats to sustainability.

STRENGTHS OF THE PROJECT – What worked well including achievements	WEAKNESSES OF THE PROJECT – what did not work so well?
OPPORTUNITIES FOR IMPROVEMENT	THREATS TO SUSTAINABILITY OF THE PROJECT

FORCE FIELDS ANALYSIS

The force fields analysis seeks to identify the internal and external factors impacting the project positively or negatively.

Internal factors – facilitating factors	Internal factors – constraining factors
External factors – facilitating factors	External factors – constraining factors

Recommendations from Focus group participants to improve performance and sustainability of the project – following SWOT and Force Fields Analysis.

Annex H: TE Rating scales

Ratings Scale - Relevance, Effectiveness, Efficiency Rating Description

Rating	Description
6 = Highly Satisfactory (HS)	Level of outcomes achieved clearly exceeds expectations and/or there were no shortcomings
5 = Satisfactory (S)	Level of outcomes achieved was as expected and/or there were no or minor shortcomings
4 = Moderately Satisfactory (MS)	Level of outcomes achieved more or less as expected and/or there were moderate shortcomings.
3 = Moderately Unsatisfactory (MU)	Level of outcomes achieved somewhat lower than expected and/or there were significant shortcomings
2 = Unsatisfactory (U)	Level of outcomes achieved substantially lower than expected and/or there were major shortcomings.
1 = Highly Unsatisfactory (HU)	Only a negligible level of outcomes achieved and/or there were severe shortcomings
Unable to Assess (UA)	The available information does not allow an assessment of the level of outcome achievements

Rating scale for sustainability

Rating	Description
4 = Likely (L)	There are little or no risks to sustainability
3 = Moderately Likely (ML)	There are moderate risks to sustainability
2 = Moderately unlikely (MU)	There are significant risks to sustainability
1 = Unlikely (U)	There are severe risks to sustainability
Unable to Assess (UA)	Unable to assess the expected incidence and magnitude of risks to sustainability

Annex I: Signed Evaluation Consultant Agreement form

Annex J: Signed UNEG Code of Conduct form

Evaluators/Consultants:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study imitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.
8. Must ensure that independence of judgement is maintained, and that evaluation findings and recommendations are independently presented.
9. Must confirm that they have not been involved in designing, executing or advising on the project being evaluated and did not carry out the project's Mid-Term Review.

Evaluation Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System:

Name of Evaluator: ___Prof Aurelian Mbzibain_____

Name of Consultancy Organization (where relevant): _____

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at Wolverhampton _____ (Place) on ___ 07.08.2022_____ (Date)

Signature: _____ _____

DocuSigned by:

1F4F11B6061C440...

Name of Evaluator: __Tashi Pem_____

Name of Consultancy Organization (where relevant): __- _____

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Annex K: Signed TE Report Clearance form

Terminal Evaluation Report for Bhutan Sustainable Low-emission Urban Transport Systems (SLEUTS) Project *& UNDP Project ID # 5563*) **Reviewed and Cleared By:**

Commissioning Unit (M&E Focal Point)

Name: Ugyen Dorji

Signature: DocuSigned by: D6BDA65F7D19490...

Date: 27-Sep-2022

Regional Technical Advisor (Nature, Climate and Energy)

Name: Manuel Soriano

Signature: DocuSigned by: Manuel Soriano A062AA9E5030469...

Date: 28-Sep-2022

Annex L: Audit Trail – attached as separate file

Annex M: GEF Core Indicator Matrix – attached as a separate file