Monitoring & Evaluation (M&E) Plan and Impact Statement Form

Objective of the M&E Plan and Impact Statement:

- The M&E Plan and Impact Statement must be designed based on the Technical Assistance Response Plan and must enable the Implementer to complete the Closure Report at the end of the assistance.

Process for filling in the form:

- The Implementer must identify relevant quantitative and qualitative indicators as specified in the Closure Report. A sub-set of indicators to monitor and assess must be chosen among these.
- The Implementer may also identify other specific, measurable, achievable, relevant, and time-bound indicators suitable to monitor Activities, Outputs and anticipated Outcomes from the technical assistance and add to the M&E Plan and Impact Statement.
- During implementation of the TA or FTA, the Implementer must collect all relevant data as described in the Monitoring & Evaluation Plan. Aggregated data on selected indicators as well as an updated version of the Impact Statement will be presented in the Closure Report at the end of the assistance.

Basic Information	
Title of response plan	Technical Capacity Enhancement for Planning Urban Public Transport System in Vientiane, Lao PDR
Technical assistance reference number	-
Country/ countries	Lao PDR
NDE focal point and organization	• NDE: Syamphone Sengchandala • Focal person: Souphany Heuangkeo, Deputy Director, Lao PDR
Sector(s) addressed	Low-carbon transportation (mitigation)
Technologies supported	Public transport planning
Implementation period and total duration	July 2022 – June 2023
Total budget for implementation	~$176,200 USD (233,330,000 KRW)
Designer of the response plan	Korea National University of Transportation
Implementer of response plan	Korea National University of Transportation & Youngin ITS

(A) Outputs and Activities as described in the Response Plan	(B) Indicator	(C) Expected results	(D) Method and frequency for data collection	(F) Comments
	Select relevant indicators from the Closure Report (at least one core indicator, section B). You may also define additional relevant indicators to be added.	*Add the expected quantitative or qualitative target/value of the indicator (e.g. number of studies, policy recommendations, etc.).*	*Describe the expected method and frequency for data collection (e.g. survey, head count at a training workshop, application of a standard methodology etc.)*	*Describe any assumptions made or anticipated challenges for collecting quantitative and qualitative data*
1: Development of implementation planning and communication documents	*N/A*	*N/A*	*N/A*	*N/A*
Activity 1.1: Formulation of i) Detailed work plan, ii) Monitoring and evaluation plan, iii) CTCN Impact Description, iv) Closure and Data Collection report.	*N/A*	*N/A*	*N/A*	*N/A*
Activity 1.2: Inception Workshop	*N/A*	*1 workshop attended by minimum 2 attendees*	*N/A*	*N/A*
Deliverable 1: i) Detailed work plan1 ii) Monitoring and evaluation plan iii) CTCN Impact Description iv) Closure and Data Collection report	*N/A*	*4 deliverables (see first column)*	*N/A*	*N/A*
2: Review of the Planned Urban Public Transport Network for Vientiane	*N/A*	*N/A*	*N/A*	*N/A*
Activity 2.1: Review of related plans and data (existing conditions)	*Transport*	*Review of 3 related plans*	*Collected from various online sources by internet key word searches*	*N/A*
Activity 2.2: Review of the ongoing plan for the urban public transport network in Vientiane	*Transport*	*1-0 recommendations in a report*	*Review of 1 or 2 documents received from JICA*	*N/A*
Activity 2.3: SP survey and related analysis.	*Transport*	*Survey of 300 Vientiane residents*	*Survey of 300 Vientiane residents*	*N/A*
Deliverable 2: Draft and Final Plan for Vientiane Urban Public Transport System & Network		*1 report*		
3: Smart Public Transport Plan (SmartCity), 2022 – 2030				
Activity 3.1: Develop models including transport model	*Transport*	*1 transport model, calibrated*	*Calibrated data collected from Lao PDR government sources*	*N/A*
Activity 3.2: Research of latest trends in ITS for public transport	*Transport*	*1 Report Chapter*	*Collected from various online sources by internet key word searches*	*N/A*
Activity 3.3: Develop Smart Public Transport scenarios for Vientiane	*Transport*	*3 – 4 scenarios of multiple features*	*N/A*	*N/A*
Activity 3.4: Develop evaluation criteria	*Transport*	*10 or so evaluation criterium*	*Using a Multiple Account Evaluation (MAE) methodology*	*N/A*

Activity 3.5: Undertake evaluation	*Transport*	*3 – 4 scenarios of multiple features*	*Using a Multiple Account Evaluation (MAE) methodology*	*N/A*
Output 3: Smart Transportation Plan		*1 Report Chapter*	*N/A*	
4: Pre-Feasibility Study for One Intervention (TBD)				
Activity 4.1: Choose intervention for further study	*Transport*	*1 Report Chapter*	*N/A*	*N/A*
Activity 4.2: Develop estimated construction costs	*Transport*	*1 Report Chapter*	*Collected from Korean sources*	*N/A*
Activity 4.3: Develop socioeconomic benefit-cost analysis	*Transport*	*1 Report Chapter*	*Standard socioeconomic analysis over 10-year project period using Korean-reported discount rates*	*N/A*
Activity 4.4: Develop GHG reductions quantifications	*Transport*	*1 Report Chapter*	*GHG CO2e rates to come from USA or UN sources*	*N/A*
Activity 4.5: Implementation evaluation	*Transport*	*1 Report Chapter*	*N/A*	*N/A*
Activity 4.6: Development of the pre-feasibility plan document	*Transport*	*1 Report Chapter*	*N/A*	*N/A*
Deliverables 4: Draft and Final Pre-Feasibility Plan for One Intervention (TBD)	*Transport*	*1 Report Chapter including final recommendations*	*N/A*	*N/A*
5: Capacity Building and Administration of Public Transport in Vientiane				
Activity 5.1: Capacity Building Session preparation	*Transport*	*1 document including plans*	*N/A*	*N/A*
Activity 5.2: Capacity Building Session	*Transport*	*Capacity building for 3 individuals from Lao PDR of which at least one is female*	*N/A*	*N/A*

Note: The Response Plan may contain information useful for the section below. The information in the table below will be used by the CTCN for public communication of the achieved and expected results of the Technical Assistance through the CTCN website www.ctc-n.org and other communication channels. See for example: https://www.ctc-n.org/sites/www.ctc-n.org/files/benin_a_ag_forestry.final_.pdf

Impact Statement	
Challenge	*The current public transport system in the capital, Vientiane, is a very small and basic system with low patronage, amounting to no more than 1 -2 % of all trips. In the past, the Lao PDR has had outside assistance from several international organizations and has made some progress in upgrading its transport network, including planning for BRT. Beyond the BRT project, the Lao PDR should plan for a future that includes more usage of public transport to meet its official SDGs and other goals including the use of modern technologies to enhance the appeal and efficiency of public transport in Vientiane. However, the Lao PDR currently still lacks the capacity to do so.*
CTCN assistance	• *We will help the Lao PDR achieve its goals by developing, in conjunction with the ongoing work by JICA, a review of its future planned public transport network.* • *We will develop a basic plan and priority list for incorporating modern intelligent transport systems (ITS) into the Vientiane public transport network. We will also develop a pre-feasibility study for a single promising technology solution.* • *We will also implement a capacity building program with Lao PDR government officials to introduce them to advanced public transport technologies and planning processes in Korea.*
Anticipated impact	***ECONOMIC**:* *- Upon completion of this TA, the Lao PDR can focus on implementing public transportation service improvement projects that apply information and communication technology, modern transport planning standards, and modern administration based on knowledge transfer from Korea. By investing in such programs, the public transport system can become more competitive and convenient thus increasing its usefulness and impact, which is directly related to increase in accessibility to jobs, which will positively impact economic development in the Capital, Vientiane. For example, the DRT system envisioned in this TA would allow informal transport users to better plan their trips and have more information about travel times. Overall, this decreases the amount of time they need to spend planning and waiting for transport, thereby allowing them to spend more time on economic activities. Additionally, the public transport system would become more useful for tourists, who can take advantage of the public systems which can lead to increased tourism (and increased economic benefits for the operator) and therefore more economic opportunity for locals overall.* ***SOCIAL**:* *The recommendations provided in the TA to the Lao PDR will allow them to make both the formal (conventional) and informal public transportation systems more useful. This will in provide affordable and accessible means of transportation for a larger portion of the population, especially those who*

	cannot afford private vehicles. This enhances mobility for people who might otherwise face challenges in reaching education, healthcare, relatives and friends, and job opportunities. This, in turn, contributes to a more equitable distribution of resources and opportunities. ***ENVIRONMENTAL**:* *- This will allow them to cope with their increasing traffic congestion and air pollution problems, set-up expanded BRT, BIMS (Bus Information and Management System), or Demand-Responsive Transport systems and, as a result, improve the public transportation mode share (or at minimum, maintaining the current levels) which can results in a decrease in private vehicle use and therefore traffic congestion and its associated air pollution, GHG emissions, and other pollutants.*
Anticipated co-benefits from the TA	*- With investment in public transport, and transport more generally, there will be significant co-benefits in terms of increased economic opportunity which will lead to economic growth. This is especially true in places with underdeveloped public transport networks, like Vientiane.* *- Investing in transport infrastructure has long been shown to increase and enable **economic activity**. Mainly, this is caused by the "agglomeration effect", meaning that as more people, jobs, materials, and places become better connected (due to enhanced transport activity) economic activity becomes easier and more efficient and more of it occurs.* *- Further, the environment will benefit from implementation of our recommendations since they will encourage a switch (or remaining) in highly efficient public transport versus private transport options, which are still very often using fossil fuels.*
Gender aspects of the TA	*In many countries, women are highly under-represented in decision-making with majority of the transport sector being managed and operated, and designed for, men. A disruptive market change more accessible transportation through technology enhancements, could to an increasing women's participation in the transport sector and provide socio-economic opportunities in new businesses and business models as drivers, charging solution providers, fleet operators etc. For example, our recommendation in this TA is to provide real-time information to passengers through technological means, with the Central Bus Station (CBS) being the priority. By installing (physical) digital signage at the location, women will directly benefit from increased access to information . This stop is often used by women going to local nearby markets etc. in central Vientiane.*
Anticipated contribution to NDC	*Upon completion of this TA, the Lao PDR can focus on implementing public transportation service improvement projects that apply information and communication technology (ICT), modern transport planning standards, and modern administration based on knowledge transfer from Korea. This will allow them to cope with their increasing traffic congestion and air pollution problems, set-up expanded BRT, BIMS (Bus Information and Management System), or DRT and, as a result, improve the public transportation mode share.*
The narrative story	*Planning for the future Vientiane public transport may include the installation of Intelligent Transportation System (ITS) technologies, also known as Smart Transport. ITS can contribute to the transition from personal transport to buses by providing improved convenience for the end-user.* *In the ongoing Vientiane Transportation Master Plan (VTMP) being produced by JICA, the focus is on traditional infrastructure with some exceptions like TSP (on BRT corridors) and an IC card-based payment system. This TA will*

	complement this ongoing work by focusing on a few key areas: *(1). Providing a second look at the VTMP and providing any recommendations* *(2) Looking at and evaluating SmartTransport scenarios in Vientiane;* *(3) Building a pre-feasibility study for one SmartTransport feature in Vientiane, like DRT.* *We will provide additional recommendations for Smart Public Transport components that will enhance and improve both the existing, and proposed, public transport systems in Vientiane. Three scenarios, based on investment values will be considered for future implementation in Vientiane. These recommendations will increase the convenience and public perception of public transport in Vientiane, which is quite low and hopefully convince locals to start using buses instead of buying cars, or better yet, instead of using their cars or motorcycle that they already own. As a result, GHGs can be reduced overall in the country.* *However, such results can only be realized if the recommendations are actually followed, so care should be taken to provide a good base for future studies and funding for the projects and policies we are recommending in this TA.*
Contribution to SDGs	***SDG # 11: Make cities and human settlements inclusive, safe, resilient, and sustainable****: The long-term impacts of this TA will bring the population in Vientiane both economic and health benefits. The planning works in the TA will cover the public transport system, both formal and informal, and if implemented would contribute to establishing (and maintaining the exiting) the Vientiane public transportation system, sustainably (including sustainable revenue and environmental sustainability).* ***SDG # 13: Take urgent action to combat climate change and its impacts****: This TA will assist the Lao PDR in reducing its increasing dependence of fossil-fuel-based private transportation while promoting more efficient usage of their roadways. Given that the current public transport system in Vientiane is far inadequate for the population, there is a substantial risk that the system will continue to be widely disused and inconvenient for locals. Improving the public transport system will improve the city's ability to prevent locals from switching to private transport in great numbers.* ***SDG #17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.*** *The TA has strengthened and will continue to strengthen the relationship between Korea and the Lao PDR. Many of the recommendations in the TA will require substantial support from developed countries for technology transfer and equipment supplies. Korea is well prepared and eager to provide this support to the Lao PDR for a mutually beneficial economic relationship.*
Reference to knowledge products	*Please indicate if any UNFCCC Technology Executive Committee (TEC) knowledge products (publications, briefs, tools etc.) were used in the development of the TA request and/or are envisaged to be used during implementation of the technical assistance.* *Link to TEC knowledge database:* *https://unfccc.int/ttclear/tec/documents.html* *Which knowledge products do you envisage to use? Please list* *Not used.*
