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United Nations Development Programme

Project Document

Project title: Tashkent - Accelerating Investments in Low Emission Vehicles (TAILEV)		
Country(ies): Uzbekistan	Implementing Partner (GEF Executing Entity): Ministry of Transport	Execution Modality: National Implementation Modality (NIM)
Contributing Outcome (UNDAF/CPD, RPD, GPD): This project aligns with the UNDAF for Uzbekistan for 2021-2025, contributing to Outcome 5: By 2025, most at risk regions and communities of Uzbekistan are more resilient to climate change and disasters, and benefit from increasingly sustainable and efficient management of natural resources and infrastructure, better climate action, environmental governance and protection and Output 1.5: Innovative and sustainable climate change adaptation and mitigation initiatives in agriculture, health water, transport and building/housing sectors are implemented at national and regional levels.		
UNDP Social and Environmental Screening Category: Moderate		UNDP Gender Marker: GEN 2
Atlas Award ID: 00120488		Atlas Project/Output ID: 00116678
UNDP-NCE PIMS ID number: 6417		GEF Project ID number: 10282
LPAC meeting date: 14 June 2021 (expected)		
Latest possible date to submit to GEF: 11 December 2020		
Latest possible CEO endorsement date: 13 June 2021		
Planned start date: 1 July 2021		Planned end date: 30 June 2027
Expected date of posting of Mid-Term Review to ERC: 1 July 2024		Expected date of posting Terminal evaluation report to ERC: 31 March 2027
Brief project description: This project is designed to accelerate the adoption of electric vehicles in the City of Tashkent that can be replicated in other cities in the Republic of Uzbekistan, significantly reduce greenhouse gas emissions in the transport sector, and improve urban environmental quality.		

The project will support: i) the design, implementation and operation of a pilot green urban transport corridor (GUTC) in Tashkent with a fleet of electric buses to be deployed as public transport; ii) the collection and dissemination of information that will provide evidence of the environmental, financial and social benefits of electric buses and GUTCs that are intended to shift the market towards low-carbon e-mobility and accelerate adoption of e-vehicles and GUTCs; iii) measures that are to be developed to ensure the long-term environmental sustainability of e-vehicles and GUTCs; and iv) assistance to the government to establish an institutional framework and adopt a strategy for the promotion of gender-inclusive low-carbon electric mobility and GUTCs. While the direct lifetime GHG emission reductions from the displacement of CNG and diesel buses to electric buses is 20,700 tCO_{2eq} operating on the pilot Shota Rustaveli GUTC and the Fargona Yuli BRT corridor, the pilot GUTC and fleet of electric buses should catalyze interest amongst the public and private investors in additional GUTCs in Tashkent and other Uzbekistan cities, and in electric vehicles such as electric fleets of taxis and delivery vehicles. This will lead to indirect emissions reductions of 11.4 million tCO_{2eq} top-down and 0.207 million tCO_{2eq} bottom-up.

TAILEV will make a positive contribution to SDGs 11 and 13 as well as 3, 5, 8 and 12.

(1) FINANCING PLAN	
GEF Trust Fund	USD 3,569,725
UNDP TRAC resources	USD 300,000
Confirmed cash co-financing to be administered by UNDP	USD 300,000
(1) Total Budget administered by UNDP	USD 3,869,725
(2) CONFIRMED CO-FINANCING	
<i>Ministry of Transport</i>	USD 7,000,000
<i>JSC "Toshshakhartranskhizmat" (TBC)</i>	USD 6,600,000
<i>Tashkent City Municipality</i>	USD 2,800,000
<i>ToshkentboshplanLITI</i>	USD 70,000
<i>Uzhydromet</i>	USD 450,000
<i>International Solar Energy Institute</i>	USD 300,000
<i>JSC Uzavtosanoat</i>	USD 300,000
<i>Municipality of Namangan City</i>	USD 700,000
<i>Goscomecology</i>	USD 350,000
<i>Turin Polytechnic University</i>	USD 300,000
<i>JV UzTruck and Bus Motors Ltd.</i>	USD 500,000
<i>JV Sam Auto LLC</i>	USD 3,000,000
<i>Valley Fruits LLC</i>	USD 3,200,000

(3) Total confirmed co-financing		USD 25,570,000
(4) Grand-Total Project Financing (1)+(3)		USD 29,439,725
SIGNATURES		
Signature: print name below	Agreed by Government Development Coordination Authority	Date/Month/Year: within 25 days of GEF CEO endorsement
Signature: print name below	Agreed by Implementing Partner	Date/Month/Year: within 25 days of GEF CEO endorsement
Signature: print name below	Agreed by UNDP	Date/Month/Year: within 25 days of GEF CEO endorsement
Key GEF Project Cycle Milestones: Project document signature: within 25 days of GEF CEO endorsement First disbursement date: within 40 days of GEF CEO endorsement Inception workshop date: within 60 days of GEF CEO endorsement Operational closure: within 3 months of posting of TE to UNDP ERC Financial closure: within 6 months of operational closure		

ACRONYMS

AFA	Admin and Finance Assistant
AWP	Annual Work Plan
BRT	Bus rapid transit
CNG	Compressed natural gas
CoM	Cabinet of Ministers
CTA	Chief Technical Advisor
DSA	Daily Subsistence Allowance
EOP	End of Project
ERC	UNDP Evaluation Resource Center
ESMF	Environmental Social Management Framework
EV	Electric vehicle
EVI	IEA coordinated Electric Vehicles Initiative
FSP	Full Sized Project
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEFSEC	Global Environment Facility Secretariat
GES	Green Economy Strategy
GHG	Greenhouse gas
GMU	GUTC Monitoring Unit
Goscomecology	State Committee for Ecology and Environmental Protection
GoU	Government of Uzbekistan
GSO	Gender Safeguards Officer
GUTC	Green urban transport corridor
HACT	Harmonized Approach to Cash Transfers
ICCT	International Council for Clean Transportation
IEA	International Energy Agency
IEBS	International Electric Bus Specialist
IGUDE	International green urban development expert
IPS	International Procurement Specialist
ISEI	International Solar Energy Institute
M&E	Monitoring and Evaluation
MoT	Ministry of Transport
MRV	Monitoring, reporting and verification
MSP	Medium Sized Project
MTR	Mid Term Review
NDC	Nationally determined contributions
NGO	Non-governmental organization
NMV	Non-motorized vehicular
OPF	Operational Focal Point
PIF	Project Identification Form
PIR	GEF Project Implementation Report
PM	Project Manager
PMU	Project Management Unit
POPP	Programme and Operations Policies and Procedures
PPG	Project Preparation Grant
PRF	Project Results Framework

PS	Procurement Specialist
PTA	Public Transit Authority
PTS	Public Transport Specialist
SDG	Sustainable Development Goal
SEP	Stakeholder engagement plan
SESP	Social and Environmental Screening Procedure
STAP	GEF Scientific Technical Advisory Panel
TAILEV	Tashkent – Accelerating Investments into Low Emission Vehicles Project
TBC	TASHKENT Bus Company or JSC “Toshshakhartranskhizmat”
TCM	Tashkent City Municipality
TE	Terminal Evaluation
TNC	UNFCCC Third National Communication
TOD	Transit-oriented development
ToC	Theory of Change
ToR	Terms of Reference
TPM	Transit priority measures
TSP	Transit signal priority
UEMI	Urban Electric Mobility Initiative
UNDAF	United Nations Development Assistance Framework
UNDP-NCE	UNDP Global Environmental Finance Unit
UNFCCC	United Nations Framework Convention on Climate Change
UPS	National urban planning specialist

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DEVELOPMENT CHALLENGE

1. Uzbekistan is party to United Nations Framework Convention on Climate Change (UNFCCC), a signatory to the Paris Agreement on 19 April 2017 with the Senate of the Uzbekistan's Parliament ratifying the Paris Agreement through adoption of a Law "On Paris Agreement Ratification" on 27 September 2018. The commitment of the Government of Uzbekistan (GoU) towards the sustainability and modernization of its economy and global environmental commitment is made through nationally determined contributions (NDCs) declared by the country that seek to decrease specific emissions of greenhouse gases per unit of GDP by 10% by 2030 from 2010 levels.
2. The GoU's State Committee for Ecology and Environmental Protection reports that atmospheric emissions of pollutants and greenhouse gas emissions from stationary and mobile sources of pollution increased by 10% between 2013 to 2017. In recent years, a number of major targeted government resolutions and decisions on environmental protection activity have been adopted and are being implemented to mitigate this increase. Despite the introduction of a number of low carbon technologies (including low-waste and energy-saving technologies) and improving the energy efficiency of energy intensive industries, the transport sector remains a significant contributor to Uzbekistan's atmospheric emissions.
3. The decree of the President of the Republic of Uzbekistan dated 04.10.2019, "Strategy for the transition of the Republic of Uzbekistan to the green economy for the period 2019-2030", was approved with priorities in mitigating the environmental impact of the transport sector, all designed to lead to a significant reduction in emissions of polluting substances and GHGs¹. Transport-related targets for the implementation of this Strategy include:
 - a decrease in specific GHG emissions per unit of gross domestic product by 10% from the 2010 level;
 - a two-fold increase in energy efficiency and a decrease in the carbon intensity of gross domestic product;
 - further development of renewable energy sources to bring their share to more than 25% of the total volume of electricity generation;
 - providing access to a modern, affordable and reliable energy supplies to 100% of the population and all sectors of the economy; and
 - expansion of the production and use of motor fuels and motor vehicles with improved characteristics of energy efficiency and environmental friendliness as well as the development of electric vehicles.
4. Priorities in the transport sector in implementing the objectives of the *Green Economy Strategy* (GES) includes:
 - the formation of a single integrated development policy aimed at reducing transport costs and ensuring the efficient functioning of the transport sector, and the development of "green" transport in accordance with long-term urban development plans and environmental safety measures;
 - expanding the production and use of vehicles with improved energy efficiency and environmental friendliness in accordance with the minimum of a Euro-4 standards for electric vehicles, hybrid vehicles, and gas fuels;
 - improved engine fuel production;
 - continued renewal of the vehicle fleet including the development of an incentive program for the disposal of old cars and the purchase of new, more environmentally friendly cars;
 - ensuring the phase-out of hydrocarbon fuel and stimulating the development of electric transport;
 - the development and improvement of efficient public transport systems (increasing the share of public transport with improved performance);
 - development of new transport and logistics systems and road infrastructure; and
 - strengthening state control over the environmental condition of vehicles in use.
5. Implementation of the GES does state the GoU's focus on integrated solutions for "greening" urbanization across sectors that includes *inter alia*, improving urban mobility, ecosystem conservation, climate change adaptation, and smart technologies. The potential impact of implementing this GES is the reduction of the growth trajectory of transport-related GHG emissions through

¹ This is an update from Uzbekistan's 2016 Third National Communications (TNC) that cites on pg 69 Uzbekistan's programme "Towards 2030: Transition to Resources-efficient Growth Model (Vision 2030)" that the "improvement of system of transportation and logistical communications enabling efficient use of energy resources" is required to maintain the country's high economic growth rate of 8%.

the indigenous production and adoption of electric vehicles (EVs), a mode of transport potentially cleaner than those powered by fossil fuels. Successful implementation of the GES, however, will require the lowering of a number of barriers including:

- low levels of government capacity to implement new legislation, strategies and concept programmes on green transport and green urban development. This would include a lack of exposure of government personnel to best international practices for greening urban transport and green development and a lack of examples of green urban transport and development to observe and learn from in Uzbekistan;
 - increasing urban traffic congestion caused by the decreasing use of public transport modes in many urban areas and the rising economic status of the population with a higher proportion of the population with private car ownership. Moreover, the decreasing use of public transport is due to a lack of investment into increasing the frequency and quality of public transport that would meet growing demand for urban trips. Increased traffic congestion has contributed to an overall deteriorating quality of life, increased urban air pollution², and increased GHG emissions. For Uzbekistan, road transport pollution is 60% of all air pollution, 3 times higher than in developed countries of the world³;
 - low availability of EVs in Uzbekistan partly due their low demand and partly due to a low level of knowledge of EVs amongst Uzbek consumers. Low EV demand has been caused by electric vehicles still having a lower range compared to petrol vehicles notwithstanding recent technological improvements to reduce this disparity. Limited range and a lack of recharging infrastructure bring added constraints to wider adoption in addition to seasonal variances in electric vehicle performance. As such, piloting urban captive electric bus fleets would be more successful than piloting a fleet of electric taxis or delivery vehicles whose travel patterns are not planned in advance.
6. Addressing of these challenges is also consistent with Uzbekistan’s TNC from 2016 that foresaw “unavoidable growth in number of private cars will lead to a further increase in volume of GHG emissions”. The GoU’s response to this challenge was a listing of measures to decrease energy consumption of automobile transport including inter-alia: i) public transport traffic optimization in large cities; ii) introduction of hybrid electrical automobile transport; and iii) “modal shift” or priority development of urban public transport including access limitation to city centers, establishment of paid parking and development of bicycle infrastructure⁴. The impact of the COVID-19 pandemic will increase the level of difficulty in addressing of the challenges of decreasing the energy intensities of automobile transport. The pandemic has only reconfirmed to many governments the need to find sustainable solutions for environmental issues as a means of addressing an over-dependence on nature. As such, the rewards for Uzbekistan are immense if it chooses to persevere towards a low carbon future for the transport sector under its *Green Economy Strategy*.
7. Urban public transport in Uzbekistan is public sector-dominated, with no market liberalization, nor private sector involvement except along for some routes with private minibuses operating with up to 12 person capacities. Otherwise, public transport operators are fully government owned, and public transport receives substantial subsidization in order to reduce end-user fares. This baseline has also resulted in finance institutions not being involved in financing the urban public transport and focusing on investments such as road infrastructures and freight transport. However, in stakeholder consultations at the project design stage, the Ministry of Transport has indicated its interest to explore market reforms and introduce private sector operators on key bus routes. Also, there is some initial exploration of domestic (commercial) financing for the public sector operators, including from Uzpromstroybank (a national bank) providing financing for the intended upcoming procurement of the 20 electric buses and charging equipment for the BRT route in Tashkent.
8. In the capital city of Tashkent, where the main project activities will be implemented, the road network of the Tashkent City Municipality (TCM) is known for its wide transport corridors, many with 8 to 12 lanes of common traffic. While these corridors are common for the main routes of the City, the secondary road system that accesses residential areas is typically 2 to 4 lanes with no policies for parking along these roads. The City is served by 36 km of metro lines with 29 stations, and a city bus system managed by JSC “Toshshakhartranskhizmat” (also referred to as TBC or the Tashkent Bus Company) that operates over 1,000 buses. There is connectivity between different modes of transport within the City (between metro stations, bus routes and train stations) that can be improved to encourage more use of public transport. While there are sidewalks for pedestrians along most of the key transport corridors in Tashkent, there are only a few kilometers of cycling pathways observed in the City. The increase in the number of privately-operated automobiles has created more congestion in Tashkent over the past 10 years that has impacted the efficiencies of City-operated public buses as well as urban mobility within the City. An estimated 1,000 buses service 136 routes on a daily basis for more than 600,000 passengers.

² In 2018, air polluting emissions in Tashkent totaled 410,000 tons of which 94% are from mobile sources with road transport accounting for up to 80% of these emissions. Nationally, road transport pollution is 60% of all air pollution in Uzbekistan, which is more than 3 times higher than in developed countries of the world.

³ This rate is 18% for developed countries, 40% for Russia, and 30% for Kazakhstan.

⁴ Section 3.3.5 (Pg 78-80) of Uzbekistan’s TNC

STRATEGY

9. To meet the targets of SDG 11⁵, the GoU prepared a “*Concept on Environmental Protection of the Republic of Uzbekistan for the Period until 2030*” that was approved by the President on 30 October 2019⁶. Within the framework of the Concept, a “Road Map” was developed for environmental management to improve the quality of life of the population that includes increasing environmental sustainability of the transport sector in the country. To ensure environmental safety in transport, the Roadmap provides for a progressive transition of locally produced motor vehicles and motor fuels (gasoline and diesel fuel) corresponding to the Euro-5 environmental class and higher by 2030, which will ensure environmental safety of operating vehicles. In addition, due to the increasing number of vehicles, the incompatible quality of automobiles and motor fuels produced in the country, has led to an increase in motor fuel consumption and, subsequently, an increase in the emissions of pollutants and GHGs. On this basis and in line with the TNC’s transport-related measures mentioned in Para 6, the country developed a project “Concept for the further development of transport, communications and transit potential of the Republic of Uzbekistan until 2030” or 2030 Transport Concept. Furthermore, the Ministry of Transport is currently developing a “Strategy for the development of the transport system of the Republic of Uzbekistan until 2035” (2035 Transport Strategy) with its Goal 6 aimed to “ensure environmentally friendly transport, creating conditions for the development of green transport” that focuses on the promotion of electric vehicles. More information on Goal 6 in the 2035 Transport Strategy is provided in Annex 5. The *2030 Transport Concept’s* priority areas deemed beneficial for improving the environmental quality in Uzbekistan’s transport sector (including reduction of the negative impact of transport on environment that includes reducing emissions of pollutants and GHGs) are the introduction of clean, innovative technologies, as well as the implementation of a number of environmental priority measures in transport. In particular, the main priority areas of activity for the near future include:
- production of vehicles, in particular automobiles, as well as motor fuels that meet modern environmental requirements;
 - continued renewal of the fleet;
 - implementation of innovative clean urban planning systems;
 - wider use of alternative energy sources in transport;
 - development of new effective methods and means of organizing and managing traffic;
 - development and improvement of efficient public transport systems;
 - strengthening state control over the environmental condition of operating vehicles;
 - promotion of cycling with the creation of separate bike lanes and related infrastructure.
10. The GoU and Tashkent City Municipality (TCM) expressed their desire to demonstrate the operation of electric buses within a “green urban transport corridor” (GUTC) as a measure that addresses the barriers mentioned in Para 5 and many of the priority areas of the aforementioned *2030 Transport Concepts* and aligns with Goal 6 of the 2035 Transport Strategy. The Project defines the GUTC as an integrated transport corridor centered around e-buses.
- a) Core elements of the GUTC concept include (i) utilization of e-buses, (ii) in-route charging stations (where applicable), (iii) priority setting components such as dedicated bus lanes, transit priority signaling and queue jumps, and (iv) associated pathways for pedestrians and cyclists to access e-bus stations.
 - b) Additional complementary elements of GUTC can include (v) increased parking prices in the busy business centers and other crowded areas, (vi) lowering development fees for developers, (vii) variations on property taxes, and (viii) design elements such as premium buses and bus-stops for improved customer experience.
11. The Government of Uzbekistan is prioritizing the transition to low emission transport through several policy and strategy document that are listed above. Current developments such as government plan for purchasing 300 e-buses and associated charging stations for Tashkent (details are provided below) is a key example for this target. Hence, the project strategy sees GUTC as a key element that can co-develop with e-buses where at one point all the buses becoming electric. A Theory of Change based on a problem tree (both provided in Annexures 18 and 19) has been developed using a *pilot demonstration of electric buses* within a GUTC for this proposed GEF Project, TAILEV, to meet developmental challenges outlined in Section 1 that are designed to accelerate the adoption of electric vehicles in Uzbekistan for public transport and private use as well as the development of GUTCs that can be implemented to

⁵ Target 11.2 is the provision for the safety and environmental sustainability of cities and towns, as well as access to safe, affordable and environmentally sustainable transport systems by improving road safety, in particular, by increasing the use of public transport, focusing on special attention to the needs of socially vulnerable segments of the population.

⁶ Unofficial translation at <https://cis-legislation.com/document.fwx?rgn=120270>

enhance and increase the public transport ridership which will in turn contribute to the decreasing of traffic congestion and associated GHG emissions. To this end, the GoU and the Tashkent City Municipality (TCM) announced the adoption of a Cabinet of Ministers (CoM) Resolution No. 157 (16 March 2020) on “measures to improve the system of urban passenger transport in Tashkent”, designed to increase the efficiency of the services provided for passenger transport, traffic safety, and the integration of modes of the transport system. The following developments have been observed during the project design phase:

- large-scale reconstruction of one of the most important and busiest streets in the capital, the Fargona Yuli, has been completed at the end of 2020. After the finalization of this \$10 M project the capacity has been raised to 80,000 vehicles/day from 25-30,000/day; The Fargona Yuli BRT line is one of TAILEV Project’s pilot sites where all of the investment will be done by the Government of Uzbekistan whereas, the TAILEV project will implement its pilots in Shota Rustaveli street with a GUTC concept. Both lines connect at few connections throughout their routes. As the GUTC at Shota Rustaveli will connect two railway stations too, the proposed TAILEV Project will be an integral part of the transport restructuring in this part of Tashkent City and serves a complex approach to achieve climate change mitigation, social and environment benefits for the citizens of Tashkent City. Moreover, GUTC at Shota Rustaveli will have connections with the Babur Street from the Tashkent International Airport (indicated above), which will have its own dedicated bus lines;
 - Tashkent public transport was completely switched to the electronic payment card system. From 1 February 2021, the paper travel cards were replaced by electronic cards. Such cards can be purchased at ground-based sales kiosks of Toshshahartranskhizmat JSC. The preferential transport cards are available for schoolchildren, students and retired;
 - in 2021, a system of automatic announcement of stops in buses in Uzbek and Russian has been introduced at some routes but the electronic digital displays indicating bus arrival times at selected bus stops are not yet implemented;
 - in March 2021, TCM has announced that 2 high-speed bus service may be launched in certain areas of Tashkent. The draft resolution is currently being considered by relevant ministries and departments. The creation of this system will ensure that the population can get from one place to another faster by public transport than by car. The project is scheduled to be completed by September 1, 2021. Also, under the BRT project, 23 metrobuses were purchased; Finally, it is planned that a BRT line with a length of 12 km will be launched in Samarkand by September 2021;
 - in October 2020, a draft resolution of the Cabinet of Ministers entrusted TCM to purchase 300 electric buses by the end of 2023 was published. Procurement was expected to start in 2021 and TCM intends to purchase 100 units of vehicles each year. In addition, 300 charging stations will be purchased. In total, the authorities expected to spend 1 trillion UZS (\$95 M) for these purposes. However, the COVID19 pandemic with major consequences on economy may have impacts in this planning;
 - TCM announced that it developed a project to purchase 50 electric buses for Tashkent City. A bidding for the initial 20 buses is scheduled for April 2021, and several companies expressed their interest to bid. It is planned that the procured e-buses will be put into operation by the end of 2021;
 - the Ministry of Energy plans that by 2030, about a quarter of the Tashkent’s transport will go into the category of electric vehicles;
 - the production of electric vehicles in Uzbekistan can be launched by 2025. Currently, "Uzavtosanoat" (national automobile producer affiliated with GM) is developing a concept on production of electric vehicles in Uzbekistan starting in 2025.
12. Moreover, there are ongoing initiatives (as of early 2020) within TCM to pilot electric buses for public transport that includes electric buses from Belarus and China being tested under Tashkent conditions. The importance of seasonal testing of these electric buses for their range on one battery charge cannot be underscored. With the seasonal variations of Tashkent and the considerable funds to be expended on pilot e-bus fleets, testing of various electric bus models will likely not be completed until mid-2021 or beyond. The proposed TAILEV project is in a position to facilitate the acceleration of electric vehicle adoption through further rigorous testing of electric vehicles and monitoring its environmental and socio-economic impacts using best international practices.
13. A 4-step TAILEV strategy is proposed to achieve the changes encapsulated in the TAILEV Project objective of *“accelerating the adoption of electric vehicles in the City of Tashkent that can be replicated in other cities in the Republic of Uzbekistan, significantly reduce greenhouse gas emissions in the transport sector, and improve urban environmental quality”* that will include:
- Component 1: Government establishment of an institutional framework and an adopted strategy for promotion of low-carbon electric mobility and GUTCs;
 - Component 2: Implementation of pilot projects to provide evidence of technical, financial and environmental sustainability to plan for scale-up of low-carbon e-mobility and GUTCs;
 - Component 3: Creation of conditions to shift market towards low-carbon e-mobility and accelerate adoption of e-vehicles and GUTCs; and
 - Component 4: Developing measures to ensure the long-term environmental sustainability of e-vehicles and GUTCs.
14. The strategic approach of TAILEV with these 4 components can be placed into 2 categories:

- *De-risking* of the concept of electric buses and green urban transport corridor (GUTC) as an integrated transport corridor centered around electric buses. De-risking will be facilitated through the experience garnered from Component 2 on the pilot operation of electric buses (up to 30 e-buses) for public transport along the GUTC Shota Rustaveli demo project by UNDP/GEF/MOT and Fargona Yuli BRT corridor as national project demo project by UNDP/GEF/MOT, and from Component 3 (Outputs 3.1 to 3.5) which assists in the generation and collation of environmental and operational information from monitoring of the pilot operation of these e-buses and general traffic along the both routes. By linking both bus routes with e-buses on the same investment, the Ministry of Transport will be able to see the positive impacts of greening of spatial planning (through a demo GUTC along Shota Rustaveli Street) combined with the operation of electric buses along the transit corridor. Moreover, more attention will be drawn to the electric buses under these conditions. De-risking essentially takes place during Years 1 to 3;
- *Scaling-up* the development of GUTCs and the usage of electric vehicles in Uzbekistan. TAILEV assistance from Component 1 will consist of formulation of national policies and strategies and from Component 3 (Outputs 3.6 and 3.7 only) to support measures for potential investors in both public and private sectors to increase the usage of electric vehicles in Component 4. Scaling-up essentially takes place during Years 4 to 6.

By the end of the Project (EOP), the positive investment environment resulting from the completion of de-risking outputs and scaling-up activities of TAILEV should exert a positive influence on long-term outcome of the Project that is the decreasing GHG emissions from transport sector in Uzbekistan.

15. For the proposed TAILEV Strategy to succeed, assumptions have been made including:

- Continued high level support for the developing and operating GUTCs as a part of the country's "Strategy for the transition of the Republic of Uzbekistan to the green economy for the period 2019-2030" and the "2030 Transport Concept", and adoption of the 2035 Transport Strategy, notwithstanding the difficulties brought on by the COVID-19 pandemic;
- The availability of funds from GoU and regional development banks for capital financing of GUTC development of both Shota Rustaveli GUTC and Fargona Yuli BRT projects as well as public bus fleet renewal to e-buses;
- Appropriate pricing of fossil fuels that account for environmental costs and the instability of global fossil fuel prices.

Section V contains the Project Results Framework that summarizes the TAILEV Project Strategy.

An important element of the project will be its investment support, with the end objective of promoting cost-efficient and financially sustainable investment in e-buses and charging infrastructure. The current baseline context in Uzbekistan for urban public transport is that, to-date, it is public sector-dominated, with limited market liberalization and private sector involvement. Nonetheless, stakeholder consultations have identified initial interest from the Ministry of Transport to explore initial market reforms. It is in this context of the current public sector monopoly in Uzbekistan that the submitted project design proposes a default design for the investment support mechanism, with GEF INV subsidizing the purchase of a number of e-buses and charging stations through covering the incremental upfront cost of the e-buses (with respect to CNG buses). Following consultations with key partners, and based on the current baseline, this upfront-capital subsidy scheme was determined to be the most pragmatic approach to identify at this design stage. Notwithstanding this default design for investment support, the project will take an overall flexible approach, including activities to explore and implement market reforms to public transport, and then finalizing the design of efficient and appropriate GEF INV, potentially linking to emerging market reforms. As a first step, the project will carry out analysis on current structures and dynamics of public transport, explore market liberalization potentials through consultations with key stakeholders including finance institutions, and review good practices/models from other countries. These analyses will be undertaken during the first year of the project to enable smooth transition to the second step. Later, based on these findings, the project will detail its investment approach with a default of the current up-front capital subsidy scheme (based on incremental cost), and with the opportunity, should conditions permit, to adopt alternative models.

16. In summary, the elements of the TAILEV Project design are geared towards success of replication of GUTCs with e-buses and e-mobility by:

- the inclusion of a pilot GUTC project Shota Rustaveli route to provide the GoU and relevant government agencies that oversee urban transport policies and strategies with the experience of implementing a pilot for a low carbon mode for urban transport. This pilot will also generate evidence on the benefits of GUTC developments. This pilot as well as the Fargona Yuli BRT project (which is being developed by TCM without Project assistance for now) will provide evidence of the benefits of e-bus operations as well as measures undertaken to de-risk the initial investments of e-buses. Without a pilot GUTC and pilot e-bus operations, a slower pace of adoption of e-vehicles and other low carbon modes of transport in Uzbekistan would result, resulting in higher risks of the GoU not achieving its green economy targets by 2030;

- undertaking of de-risking measures that will include financial assistance to cover a portion of additional costs for purchasing e-buses (over and above the costs of conventional buses fuelled by CNG or diesel) as well as charging infrastructure. Given the cost of e-buses and their charging stations, this measure will leverage GEF funds to maximize the number of e-buses and the demonstrative impact of the e-bus fleets along the two GUTCs;
- the information generated by this pilot (that includes operational and environmental data) should serve as the basis for informing policies and regulations (to be formulated under Component 1) to increase consumer confidence in EVs and facilitate the upscaling of low carbon transport for the country;
- the pilot Shota Rustaveli GUTC (as well as the Fargona Yuli BRT wherever possible) being consciously inclusive of all stakeholders deemed relevant to lowering the carbon footprint of urban transport in Uzbekistan (including an appropriate representation of the population in terms of gender and stakeholders who are physically challenged) in decision making, with a large focus on building their capacity to plan, design and manage the appropriate interventions;
- its contribution to SDG Goals 3, 5, 8, 11, 12 and 13. Further details of these SDG benefits from TAILEV can be found in Annex 8;
- its linkage with the “Global Programme to support countries with the shift to electric mobility” (GEF Agency Program ID.01679), also referred to as the Global E-Mobility Programme. The linkages of the Global E-Mobility Programme include i) access to knowledge products related to e-mobility; ii) access to support and investment platforms to facilitate and sustain e-mobility investments; and iii) assistance from the Global E-Mobility Programme to create conditions in Tashkent and other large cities of Uzbekistan for the increased uptake of electric vehicles.

Table 1: TAILEV Strategic Approach

De-Risking			Scale-Up		
Key Activities	Project contribution	Key Co-financing	Key Activities	Project contribution	Key Co-financing
Shota Rustaveli pilot GUTC, 7.5 km in length (routes shown on Figures 1-1 and 1-2)	Output 2.1: Feasibility studies on GUTC using international experience Output 2.2: Operational GUTC	US\$ 2.8 million (investment) from Tashkent City Municipality	Public procurement (or public financial commitment for) of e-buses along other routes in Tashkent and other cities Other GUTCs developed by EOP	Output 3.6: Feasibility studies and business plans for scale-up of e-bus fleets and associated additional GUTCs in Tashkent and other cities in Uzbekistan such as Samarkand and Namangan	US\$12.5 million from various Government agencies
Pilot fleet of 10 e-buses + 2 charging stations for Shota Rustaveli GUTC demo Pilot fleet of 20 e-buses + charging stations for Fargona Yuli BRT	Output 2.3: Operational e-bus fleet with assistance to select best technology and for tendering plus incremental financial support for 10 e-buses and 2 charging stations	US\$3.6 million (investment and in-kind) from Tashkent Bus Company US\$6.5 million (investment) from Ministry of Transport	Assistance to private sector on e-vehicle investments Private procurement of e-vehicles (unspecified number) by EOP	Output 3.7: Workshops and technical assistance to promote and increase adoption of EVs focusing on private investment from taxi fleets, delivery companies and private owners	US\$2.5 million from various but unspecified private sector entities
Fargona Yuli BRT, 9.1 km in length (routes shown on Figure 1-4)	Output 2.2: Operational GUTC	Co-finance not specified from Ministry of Transport	Dissemination of positive information on GUTC and e-vehicle investments	Output 4.1: National workshops to share findings of monitoring program of key environmental indicators along Shota Rustaveli GUTC. Output 4.3: Lessons learned study	Over US\$0.5 million (in-kind) from various project partners

RESULTS AND PARTNERSHIPS

IV.1 Expected Results

17. ***Outcome 1: The government establishes an institutional framework and adopts a strategy for the promotion of gender-inclusive low-carbon electric mobility and GUTCs.*** This outcome will be achieved through information and results generated from the pilot Shota Rustaveli GUTC and the Fargona Yuli BRT corridor and the operations of the e-bus fleets that will, through a newly formed MoT “E-mobility Unit” (see details in Para 28), inform GoU’s national policies, standards, regulations, strategies and work plans for transport-related aspects of the Green Economy Strategy, and strengthen capacities of government personnel involved with TAILEV. All documents related to the outputs to achieve this outcome are to include sections with gender analysis and dedicated to the creation or improvement of gender features of GUTC infrastructure and the e-buses, and activities to promote greater participation of women at all stages of TAILEV and beyond from management to regular operating staff level (i.e. drivers, technicians, mechanics). Delivery of outputs and activities in this Outcome will be towards the end of TAILEV at a time when sufficient information has been generated from pilot operations of GUTC and e-bus fleets under Outcomes 2 and 3. Outputs and activities to be delivered to achieve Outcome 1 is provided in Paras 18 to 22.
18. ***Output 1.1: National Strategy and Roadmap on electric vehicles (EVs).*** Activities to deliver this output will commence in 2025 (Year 4) to provide assistance to the MoT for the preparation of a National Strategy and Roadmap for broader adoption of e-vehicles. Participation of project’s stakeholders will be a key element of this output. This will include related government organizations, municipalities, bus companies, civil society organizations as well as private sector representatives including but not restricted to automotive related companies, banks and other finance institutions that are present in the energy-transport ecosystem of Uzbekistan:
- **Activity 1.1.1: Updating market surveys on EVs in Uzbekistan.** A consulting team will be recruited for this activity including the following outputs below. This activity will involve liaison and consultation with the private sector representatives that are working in automotive manufacturing sector including but not restricted to JSC Uzavtosanoat and its members, UZ Truck and Bus Motors, and Samarkand Automobile Plant that are also the co-financiers of the project:
 - updated gender disaggregated market surveys of e-vehicle usage and consumer opinions of e-vehicles; and
 - an updated survey on e-vehicle infrastructure (i.e. charging stations and number of e-vehicles in use)⁷;
 - **Activity 1.1.2: Technical and legal assistance for the preparation of a National Strategy and Roadmap for broader adoption of e-vehicles assistance** including:
 - preparation of the National Strategy and Roadmap on EVs;
 - inclusion of actions by relevant ministries to improve the integration of renewable energy development and low carbon electric mobility;
 - inclusion of guidelines, regulations and schemes developed under Output 4.2 (in close collaboration with Goscomecology) for the collection, re-use or environmentally sound disposal of downgraded EV batteries; and
 - editing and amendments to draft Strategy and Roadmap to aid its adoption by GoU.
19. ***Output 1.2: National GUTC Strategy and Roadmap for increasing development of GUTCs and improving urban environmental conditions.*** The project defines the GUTCs as transport corridors centered around e-buses. Therefore, the project team will ensure that Output 1.1 and 1.2 will be implemented in a coherent way where both processes contributing to each other. Activities under this output will commence in 2025 (Year 4) to include:
- **Activity 1.2.1: Collect available information to inform the preparation of the National GUTC Strategy and Roadmap** including:
 - collection of information from surveys of the economic impact from retail and real estate developments along the Shota Rustaveli GUTC and possibly the Fargona Yuli BRT corridor (information that will likely be available from TCM);
 - public opinion of GUTCs and their economic impact from retail and real estate developments along the pilot Shota Rustaveli GUTC. This work would be done by a consulting team and include available information from lessons learned from pilot Shota Rustaveli GUTC including gender-disaggregated public surveys of the opinions of the Shota Rustaveli GUTC (Output 2.2);

⁷ Information to be sourced from JSC Uzavtosanoat.

- experiences from project's private sector stakeholders (co-financiers and others) who will be actively participating to the project implementation.
 - Activity 1.2.3: Provide technical and legal assistance to prepare National GUTC Strategy and Roadmap. This activity will be informed from information collected from Activity 1.2.1 and also include editing and amendments to draft GUTC Strategy and Roadmap to aid its adoption by GoU. Furthermore, this activity will coordinate efforts with the Output 1.1 as GUTC concept involved adoption of e-buses as a core element;
20. Output 1.3: Municipal-level strategy for increased adoption of EVs and development of GUTCs for cities in Uzbekistan. This output would commence upon the catalysed interest in EV investments in Tashkent and possibly other large cities in Uzbekistan such as Namangan (with Output 3.6 as an indicator of this interest). Activities will commence in 2024 (Year 4) with the following activities:
- Activity 1.3.1: Recruit consulting team to prepare municipal level strategies to accelerate EV adoption;
 - Activity 1.3.2: Consulting team prepares municipal level strategies to accelerate EV adoption. Preparations will include how city provides permits to EV fleets (i.e. taxis, delivery companies) based on pipeline EV investment plans and infrastructural readiness of the municipality to accommodate an influx of EVs. This preparation should include international best practices of municipalities to accelerate EV adoption and informal consultations with municipalities for their inputs into preliminary strategies. Also, consultations with the key private sector members that are working in the automobile industry will be undertaken to better align with the private sector priorities in the subject cities;
 - Activity 1.3.3: Conduct workshop for municipalities to share draft strategies for increased adoption of EVs. Feedback from participating municipalities would be solicited to increase ownership, and improve likelihood of adoption by participating municipalities;
 - Activity 1.3.4: Technical assistance to Samarkand and Namangan and other municipal administrations to draft strategies for increased adoption of EVs. Technical assistance will be offered as required or requested by municipalities for the drafting of specific issues within a municipality's strategy for increased EV adoption.
21. Output 1.4: Proposed new codes and standards for EVs and development of GUTCs in Uzbekistan. Project assistance will be provided to MoT to accelerate the development of these national codes and standards that include provisions for inclusivity for gender and vulnerable groups. Also, private sector representatives that are active in automobile manufacturing sector (project partners with co-finance support and others) will be key participants of developing these codes and standards in order to have documents reflecting their priorities as well as know-how. Without these codes and standards, EV manufacturers and importers will not have full confidence to service EV market demand in Uzbekistan. Besides, the national EV and GUTC codes and standards will encourage other municipalities in Uzbekistan to further deploy EVs and construct GUTCs. Activities under this output will commence by 2025 (Year 5) including:
- Activity 1.4.1: Provide technical assistance to prepare national standards and codes for EVs. This would be done on the basis of the similar EV codes and standards and other countries (such as in the EU), and adapted to Uzbekistan based on information from the Guidelines developed by TBC in Output 3.1. and edited ready for national adoption by the GoU;
 - Activity 1.4.2: Provide technical assistance to prepare national GUTC standards. This would be done on the basis of the GUTC codes and standards developed by TCM in Output 3.3. and edited ready for national adoption by the GoU;
22. Output 1.5: Adopted national policy statement on EVs and GUTCs. By the second half of 2026 (Year 6), the GoU will need to state clear goals in green urban development that includes electric vehicles and GUTCs as solid systems for the deployment of e-buses. The activity to deliver this output will be:
- Activity 1.5.1: Provide legal and technical assistance (as required) to draft a national policy statement on EVs and GUTCs. Drafting of the national policy statement will likely be undertaken by the MoT's E-mobility Unit.
23. **Outcome 2: Pilot project in Tashkent to provide evidence of technical, financial and environmental sustainability to plan for scale-up of low-carbon e-mobility and GUTCs.** Without this outcome, there will be an absence of evidence of the environmental, technical and socio-economic viability of electric vehicles and green urban transport in Uzbekistan. As the first activities of TAILEV to de-risk the concept of a green urban transport corridor (GUTC) as a comprehensive transit corridor concept centered around e-buses and electric vehicle technology, this outcome is to be achieved through the development of the pilot Shota Rustaveli GUTC (7.5 km) in Tashkent complete with the pilot operations of a fleet of 10 electric buses (see Figures 1-1 and 1-2 for location) as well as an estimated fleet of 20 e-buses operated along the Fargona Yuli BRT (9.1 km) referred to in Para 11. Once operational, experience around these corridors will generate valuable evidence of environmental, technical and socio-economic benefits of GUTCs and e-mobility. Furthermore, replication of results will contribute to the decreasing of carbon emissions due urban transport activities through deployment of EVs and decreased traffic congestion via increased ridership in the public transport services. While the main GUTC infrastructure will be realized by TMC as a co-finance to the project, the GEF resources will be

used for covering soft integrated activities such as feasibility studies, strategy development, institution of codes and standards and awareness campaigns (under different components). Division of GEF and co-financing resources for this Outcome is provided in the below table to demonstrate where GEF resources are utilized. Outputs and activities to be delivered to achieve Outcome 2 are provided in Paras 24 to 27.

Table: Estimates of GEF and Co-Financed Efforts by TAILEV for Outcome 2

Output/Activity	Financing	GEF	Co-Financing
Output 2.1: Feasibility study on GUTCs in Tashkent with gender-inclusive features with an emphasis on e-buses and NMV infrastructure to increase public transport ridership, and green belts			
Activity 2.1.1: Provision of oversight review for the pilot Shota Rustaveli GUTC design		10,000	
Activity 2.1.2: Consult with affected businesses and residents along and in the “influence area” of the pilot Shota Rustaveli GUTC		25,000	
Activity 2.1.3: Addition of measures in the feasibility study to encourage transit-oriented development (TOD) along the pilot Shota Rustaveli GUTC and Fargona Yuli BRT corridor		15,000	
Activity 2.1.4 Technical assistance on preparation of e-bus tenders to evaluate best global technologies for e-buses and charging station technologies		15,000	
Activity 2.1.5: Impact of COVID-19 on TAILEV		10,000	
Activity 2.1.6: Study tours to other cities where GUTCs and e-bus operations for public transport have already been implemented		25,000	
Output 2.2: An operational pilot GUTC in Tashkent with measures to attract and maximize ridership along the corridor with e-buses (with features that are inclusive of gender and vulnerable groups) and green belts for maintaining urban resilience to climate change	TBC MoT		1,000,000 1,500,000
Activity 2.2.1: Oversight review of the tendering process for selecting a general contractor for construction of civil works for the GUTC		10,000	
Activity 2.2.2: Oversight of construction activities of the GUTC		200,000	
Construction of GUTC	MoT TBC		4,500,000 2,800,000
Activity 2.2.3: Assistance to undertake measures to encourage TOD along the Shota Rustaveli GUTC and Fargona Yuli BRT corridor.		20,000	
Activity 2.2.4: Assistance to ensure constructed works are aligned with Tashkent’s Integrated City’s Master Plan		10,000	
Activity 2.2.5: Conducting a public campaign to raise awareness of the pilot Shota Rustaveli GUTC, the Fargona Yuli BRT corridor and e-bus fleets		75,110	
Output 2.3: An operational fleet of electric buses and fast charging stations within Tashkent City Municipality	TBC		1,700,000
Activity 2.3.1: <u>Undertaking analysis to explore potentials for urban public transport market reforms and associated financing options leading to finalization of the design of pilot e-bus and charging station investment.</u>		60,000	
Activity 2.3.2: <u>Analysis of business plans and finance options to finalize the investment design.</u>			
Activity 2.3.3: Shortlisting global companies to provide more than 10 e-buses and 2 charging stations		10,000	
Activity 2.3.4: Assistance on the tendering process to procure a pilot fleet of 10 e-buses and 2 charging stations		15,000	
Purchase of electric buses from tender		1,400,000	
Purchase of electric buses from tender	JSC TBC		3,600,000
Purchase of electric buses from tender	MoT		2,000,000
Activity 2.3.5: Assistance to TBC on operationalizing pilot e-bus fleets and charging stations		140,000	
Activity 2.3.6: Training for operation and maintenance of the e-buses by the supplier(s) and selected training institutions		172,000	
Activity 2.3.7: Undertaking a study tour to another city that has mobilized electric bus fleets		30,000	
Totals:		2,242,110	

24. Output 2.1: Feasibility study on GUTCs in Tashkent with gender-inclusive features with an emphasis on e-buses and NMV infrastructure to increase public transport ridership, and green belts. Tashkent City Municipality (TCM) will be the main project partner responsible for the construction of the pilot Shota Rustaveli GUTC as well as the Fargona Yuli BRT corridor. TCM will

cooperate with ToshkentboshplanLITI (entity specializing in urban planning and master plans for Tashkent)⁸ and JSC “Toshshakhartranskhizmat” (Tashkent Bus Company or *TBC*) during the implementation of the project. In 2021 (Year 1), the Project will assist TCM, ToshkentboshplanLITI and TBC to upgrade designs of the Shota Rustaveli GUTC and Fargona Yuli BRT and the e-bus fleet operation along the GUTC that aligns with best international practices. Activities to deliver this output will include:

- Activity 2.1.1: Provision of oversight review for the pilot Shota Rustaveli GUTC design. This will be conducted in close collaboration with TCM and ToshkentboshplanLITI on aligning the engineering design and planned bus operations with e-buses (under TBC) for this pilot 7.5 km Shota Rustaveli GUTC with best international practices and with the Tashkent Integrated City Master Plan. This should include a review of the pilot Shota Rustaveli GUTC plans for dedicated bus lanes, inclusion of in-route charging stations/equipment, non-motorized vehicular (NMV) infrastructure⁹, enhanced bus stops, transit signal priority (TSP) and queue jumps, parking policies¹⁰ and associated pathways for pedestrians and cyclists to access e-bus stations. These designs must also maximize user inclusivity that has considerations for gender and vulnerable groups¹¹ that use the GUTC infrastructure and e-buses and promote strategies for greater participation of women in all facets of implementation and operation from management to regular operating staff levels (such as drivers, technicians, mechanics, etc.). These features are to be included wherever practical in the designs of the pilot Shota Rustaveli GUTC to maximize average e-bus speeds above the current 19.6 kph. If requested by TCM and TBC, a similar oversight review can also be conducted for the Fargona Yuli BRT;
- Activity 2.1.2: Consult with affected businesses and residents along and in the “influence area” of the pilot Shota Rustaveli GUTC¹². A consulting team will be recruited to undertake informal consultations with these businesses and residences, followed by a formal consultation in a workshop or open house setting to finalize all stakeholder inputs;
- Activity 2.1.3: Addition of measures in the feasibility study to encourage transit-oriented development (TOD) along the pilot Shota Rustaveli GUTC and Fargona Yuli BRT should be done in parallel with Activity 2.1.1. Specific issues to be addressed will include:
 - educating municipal staff on the benefits of good transit services and good transit priority alongside TOD;
 - the municipality providing incentive to developers if they develop investments along a GUTC;
 - prioritization of bus improvements in areas by TCM where transit priority measures (TPM) are provided, making TOD development more desirable;
- Activity 2.1.4 Technical assistance on preparation of e-bus tenders to evaluate best global technologies for e-buses and charging station technologies. This should include plans for integrating solar PV or other sources of renewable energy to the charging stations (also possible through the wheeling of renewable energy to the charging stations) and de-risking advice that could reduce the range variability of available e-buses in Uzbekistan (based on seasonal variations in demand on a bus battery that can potentially reduce a range on one charge by more than 50%). Also, as described in Annex 6, there are several options for adopting charging stations for e-buses such as depot charging and in-route charging. This activity will elaborate on pros and cons of different charging options which in turn may have a considerable effect on GUTC design. This will support the tendering process for Outputs 2.3 and 2.4;
- Activity 2.1.5: Impact of COVID-19 on TAILEV: The effect of COVID-19 to the public’s preferences on transport will be analyzed. This will include measures to be taken in the public transport sector and possible opportunities rising in the post COVID-19 era to enhance green urban transport modes. These analyses and the associated findings will feed into the relevant Project mechanisms, EV fleets and tools to remove possible risks and generate additional benefits to the Project. Moreover, the project team will seek information and knowledge from other projects under the Global E-mobility Program in terms of effects of COVID-19 to transport and mitigation strategies;
- Activity 2.1.6: Study tours to other cities where initiatives similar to GUTCs and e-bus operations for public transport have already been implemented. This could include cities such as Almaty and Istanbul. Study tour participants will benefit from viewing functional transit corridors similar to GUTCs and operational e-bus fleets. This will also strengthen the capacities of

⁸ See Annex 4, Table 4-1 for more details

⁹ NMV infrastructure should include a network of cycling paths along the pilot Shota Rustaveli GUTC that encourage cycling as a means of improving urban mobility to various destinations along the GUTC but also with other potential GUTCs in Tashkent.

¹⁰ Parking policies can include paid parking spaces along the pilot Shota Rustaveli GUTC (free parking for electric vehicles at a later date) that would ensure more road space for public transport and increased use of electric buses for public transport. This may require the inputs from an international green urban development expert (IGUDE) and a national urban planning specialist (UPS).

¹¹ Vulnerable groups include physically challenged persons, wheel-chair bound persons, the elderly, and mothers with younger children.

¹² The “influence area” is defined as being within a 0.5 km distance of the GUTC. No consultations planned for Fargona Yuli BRT corridor since TAILEV funds are only to be allocated for partial procurement of e-buses along the pilot Shota Rustaveli GUTC.

Tashkent-based design teams to adopt designs and financing mechanisms based on best international practices. Participants on the study tour must comprise at least 30% women;

25. Output 2.2: An operational pilot GUTC in Tashkent with measures to attract and maximize ridership along the corridor with e-buses (with features that are inclusive of gender and vulnerable groups) and green belts for maintaining urban resilience to climate change. By 2022, (Year 2), the actual construction of the pilot Shota Rustaveli GUTC is expected to commence. While TCM and ToshkentboshplanLITI are expected to undertake the supervisory roles during tendering and construction of the GUTC, the Project will assist them during implementation of this demo by advising on the application of best international practices. Activities to deliver this output will include:

- Activity 2.2.1: Oversight review of the tendering process for selecting a general contractor for construction of civil works for the GUTC;
- Activity 2.2.2: Oversight of construction activities of the GUTC. Project oversight assistance will include feedback to TCM on compliance to best practices for the construction of various GUTC features such as the dedicated bus lane, in-route charging infrastructures, cycling and pedestrian pathways for accessing to buses, enhanced bus stops, park-and-ride lots, and green spaces that provide urban benefits such as natural drainage, water retention, and shading. In addition, oversight will be provided to ensure the installation and construction of design features mentioned in the Output 2.1 feasibility study to maximize user inclusivity for women and vulnerable groups;
- Activity 2.2.3: Assistance to undertake measures to encourage TOD along the Shota Rustaveli GUTC and Fargona Yuli BRT corridor. This would be done in parallel with Activity 2.2.2 with technical assistance to include measures such as:
 - restricting street parking along GUTC;
 - increase parking prices in the busy business centers and other crowded areas along the GUTC;
 - lower development fees for developers along GUTC;
 - reduced property taxes along GUTC;
 - assistance with design of TPMs including signaling, queue jumps, bus lanes, premium bus stops that improve customer experience and increase passenger volumes along the GUTC (such as real-time information, shelters, and increased accessibility of the GUTC for mobility challenged customers);
- Activity 2.2.4: Assistance to ensure constructed works are aligned with Tashkent’s Integrated City’s Master Plan: This activity would be conducted in parallel to Activity 2.2.2.
- Activity 2.2.5: Conducting a public campaign to raise awareness of the pilot Shota Rustaveli GUTC, the Fargona Yuli BRT corridor and e-bus fleets. A consulting team will be recruited to organize and undertake this public campaign that will maximize the effectiveness of general public messaging of economic and environmental benefits of low carbon transport and green spaces including measures on COVID-19 related public transport principles. This will include the preparation of public messaging and knowledge products specifically designed to most effectively reach both male and female users. Terms of reference for this consultancy will include:
 - design of communications strategy appropriate for TAILEV and its objectives in Year 1, most notably with regards to the pilot Shota Rustaveli GUTC and the Fargona Yuli BRT corridor in Tashkent and the social and environmental benefits for city residents and tourists;
 - assisting the PMU and the MoT from Years 2 to 6 in implementing public information and knowledge product dissemination of the e-bus fleets along the Shota Rustaveli GUTC and Fargona Yuli BRT corridor and any efforts for its replication;
 - monitor and report the effectiveness of public information and knowledge product dissemination from past awareness raising activities during Years 2 to 6, and suggest and implement improved measures for public awareness raising of the Shota Rustaveli GUTC and Fargona Yuli BRT corridor, their e-bus fleets, and electric vehicles;

26. Output 2.3: An operational fleet of electric buses and fast charging stations within Tashkent City Municipality. The approach for this output is based on understanding the current market conditions and potentials in urban public transport in Uzbekistan. Given to the current developments in the urban public transport sector with indications on willingness of the government performing reforms in the sector towards liberalization, the project will take a comprehensive and flexible approach with specific activities on exploring market reform potentials and defining cost effective finance options for TAILEV pilot implementations on the procurement of e-buses. Under this key output, the project will carry out analysis on current structures and dynamics of public transport, explore market liberalization potentials through consultations with key stakeholders including finance

institutions, and review good practices/models from other countries. The project will consult with various stakeholders including finance institutions that are active in Uzbekistan such as ADB, Worldbank, EBRD, AfD, KfW, EIB, Islamic Development Bank and national organizations such as Uzbek Industrial and Construction Bank (Uzpromstroybank) and other key national commercial banks. These analyses will be undertaken during the first year of the project to enable smooth transition to the second step. Then, based on these findings of these analyses, the project will detail its investment approach with a default of the current up-front capital subsidy scheme (based on financing the incremental cost), and with the opportunity, should conditions permit, to adopt alternative models. Activities to deliver this output in Year 1 will be done concurrently with Output 2.2 and involve de-risking assistance to TBC to identify and procure the most appropriate e-bus technology for Tashkent. However, activities of this output only include tendering process for e-buses along the pilot Shota Rustaveli GUTC and not include the 20 e-buses along the Fargona Yuli BRT corridor unless otherwise directed by MoT and TBC. Activities to deliver this output will include:

- Activity 2.3.1: Undertaking analysis to explore the potentials for urban public transport market reforms and associated financing options leading to finalization of the design of pilot e-bus and charging station investment. This activity will implement a series of studies, analyses and support to identify how urban public transport may be liberalized to bring in more private sector involvement. The main studies are listed as:
 - analysis on current structure and dynamics of public transport, both nationally and in key local jurisdictions;
 - exploration, including studies and dialogues with key stakeholders, on public transport market liberalization potential;
 - review of latest good practice models/support for public financial support for e-buses.
- Activity 2.3.2: Analysis of business plans and finance options to finalize the investment design. A full assessment of business plans and associated financing options based on the analyses done under activity 2.3.1 will be carried out to identify the most suitable form of project investment support to e-buses and charging stations. The analysis will examine:
 - Using the most cost-effective financial instruments (for example, comparing grants/subsidies, concessional and low-interest rate loans)
 - Involving the private sector, for example via fleets
 - Alignment with emerging market reforms.

At the time of drafting this project document, a default set of activities for the project’s investment support has been developed using an up-front capital subsidy approach, which is set out below in activities 2.3.3. to 2.3.7. This default approach is that the GEF funds can be applied to a maximum of 20% of the capital cost of the e-bus or charging station. This default approach is subject to change depending on the findings of this activity 2.3.2.

- Activity 2.3.3: Shortlisting global companies to provide 10 e-buses and 2 charging stations. This will involve technical assistance to select the best available technology options from technologies evaluated in Output 2.1. This will result in the shortlisting of global companies that will provide more than 10 e-buses and 2 charging stations (preferably fast-charging but based on the recommendations from the feasibility study of Output 2.1. If possible, the tender should also include the use of renewable energy into the charging stations as a means to demonstrate low carbon energy generation for e-buses;
- Activity 2.3.4: Assistance on the tendering process to procure a pilot fleet of 10 e-buses and 2 charging stations. This tender should include provisions designed to de-risk this first procurement (that is to be owned and operated by TBC) and include testing the cross compatibility between the buses and charging station equipment provided by several but separate manufacturers, several of whom are operating under JSC Uzavtosanoat¹³. Tenders that include plans for implementing local manufacture of e-buses would be viewed favorably, notably in the context of job creation amidst the COVID-19 pandemic and green recovery efforts;
- Activity 2.3.5: Assistance to TBC on operationalizing pilot e-bus fleets and charging stations. This will involve:
 - commissioning of the e-buses (that will have inclusivity features for gender and vulnerable groups);
 - operating the e-buses;
 - monitoring their range on one battery charge; and
 - monitoring of the charging time for each e-bus;

¹³ They are part-owners of Sam Auto LLC and MAN Auto.

- Activity 2.3.6: Training for operation and maintenance of the e-buses by the supplier(s) and selected training institutions. The training programme will use knowledge products from the suppliers and those prepared by local training institutes, and also encourage participation of women from management to operations (such as drivers, technicians and mechanics). Resources will be available for local training institutes to prepare the supplier’s operation and maintenance manuals for use by TBC;
 - Activity 2.3.7: Undertaking a study tour to another city that has mobilized electric bus fleets. This should include TBC and TCM participation in tours of a city such as Moscow that has undertaken a transformation of electrifying a substantial proportion of their bus fleet. In addition, this activity will also include in regional and global events organized by the Global E-mobility Programme for Years 1 and 2. Participants should include a minimum of 30% women;
27. Output 2.4: Additional e-buses under Tashkent management operating along GUTC. This output is only provided as a contingency measure that provides TBC (JSC Toshshakhartranskhizmat) an option to procure additional e-buses after Output 2.3, if required. Activities would include:
- Activity 2.4.1: Assistance in the tendering process to procure the additional e-buses. If required, assistance will be provided if a subsequent tender seeks a different e-bus supplier. Assistance will then also be provided for new e-bus commissioning, and a supplier-driven operations and maintenance course.
28. **Outcome 3: Conditions are created to shift market towards low-carbon e-mobility and accelerate adoption of e-vehicles and GUTCs.** As a part of TAILEV de-risking (Outputs 3.1 to 3.5) for the concept of GUTC and electric vehicle technologies, this Outcome will be achieved through a process to standardize and codify of e-vehicle usage and GUTC development, to generate knowledge products with information on positive social and environmental benefits of a GUTC, to build capacity of municipal and bus company personnel to manage the GUTC and e-bus fleets, to provide high quality public transport through e-buses, and to infuse a curriculum into higher educational institutions in Uzbekistan consisting of technical knowledge products on e-vehicles and green urban development. This Outcome is also a part of TAILEV scaling-up to catalyze interest and investment in EVs after de-risking. There will be close collaboration between TAILEV personnel and the newly formed MoT’s “E-mobility Unit” responsible for promoting and developing public and private commitments to green urban development. With raised awareness of e-buses and the pilot GUTC project from Outcome 2, interest from a wide range of stakeholders will be catalyzed for investments into e-vehicle fleets, e-buses and privately-owned e-vehicles. Also, the project will promote participation of national and international finance institutions to the implementation of this outcome. This will be a key approach to obtain insight and know-how for defining and comparing different business models and financing approaches in the context of Uzbekistan in order to support the scaling up of e-buses and the charging infrastructure. Moreover, this outcome will seek support from Global E-mobility Program and the Regional Support and Investment Platform to be established by this initiative. The latter will be providing technical and investment related support to child projects and national governments. The platforms will have several functions including technical support, networks and communities of practice, investment marketplace, trainings, information dissemination and replication. Outputs and activities to be delivered to achieve Outcome 3 is provided in Paras 29 to 35.

Output/Activity	Financing	GEF	Co-Financing
Output 3.1: Adopted guidelines for EV fleet procurement, operation and maintenance	TBC		100,000
Activity 3.1.1: Organizing and training key data collection personnel on methodologies for GUTC-transport-related MRV protocols		20,000	
Activity 3.1.2: Select a GUTC Monitoring Unit (GMU)		5,000	
Activity 3.1.3: Undertake a comprehensive baseline survey of the Shota Rustaveli GUTC prior to construction		35,000	
Activity 3.1.4: Undertake “post-construction” data collection with the GMU of e-bus operational data		15,000	
Activity 3.1.5: Conduct two impact surveys (early Year 4 and late Year 6) of the Shota Rustaveli GUTC		25,000	
Activity 3.1.6: Assist TBC in the preparation of knowledge products on e-buses and charging stations		15,000	
Output 3.2: Environmental monitoring program under a cell setup within State Committee on Ecology and Environmental Protection (Goscomecology) for key environmental indicators along GUTC	Goscomecology		100,000
	Uzhydromet		100,000
Activity 3.2.1 Establish an environmental data collection program for baseline and post-project data collection along the GUTC with Goscomecology		15,000	

Activity 3.2.2: Procurement and installation of automated hardware (gas analyzers) and software complex "PAK-8816"	(To be financed during implementation)	-	90,000
Activity 3.2.3: Compile air pollution monitoring data from automated station		20,000	
Output 3.3: GUTC codes and standards that are gender inclusive			
Activity 3.3.1: Conduct meetings with appropriate stakeholders on the scope of GUTC codes and standards		15,000	
Activity 3.3.2: Developing GUTC codes and standards for Tashkent		10,000	
Activity 3.3.3: Preparation of a Tashkent GUTC knowledge product		40,000	
Output 3.4: Workshops and technical assistance for municipal personnel to sustain high levels of ridership on public transit e-buses along GUTCs			
Activity 3.4.1: Organization of and preparation of materials for workshops.		35,000	
Activity 3.4.2: Conduct a minimum of 6 technical assistance workshops on measures to sustain high levels of ridership on public transit e-buses along GUTCs		71,000	
Output 3.5: Curriculum for gender-inclusive development of e-vehicles and green urban transport in higher educational institutions in Uzbekistan			
Activity 3.5.1: Select educational institute to develop e-vehicles and green urban transport curriculum	Turin Polytechnic	5,000	100,000
Activity 3.5.2: Develop gender-inclusive curriculum for e-vehicles and green urban transport		55,000	
Output 3.6: Feasibility study and business plans for the scale-up of e-bus fleets and additional GUTCs in Tashkent and other cities in Uzbekistan such as Samarkand and Namangan			
Activity 3.6.1: Outreach and follow-up with municipal personnel and MoT-established Public Transit Authorities (PTAs)	City of Namangan	20,000	25,000
Activity 3.6.2: Tailored technical assistance to various PTAs and municipal personnel		55,000	
Output 3.7: Workshops and technical assistance to promote and increase adoption of EVs focusing on private investment from taxi fleets, delivery companies and private owners			
Activity 3.7.1: Prepare knowledge products targeting private sector	TBC	15,000	32,415
Activity 3.7.2: Conduct workshops or market fairs in Tashkent and other prominent Uzbek cities on investments into EVs and other forms of low carbon transport		49,000	
Activity 3.7.3: Provide tailored technical assistance to potential private e-vehicle investors on preparing bankable investment proposals into EVs		55,415	
Totals:		557,415	647,415

29. *Output 3.1: Adopted guidelines for EV fleet procurement, operation and maintenance.* With the experience gathered by TBC in procuring and operating e-buses by mid-2023 (mid-Year 3), a process will be undertaken with Project assistance to develop EV guidelines that will be informed by the measured impact of the operations of the e-bus fleet along the Shota Rustaveli GUTC. These impact measurements will be based on a set MRV protocol that will be informed by the Global E-Mobility Programme. The project will prepare and publish knowledge products to better disseminate the adopted guidelines. Activities to deliver this output will include:

- **Activity 3.1.1: Organizing and training key data collection personnel on methodologies for GUTC-transport-related MRV protocols.** This would take place in early in 2021 or Year 1 with inputs from the Global E-Mobility Programme on global best practices. The Project will assist the key MoT personnel during the Inception Workshop and other meeting events as required to determine the indicators and monitoring, reporting and verification (MRV) protocol for monitoring the impact of e-buses and the GUTC and include baseline and post-project gender disaggregated data collection¹⁴;
- **Activity 3.1.2: Select a GUTC Monitoring Unit (GMU).** This will be undertaken in close collaboration with the MoT using pre-set criteria to select an appropriate entity to manage data collection. The GMU will be responsible for the oversight of baseline and post-project data collection, using agreed-upon MRV protocols, along the Shota Rustaveli GUTC (see Figure 1-

¹⁴ Indicators to be discussed and potentially included in these surveys includes number of passengers (gender-disaggregated) along the Shota Rustaveli GUTC (including those in private automobiles and public transit buses), surveys for estimating energy consumption for those travel modes, associated GHG emissions from these modes of transport, GHG emissions per passenger-kilometer, % of daily trips taken by transit, % of population that resides within 0.5 km of the Shota Rustaveli GUTC (gender-disaggregated) as per Indicator 2 in the PRF on Table 1, travel time on the corridor, change in the number of cars traveling along the GUTC, and change in number of pedestrians and cyclists using the Shota Rustaveli GUTC.

1) early in Year 1, and along with the Fargona Yuli BRT corridor, if feasible. Examples of entities to perform functions of the GMU include the International Solar Energy Institute (ISEI), Public Council of Tashkent, a similar NGO to whom data collection is outsourced, Turin Polytechnic University, students from a selected university or selected MoT government personnel;

- Activity 3.1.3: Undertake a comprehensive baseline survey of the Shota Rustaveli GUTC prior to construction. This will be done early in Year 1 by a consulting team to quantify (gender disaggregated) passenger and vehicle traffic prior to the GUTC construction. Terms of reference for this survey will be informed by the methodologies in Activity 3.1.1, and the selected consulting team will work closely with the GMU on the MRV protocols and data collection. This survey should be designed to include:

- data collection of the parameters discussed in Activity 3.1.1 that can be used for measuring the impact of the Shota Rustaveli GUTC, and include for example, average daily passenger traffic (by bus, taxis or private cars) and gender disaggregated passenger counts, fuel types of vehicles using the corridor, passenger trip-destinations, vehicle emissions on the corridor, socio-economic surveys, number of consequential beneficiaries (gender-disaggregated) within 0.5 km of the proposed Shota Rustaveli GUTC, perceptions of the public on the means of public transport within the COVID-19 context and baseline GHG emissions;
- a method for obtaining data for the number of in consequential direct beneficiaries for Indicator 2 that would include the population that resides within 0.5 km of the Shota Rustaveli GUTC (gender-disaggregated);
- the Fargona Yuli BRT corridor if requested by MoT and if collection of this baseline information is feasible.

- Activity 3.1.4: Undertake “post-construction” data collection with the GMU of e-bus operational data. This activity will be carried on from the baseline survey in Activity 3.1.3 but along the Shota Rustaveli GUTC (and along with the Fargona Yuli BRT corridor if feasible) that includes the same indicators collected for the baseline (for the purposes of proper comparisons). Moreover, the consultations with private sector companies have concluded that enterprises working in the automotive-transport sector are highly interested in monitoring the results from GUTC and e-bus operations as well as contributing to the process with their knowledge. This interest is raised in several co-finance letters provided by private sector organizations. This activity will commence in 2022 (Year 2) until the EOP and be undertaken by personnel from the GMU. In addition to those indicators listed in Footnote 14, post-project indicators that can be surveyed can also include:

- energy used for charging each e-bus;
- number of kilometers for each battery charge (that should be seasonally adjusted for different energy demands on the e-bus);
- number of passengers who have undertaken a transport modal switch from private car to public transport/e-bus;

These indicators contribute to the most important TAILEV PRF indicators, the GHG emissions of low carbon modes of transport, where the objective-level EOP target for estimated cumulative GHG emission reductions is 20,700 tCO_{2eq} (see Annex 7 for detailed calculation of this target);

- Activity 3.1.5: Conduct two impact surveys (early Year 4 and late Year 6) of the Shota Rustaveli GUTC. Using a consulting team, these surveys should be conducted by early in Year 4 and late in Year 6. The surveys should:

- compile information from the baseline and post-project data collected (from Activities 3.1.3 and 3.1.4);
- characterize the changes surveyed;
- include passenger opinions on electric buses and electric vehicles in general (using some information from the public awareness campaign in Output 2.2);
- suggest interventions to ensure the data trends towards increased GHG emission reductions for the Shota Rustaveli GUTC and future GUTCs;
- be compiled into a TAILEV knowledge product that includes the environmental monitoring information collected from Output 3.2; and
- include GHG emission reduction benefits generated from the Fargona Yuli BRT corridor if requested by MoT and if collection of this baseline information is feasible (from Activity 3.1.3), and formatted in a manner that can be provided to the Center of Hydrometeorological Services (Uzhydromet) for UNFCCC reporting;

- Activity 3.1.6: Assist TBC in the preparation, design and publication of knowledge products on e-buses and charging stations. Commencing in 2022 (Year 2), the Project will assist in the compilation of e-bus and charging station technical performance data and information on e-bus and charging station guidelines, codes and regulations that will provide guidance to be adopted for future e-bus fleet procurement, operation and maintenance. International e-bus experts can be brought into

the project to develop these guidelines and codes based on other e-bus fleets¹⁵. Moreover, the project team will coordinate these efforts with the Global E-mobility Program and share the final knowledge products for dissemination with other countries.

30. Output 3.2: Environmental monitoring program under a cell setup within State Committee on Ecology and Environmental Protection (Goscomecology) for key environmental indicators along GUTC. This output was designed to augment the ongoing efforts of Goscomecology for monitoring ambient environmental baseline and post-project indicators along the Shota Rustaveli GUTC. The equipment to be purchased under this component will be co-financed by third parties and not from GEF resources. The project team will work to raise additional financing to fund these activities during the implementation period. Using Uzhdyromet equipment for PM₁₀ and PM_{2.5}, TAILEV will augment this monitoring program through the following activities:

- Activity 3.2.1 Establish an environmental data collection program for baseline and post-project data collection along the GUTC with Goscomecology. This activity will assist:
 - Goscomecology during the Inception Workshop early in 2021 (Year 1) on the design of an environmental monitoring program along the Shota Rustaveli GUTC;
 - by aiding the setup of the program to be implemented by an Uzhdyromet cell setup in partnership with Goscomecology;
 - in determining the environmental indicators for monitoring the impact of the Shota Rustaveli GUTC (that may include CO₂, CO, NO_x, CH, and SO_x). The extent of indicators to be monitored shall be commensurate with the capacity of the monitoring cell within the selected department within Goscomecology;
 - in oversight of the monitoring of the Shota Rustaveli GUTC baseline commencing in mid-2021 (mid-Year 1);
 - in oversight of the post-project monitoring in 2022 when the GUTC is in operation;
- Activity 3.2.2: Procurement and installation of automated hardware (gas analyzers) and software complex "PAK-8816". The Project will work to raise additional co-financing in 2021 (Year 1) to procure the aforementioned equipment, and to strategically install them along the Shota Rustaveli GUTC to monitor air pollutants CO, NO_x, SO₂, hydrogen sulfide (H₂S), PM₁₀, PM_{2.5} and CO₂) from the baseline to the post-project scenario;
- Activity 3.2.3: Compile air pollution monitoring data from automated station. Commencing in Year 3, data from the automated station will be included with the impact survey knowledge product from Activity 3.1.5 for dissemination to a wider stakeholder audience by Year 4.

31. Output 3.3: GUTC codes and standards that are gender inclusive: With the successful construction and operation of the Shota Rustaveli GUTC (Outputs 2.1 and 2.2) and the Fargona Yuli BRT corridor, TCM will want to expand the GUTC concept to other corridors (by late 2023 or Year 3). With e-bus operations along the GUTCs of Shota Rustaveli GUTC and Fargona Yuli BRT corridor, the TCM will be positioned to develop codes and standards (by late 2023-2024 or Years 3-4) for GUTCs that align with Tashkent's Integrated City Master Plan. These findings will be disseminated with knowledge products to be prepared by the project. Also, the Project team will seek participation of private sector organizations from the automotive sector to the development of GUTC codes and standards. This activity will include:

- Activity 3.3.1: Conduct meetings with appropriate stakeholders on the scope of GUTC codes and standards. Meetings with the IGUDE, UPS, personnel from TCM and ToshkentboshplanLITI, and other Uzbek experts (as deemed appropriate) will be setup to discuss the scope of GUTC codes and standards that will be useful for future development in all of Uzbekistan's large cities. These codes and standards, in particular, should be developed to target other interested municipalities such as Samarkand and Namangan to enable them to replicate the Tashkent experience;
- Activity 3.3.2: Developing GUTC codes and standards for Tashkent. Assistance will be provided to TCM in 2024 (late Year 3, early Year 4) to develop codes and standards that may include specific dimensions for utilization of e-buses as a central element of GUTCs, deployment of in-route charging stations (where applicable), priority setting elements such as dedicated bus lanes, transit priority signaling and queue jumps; bus stop designs, and pathways for pedestrians and cyclists to access bus-stops, vegetation species that are more drought resistant with enhanced characteristics for shading and corridor aesthetics, and design features that include considerations for gender and vulnerable groups that will maximize the number of GUTC users. The IGUDE can assist in bringing best practices for consideration by TCM, and a national consultant should be recruited to assist in the preparation of these codes and standards;

¹⁵ There are 2 global codes for charging stations, and the Project can provide guidance on the use of solar panels for the fast-charging stations for e-buses.

- Activity 3.3.3: Preparation and publication of a Tashkent GUTC knowledge product. The national consultant with assistance from the IGUDE will prepare a knowledge product containing a summary of pilot GUTC operational experiences and draft GUTC codes and standards for Tashkent to be circulated to MoT, TCM and other municipal governments by Year 4 (late 2024). This KP will be used to inform national codes and standards for GUTCs to be developed under Output 1.4. Finally, the knowledge product will be shared with the Global E-mobility Program for effective distribution of results with other countries.
32. Output 3.4: Workshops and technical assistance for municipal personnel to sustain high levels of ridership on public transit e-buses along GUTC. By late 2022 (Year 2), TBC will have successfully operated e-buses along the Shota Rustaveli GUTC and the Fargona Yuli BRT corridor. Their experiences as well as lessons learned from other successfully operated e-bus fleets and GUTCs as well as COVID-19 related measures and lessons learnt will be valuable to other Uzbek cities, TCM personnel, and potential private sector investors in electric vehicles. Activities to deliver this output will include:
- Activity 3.4.1: Organization of and preparation of materials for workshops. This will include designing and publication of quality materials for the workshops.
 - Activity 3.4.2: Conduct a minimum of 8 technical assistance workshops on measures to sustain high levels of ridership on public transit e-buses along GUTCs. These workshops during Years 3, 4 and 5 will disseminate information on TCM and TBC experience through a minimum of 8 workshops:
 - on pilot e-bus operations and GUTC operations compiled into TAILEV knowledge products from Activity 3.3.3;
 - that target TCM personnel as well as municipal personnel from other cities in Uzbekistan with the intent of assisting all Uzbek stakeholders to comprehend measures that will sustain high levels of ridership on public transit e-buses along GUTCs;
 - with a participation rate of 30% by women;
 - with inputs from international experts wherever possible who have provided management oversight reviews on GUTC/e-bus fleet operations (such as GUTC technical assistance details and scheduling of e-bus maintenance). These experts should be able to share their observations and global experience as a means to improve pilot e-bus fleet and GUTC performance;
 - with the participation of local institutes who are undertaking independent research related to electric vehicles, charging stations in the Uzbekistan environment, contribution of solar energy to electric vehicle charging stations¹⁶, and enterprises active in the evaluation of investments into electric bus assembly and maintenance¹⁷.
33. Output 3.5: Curriculum for gender-inclusive development of e-vehicles and green urban transport in higher educational institutions in Uzbekistan. The success of an operational pilot e-bus fleet, the Shota Rustaveli GUTC (as delivered in Output 2.3) and the Fargona Yuli BRT corridor is expected by the end of 2023 (Year 3) with the likelihood of increased demand for more skilled professionals in developing and managing green urban transport. Activities to deliver this output include:
- Activity 3.5.1: Select educational institute to develop e-vehicles and green urban transport curriculum. By late 2024 (mid-Year 4), the Project will need to develop criteria for the selection of a partner higher educational institute to develop this curriculum, and apply the criteria for the selection. Candidate institutions include the Turin Polytechnic University in Tashkent and ISEI;
 - Activity 3.5.2: Develop gender-inclusive curriculum for e-vehicles and green urban transport. After the completion of Activity 3.5.1, the Project will support curriculum development for e-vehicles and green urban transport development with a selected higher educational institution. The Project will support the compilation of knowledge products gathered from Outcome 2 as well as Outputs 3.1 to 3.4, into a curriculum that can be taught in local universities and technical institutes.
34. Output 3.6: Feasibility study and business plans for the scale-up of e-bus fleets and additional GUTCs in Tashkent and other cities in Uzbekistan such as Samarkand and Namangan. Technical assistance from TAILEV will be offered to prepare feasibility and business plans to facilitate lowering of a capacity constraint barrier in other cities (such as Samarkand and Namangan) to effectively analyse and plan their options for e-bus deployment combined with the development of GUTCs wherever feasible. This output will benefit from the studies that will be done under Activity 2.3.1 on the urban public transport market and potentials for market liberalization. The project team will strengthen these efforts with the support from the Regional Support and Investment Platform to be established under the Global E-mobility Program. Moreover, participation of national and international finance institutions will be sought for defining business plans for the up-scaling of e-buses. The finance institutions

¹⁶ Related to the International Solar Energy Institute in Tashkent

¹⁷ Related to JV UzTruck and Bus Motor Company Ltd.

will be key in defining solutions for the investment gap for upscaling of e-buses and charging infrastructure in Uzbekistan. Activities to deliver this output includes:

- Activity 3.6.1: Outreach and follow-up with municipal personnel and MoT-established Public Transit Authorities (PTAs). This would mainly apply to Uzbekistan's 3 largest cities: Tashkent, Samarkand and Namangan on their interest in replication of the pilot Shota Rustaveli GUTC or the Fargona Yuli BRT corridor. This activity could commence in mid-2024 (late-Year 3), and possibly earlier (such as in Year 1) considering the strong expression of interest from Namangan City Municipality in developing e-vehicle fleets and GUTCs. The mandate of newly formed PTAs is to award to private sector firms' contracts for bus route operations using e-buses and to enforce compliance to minimum standards for e-bus operations and public transit quality of the route;
- Activity 3.6.2: Tailored technical assistance to various PTAs and municipal personnel. Commencing in late-2024 to the EOP (Years 4, 5 and 6), the Project will support the preparation of feasibility studies and bankable business plans for public and private investments into additional GUTCs and additional e-bus fleets. The project will coordinate efforts with the finance institutions to come up with solutions on financing the upfront investment gaps. By this time, the pilot e-bus operation along the Shota Rustaveli GUTC and Fargona Yuli BRT corridor will provide confidence to prospective private sector route operators on bidding for route service contracts using e-buses. These feasibility studies and plans should include sections on maximizing inclusivity: equal participation in decision making, equal opportunities in labor, gender and vulnerable group considerations in planning and constructing infrastructure, opportunities for equal usage of the amenities (such as seating arrangements in e-buses, wheel chair access at bus-stops, female washrooms at work premises, etc.) and COVID-19 related lessons learnt and suggestions. The involvement of the Global E-Mobility Programme and the Regional Support and Investment Platform to be established under the Global Programme will augment the technical assistance being offered to the Project through several services such as provision of technical trainings and capacity building, establishment of communities of practice, and support through help desks;

35. Output 3.7: Workshops and technical assistance to promote and increase adoption of EVs focusing on private investment from taxi fleets, delivery companies and private owners. The Project will provide targeted assistance in close collaboration with TCM and other municipalities (likely commencing in mid-2024 or late Year 35 to the EOP) to advise the private sector on e-vehicle opportunities based on pilot e-bus operations and recent e-vehicle infrastructural developments. This will include defining and providing business models and financial solutions to manage upfront costs of investing in EVs. In order to achieve this, the Project team will coordinate its efforts with the banking sector and international finance institutions. The Project will coordinate its efforts with the Regional Support and Investment Platform that will be established by the Global E-mobility Programme. Women entrepreneurs will be encouraged to participate on these activities. Activities to deliver this output include:

- Activity 3.7.1: Prepare knowledge products targeting private sector. Preparations for these KPs will commence in Years 3 and 4. During Years 3 and 4, the Project will provide travel resources for TCM and TBC personnel to participate in the Global E-Mobility Programme to familiarize them with best practices for designing programmes for promoting EVs and green urban transport development. Year 4 will involve the compilation of gender-inclusive information from the e-bus pilots and other available international experience targeting the private sector to assist them in its decision-making to invest in electric vehicles. These KPs should include information compiled from local research institutes (such as ISEI and Turin Polytechnic University) on electric vehicles, charging infrastructure and renewable energy;
- Activity 3.7.2: Conduct workshops or market fairs in Tashkent and other prominent Uzbek cities on investments into EVs and other forms of low carbon transport. The aim of these events would be to catalyse the interest of potential private investors and commercial banks into e-vehicle investments with a focus on taxi fleets, delivery companies and private vehicle owners. The fair can also attract potential investors into cycle-sharing programs for Tashkent and other Uzbek cities. The involvement of the Global E-Mobility Programme (the Support and Investment Platform) will enhance the number of participants to this workshop (or market fair) that can include a number of their international partners such as the IEA, the Urban Electric Mobility Initiative (UEMI), and the ADB. TAILEV will ensure attendance at these workshops and market fairs have equitable participation (20-30%) from female participants;
- Activity 3.7.3: Provide tailored technical assistance to potential private e-vehicle investors on preparing bankable investment proposals into EVs. This technical assistance will focus on commercial taxi fleets, delivery companies and other private owners (including private sector co-financers Valley Fruits LLC and JV Sam Auto LLC). This assistance should also include commercial banks on risk assessment and management of e-vehicle loan programmes. The technical assistance will also emphasize the importance of gender-inclusive activities that can be undertaken with these investments and initiatives. Any financial commitments made by the private sector for e-vehicle investments at the EOP can be added to the achievement of the indirect emissions reductions.

36. **Outcome 4: Measures are developed to ensure the long-term environmental sustainability of e-vehicles and GUTCs.** This component will address environmental challenges for an e-vehicle and GUTC programme in Uzbekistan. The measures to be addressed to achieve this outcome include joint actions to improve urban environmental quality based on evidence provided from the GUTC environmental monitoring programme from Output 3.2, and the management of hazardous waste from the scaling-up of EV usage in Uzbekistan (a likely need from Outputs 3.6 and 3.7). Although Uzbekistan is not expected to encounter the problem of battery recycling within the next 15 years or more, TAILEV is committed to raising awareness and knowledge levels on these issues amongst policy makers and government staff well in advance of an expected influx of downgraded EV batteries whose end-of-life may be 15-20 years from the commencement of the TAILEV Project. Outputs and activities to be delivered to achieve Outcome 3 is provided in Paras 37 to 39.
37. **Output 4.1: National workshops with other Uzbek municipalities on monitored key environmental indicators along Tashkent GUTC.** Activities to deliver this output includes:
- **Activity 4.1.1: Organize 2 workshops in 2025 (Year 5) in other Uzbek municipalities to share findings of monitoring program of key environmental indicators along the Shota Rustaveli GUTC.** Appropriate knowledge products need to be organized for these workshops on the findings of the monitoring program of key environmental indicators along the Shota Rustaveli GUTC (from the Goscomecology monitoring program of Output 3.2). Invitations to these workshops should ensure an appropriate level (20-30%) of participation of female personnel;
 - **Activity 4.1.2: Conduct the 2 workshops organized in Activity 4.1.1.** With the technical support of TAILEV Project personnel, these workshops will present the findings of monitoring program of key environmental indicators along Shota Rustaveli GUTC (Output 3.2). The workshops should conclude with proposed joint actions to improve and manage urban environmental quality. In particular, the environmental benefits accrued by Tashkent through its operation of the Shota Rustaveli GUTC with e-buses (and compiled in the knowledge product from Activity 3.3.3) will be highlighted and shared with other jurisdictions in these national workshops. The knowledge provided during these workshops should provide Goscomecology policymakers with sufficient knowledge to support GUTC and e-bus investments by all municipalities in Uzbekistan. An appropriate level (30-35%) of participation of female personnel and air pollution experts shall be ensured.
38. **Output 4.2: Adopted guidelines for tracking, downgrading, re-use and recycling of batteries from electric vehicles and business models for extended supplier responsibility for EV infrastructure and EV components.** This output will assist in providing options for addressing the accumulation of downgraded batteries from EVs in Uzbekistan. In addition, the Project will introduce the concept of extended supplier or manufacturer responsibility, a business approach where a supplier obliges their entity to retake a product or system at the end of its useful life.¹⁸ Activities to deliver this output includes:
- **Activity 4.2.1: Prepare guidelines and procedures for EV battery management and recycling that can be applied in Uzbekistan.** TAILEV resources will be used to recruit a team of consultants (international and national) in late 2026 (2Q of Year 6) to develop knowledge products on how downgraded EV batteries may be used for stationary applications such as grid-connected electricity storage, or for vehicles with a less demanding duty cycle such as fork lifts. The team will also align its work with guidance and methodologies provided by the Global E-Mobility Programme and integrate this with the lessons and experiences gathered during the Project. Given the nascent market characteristics for downgraded EV batteries, this consultancy will also present alternative applications appropriate to Uzbekistan that are in line with experiences from peer countries on reducing e-waste as well as recycling of EV battery recycling through approaches mirrored in Europe that aligned with the European Commission's directives on Waste Electronic and Electrical Equipment (WEEE)¹⁹. Resources in this Activity will be provided for travel to a Global E-Mobility event on global practices on waste management from EV programmes;
 - **Activity 4.2.2: Prepare knowledge transfers on the concept of extended supplier or manufacturer responsibility.** The consulting team in Activity 4.2.1 will also prepare a business approach in late 2026 (2Q of Year 6) where an EV supplier or manufacturer is obliged to retake a product or system at the end of its useful life. A business approach can be maintained through the value of the materials recovered from the used EV batteries. Typically, the end-user has formal ownership of the EV batteries from the moment of purchase until its return and acceptance by the producer. This mechanism can be applied to EV batteries given the residual value of the materials, and other EV components that may have value. An alternative arrangement is leasing of the batteries under which the batteries remain the property of the supplier while used by the customer. This business approach could be adapted to Uzbekistan where there are relevant private sector stakeholders who have businesses that manage WEEE waste streams. Their knowledge on local conditions for re-cycling or disposal of EV-related items such as EV battery, can be integrated with best practices from the Global E-Mobility Programme, to provide knowledge products on extended supplier or manufacturer responsibility adapted to Uzbek conditions.

¹⁸ A common example would be several manufacturers of printer toner cartridges who run a global return system.

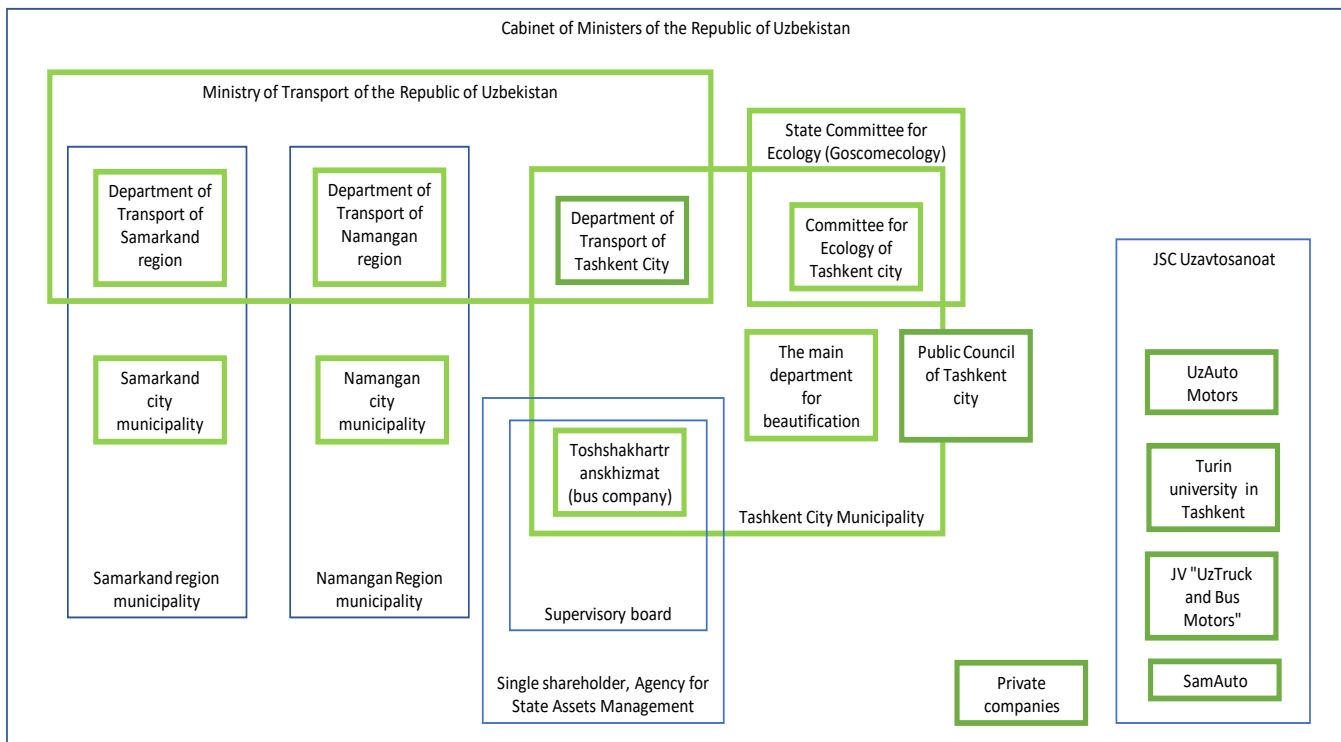
¹⁹ https://ec.europa.eu/environment/waste/weee/index_en.htm

39. **Output 4.3: Lessons learned study.** By 2026 or Year 6, the experience of Tashkent and other cities in Uzbekistan in greening urban transport will be extensive from the development of GUTCs to the operation of low carbon electric buses and encouragement of the municipal governments to invest in electric vehicles and GUTCs. Activities to deliver this output includes:
- **Activity 4.3.1: Recruitment of consultant to prepare a “TAILEV lessons learned” study.** This recruitment will be undertaken in early 2026 (Q1 Year 6);
 - **Activity 4.3.2: Prepare a “TAILEV lessons learned” study.** By early 2027 (Q1 Year 6), the TAILEV lessons learned study will be prepared containing TAILEV Project experiences in planning, implementing and operating GUTCs with EVs that have been or can be replicated by other cities and countries regionally. The study or knowledge product will have a special emphasis on issues related to inclusivity as it relates to gender and vulnerable groups with analysis of past successes on the pilot GUTC and e-bus fleet on these issues. It will also underline the importance of the government and the suppliers/manufacturers of EV batteries, components and infrastructure to responsibly manage waste streams from a scaled-up EV programme, notably the re-use and re-cycling of EV batteries. As an exit strategy for TAILEV, the study will target a wide spectra of sustainable transport stakeholders in Uzbekistan, regional countries in Central Asia using these platforms, and networks brought into TAILEV with the Global E-Mobility Programme;
 - **Activity 4.3.3: Conduct a national TAILEV Terminal Workshop.** This workshop will disseminate the TAILEV lessons learned study, to be held in mid-2027 (Q4 of Year 6).

IV.2 Partnerships

40. The Ministry of Transport (MoT) is proposed as the national implementing partner for this Project whose mandate is the development and implementation of a unified state policy for all modes of transport in Uzbekistan that includes amongst other transport modes, urban transport modes. As such, the MoT is responsible for the setting of policies in urban transport that includes, as is relevant to TAILEV, the development of electric vehicles (as mentioned in Para 3) and development of "green" transport in accordance with long-term urban development plans and environmental safety measures (as mentioned in Para 4). These developments will need the support and cooperation of MoT to source finances for GUTC construction and e-bus operations, monitoring and evaluation of pilots, and the setting of roadmaps, strategic plans and national policies and standards for green urban transport. A stakeholder map for TAILEV is provided in Figure 1.

Figure 1: Stakeholder Map for TAILEV



41. With the TAILEV focus on promoting the use of electric vehicles in Uzbekistan, TBC (JSC Toshshakhartranskhizmat, also referred as the Tashkent city public transport company) is proposed as a Responsible Party. TBC is a state-owned company that is responsible for the provision of public transport to more than 600,000 passengers daily within Tashkent City Municipality (TCM) with a fleet of over 1,000 buses (roughly 50% diesel and 50% CNG), and the operation of over 36 km of metro lines (further details of Tashkent’s public transit are found in Annex 5, Paras 5-4 to 5-13). TBC will have the responsibility for the pilot procurement, operation and maintenance of electric buses to be operated along the pilot GUTC. Figure 1 provides an illustration of the relationships between TAILEV stakeholders. Stakeholder profiles are provided in Annex 4.
42. TAILEV will also have a key partnership with its parent project, the UNEP-implemented “Global Programme to Support Countries with the Shift to Electric Mobility” (GEF Agency Program ID: 01679) which has the objective of “supporting countries to design and implement electric mobility programs as part of an overall shift to sustainable, low carbon transport sector”. TAILEV is a child project under this “Global E-Mobility Programme”, under which the Government of Uzbekistan would receive support to accelerate the introduction of electric mobility through the global knowledge and outreach capacity developed by the International Energy Agency, ADB and UNEP. The advantage of this support is the provision of an “integrated approach with other countries to develop electric mobility policy frameworks and support of electric mobility projects”. As the “parent” project at the global level, the Global E-Mobility Programme will utilize a programmatic approach wherever appropriate to support TAILEV by:
- *Raising awareness* of the multiple benefits of electric mobility for all relevant stakeholders in the child project countries that can include reductions of greenhouse gas and air pollutant emissions, energy use and costs;
 - *De-risking investment* in electric vehicles and electric vehicle supply equipment through providing guidance on development of studies and analyses, and developing and implementing demonstration projects;
 - *Provide policy packages and support* such as regulations, standards, fiscal measures and other local and national incentives that can be adapted to Uzbekistan’s desired pathway to electric mobility;
 - *Ensuring the integration of renewable energy sources* and the de-carbonization of the power grid is part of the transition to electric mobility;
 - *Promoting sustainable use of batteries and battery materials recycling*;
 - *Integrating gender issues into (electric) mobility* and work with policy makers in designing gender-responsive policies and solutions; and
 - *Promoting private sector engagement and facilitate the creation of markets* for the introduction of electric mobility through inviting and supporting suppliers of electric mobility (and affiliated companies such as those offering recharge facilities) to supply electric mobility solutions to non-OECD countries. This would include networking with financiers to create regional marketplaces for Uzbekistan cities keen to introduce electric mobility.

Furthermore, the TAILEV project will have a layered coordination approach with the Global E-mobility Programme at national project and global UNDP NCE team levels. The project has several activities that are connected with Global E-mobility program including technical knowledge transfer (such as MRV related approaches, environmental management of batteries etc.) as well as participation to the key global and regional events of the Global E-mobility Programme. Also, the project team will ensure that project partners in Uzbekistan will benefit from the Regional Support and Investment Platforms to be established under the Global E-mobility Programme. This will include participation of government and municipal staff/experts joining to technical trainings, participation to the community of practitioners and approaching the help desks to gather technical support when needed. On the other hand, UNDP NCE team will ensure effective coordination with the Global E-mobility Programme team (UN Environment) and its partners for effective management of the projects, contribution to global monitoring and evaluation efforts as well as other common issues under the Global Programme. UNDP’s NCE team will ensure the data and knowledge flow between national project team and the international coordination mechanism.

IV.3 Risks

43. Risks that can be mitigated through the activities of TAILEV include:
- Unwillingness of municipal partners to develop GUTCs on the basis of best international practices that will maximize corridor ridership and economic opportunities;

- Lack of knowledge amongst bus company operational and maintenance personnel to deal with electric buses operational and technical issues²⁰;
 - Reluctance of private companies to own and operate e-buses;
 - Lack of legal MoT framework for licencing private operators for public transport that includes environmental and social safeguards based on best international practices;
 - Limiting women’s ability to benefit from TAILEV throughout all phases (design, construction, operation, maintenance and increased usage of green public transport);
 - Environmental impacts during GUTC construction including increased air, water and noise pollution and solid waste generation, increasing health and safety risks of workers and the community;
 - Loss of livelihood for local business due to access restrictions during construction of the GUTC;
 - Possible COVID-19 related risks in relation to transport preferences of the public, changes in the priorities of the government (due to shortage of capital financing) and any other limitations that cannot be foreseen as of today. This may include support for infrastructure to support green recovery and future resilience under the GoU’s *Green Economy Strategy*. With the GoU’s desire to increase jobs within its borders, a programme to increase EV usage with domestically manufactured e-buses and other EVs could garner support from private sector vehicle-manufacturing facilities already established in Uzbekistan. Implementing these opportunities will accelerate new “green” based businesses and facilitate towards an economic recovery based on green activities.
44. Details of mitigation of the aforementioned risks in Para 43 are provided in the UNDP Risk Register in Annex 9. The Social and Environmental Screening Procedure (SESP) is provided in Annex 8.

IV.3 Stakeholder Engagement Plan

45. Other stakeholders to be engaged aside from those discussed in Section IV.2 includes key TAILEV beneficiaries who are categorized in the following list:
- National government level agencies in addition to the Ministry of Transport would include the State Committee for Ecology and Environmental Protection (also referred to as Goscomecology) who will be closely involved with TAILEV in the monitoring and assessment of environmental benefits of increased electric vehicle usage in Uzbekistan;
 - Regional municipal governments, notably:
 - the Tashkent City Municipality (TCM) who will have oversight of the pilot Shota Rustaveli GUTC and pilot e-bus fleet through their respective Department of Transport for Tashkent City and Committee of Ecology for Tashkent City, both of whom TAILEV will have a closely collaborative working relationship to develop their capacities to empower them to make decisions on developing other GUTCs and expanding the use of EVs within their municipality. TCM also have a Public Council of the City of Tashkent that is not a legal entity but a voluntary public association with strong civil society representation with whom TAILEV will engage. Their inputs into GUTC and e-bus service designs will have a focus on gender considerations and the inclusivity of these designs for vulnerable groups;
 - the Namangan and Samarkand City Municipalities who have equivalent Departments of Transport and State Committees for Ecology, who can become involved during the later periods of TAILEV, as required;
 - State-owned companies who operate services important to the public such as:
 - the TBC (JSC Toshshakhartranskhizmat) who operate public bus transport in Tashkent, and are proposed as the Responsible Party for TAILEV (as mentioned in Para 0);
 - JSC “National Electric Networks of Uzbekistan” which performs functions of a single purchaser of electricity from its producers and sale of electricity to enterprises of regional electric networks and JSC “Regional Electric Networks” that manages the enterprises of territorial electric networks that distribute and sells electricity to end consumers, and who would provide electricity for e-vehicle charging infrastructure²¹; and

²⁰ Overcoming this will require these personnel to undertake high voltage training (mainly for bus company staff) and new maintenance cycles, and training to improve their understanding of “very cold and very hot bus operations”, correct charge monitoring, conducting on-road repair programs, power loss plans, effective and efficient scheduling to allow for charging, and the impact of additional weight of e-buses on road infrastructure.

²¹ These companies were restructured from the original Uzbekenergo company in 2019, details of which are found on:

- JSC “Uzavtosanoat”, the parent company to major motor vehicles production in Uzbekistan who will also have motor vehicle market information for Uzbekistan;
- Private sector companies, mainly those involved with the manufacture of motor vehicles in Uzbekistan who can create new economic opportunities with the manufacture of EVs in Uzbekistan. Most of these companies are partly owned by JSC “Uzavtosanoat”. There is also a planned private sector investment from Namangan for the development of an eco-tourism area that will only have e-vehicles for transport within a large district within the Fergana Valley (see Tables 3 and 4-1 for more details); and
- Educational institutes such as the Innovation Center at Turin Polytechnic University who have the capacity for delivery of capacity building to all key stakeholders of the Project.

A full analysis of TAILEV stakeholders and plans for their engagement on the Project are provided in Annex 4.

IV.4 Gender equality and Women’s Empowerment

46. Enhancement of the Project’s gender impact will include:

- maximizing participation of female personnel in bus operation and maintenance;
- ensuring the introduction of the electric bus fleet in Tashkent sustains improvements in gender-inclusive features;
- ensuring inclusion of gender considerations in all long-term strategies and policy documents designed and introduced under the Project;
- preparing and introducing into practice a long-term gender and development strategy with strong participation of female employees that will define ways to make public transportation system in Tashkent more gender-friendly and improve workplaces for women within all stakeholder organizations and companies involved with the Project;
- dissemination of information on the benefits of improved public transport along the GUTC with a special focus on the health and economic benefits of electric transportation to vulnerable sectors of the urban populations of Uzbek cities (i.e. women, the elderly, children and persons with disabilities);
- TAILEV Project staff undertaking efforts to ensure equal participation and engagement of women and men in the planning, implementation and monitoring of project interventions. This will be aided by the inclusion of the Public Council of the City of Tashkent as mentioned in Para 45.

IV.5 South-South and Triangular Cooperation (SSTrC)

47. Learning opportunities and technology transfer from peer countries will be further explored during implementation of TAILEV. To present opportunities for replication in other countries, the Project will codify good practices and facilitate dissemination through global ongoing South-South and global platforms through the UNEP-implemented Global E-Mobility Programme, the UN South-South Galaxy knowledge sharing platform and PANORAMA²².

IV.6 Innovativeness, Sustainability and Potential for Scaling-Up

48. The design of TAILEV is innovative for Uzbekistan since its design can be partitioned into activities related to *de-risking* and *scaling-up*. During Years 1, 2 and 3, *de-risking* of the concept of a green urban transport corridor (GUTC) and electric vehicle technology will be undertaken, both of which had not yet been tested in the country. During Years 4, 5 and 6, scaling-up on the development of GUTCs and usage of electric vehicles in Uzbekistan will be facilitated. By demonstrating the operation of 30 electric buses and more than 2 charging stations along 2 GUTCs that prioritize public transport and de-risking the technology of electric buses under Uzbek environmental conditions, Uzbekistan will have a demonstration of the positive environmental and economic benefits of a pilot GUTC and electric vehicles. To date, the concept of GUTCs and the technology of EVs have not had the required visibility nor the public and investor confidence of the economic and environmental viability of EVs in Uzbekistan. With a significant proportion of TAILEV resources dedicated towards planning, implementation, operation and maintenance of the pilot Shota Rustaveli GUTC and pilot electric bus operations under Component 2, these pilots will utilize best international practices to generate economic, environmental and social benefits of electric buses operated along a GUTC. These benefits will

<https://gratanet.com/news/the-president-approves-reorganization-of-uzbekenergo>

²² <https://panorama.solutions/en>

be measured in a credible manner with established MRV protocols under Component 3 to generate realistic data and information.

49. By disseminating this information with an intent to of scaling-up to leverage investment (including 1,000 e-buses) in Years 4, 5 and 6, strong interest from local investors should be catalysed. This would include local manufacturers of motor vehicles to assemble electric buses and EVs in Uzbekistan to create local employment, and private sector companies who would invest in a conversion to electric vehicle fleets. This would strengthen sustained growth of electric vehicles within the Tashkent City as well as other cities in Uzbekistan such as Samarkand and Namangan. The TAILEV Project design of presentation and dissemination of these benefits to public and private stakeholders and provision of tailored technical assistance to these investors in preparing investment plans (under Component 4) should catalyse interest in investments in EVs (such as taxi fleet and delivery companies) and GUTCs. This strategy will strengthen sustainability and scaling-up issues related to TAILEV.
50. Sustainability of TAILEV will be further assured through its close links to the 2030 Transport Concept mentioned in Para 9, which will tie the activities closely with and through strong support from national and local governments. Civil society groups such as the Public Council of Tashkent will apply its strong advocacy abilities to support the actions of TAILEV, notably for their calls for improved public transport services and an expansion of safe cycling corridors. The potential of scaling-up EV investments will be enhanced by increased confidence in EV technology created during the de-risking period of TAILEV (Years 1, 2, and 3) and the strong likelihood of a downward trajectory of the price of electric vehicles and buses during the 6-year implementation period of TAILEV. For example, the de-risking period will pilot EV technology for 30 electric buses with the scaling-up period of TAILEV designed to assist the country in securing financial commitments for more than 1,000 electric buses to replace older diesel buses that will maximize the indirect GHG emission reductions significantly. This would assist the GoU towards:
 - setting targets under Goal 6 targets for the “share of the fleet of vehicles with hybrid, electric and alternative fuel engines” in their draft 2035 Transport Strategy in Uzbekistan;
 - achieving the target of an 80% transition of public transport to CNG/LPG and electric traction until 2030 based on the Concept “On Environmental Protection of the Republic of Uzbekistan for the Period until 2030” (as mentioned in Para 5-19).
51. TAILEV will explore further opportunities for accelerating this scale-up by linking TAILEV efforts with meaningful participation in specific events where UNDP could support engagement with the global development discourse on e-mobility. As a child project to UNEP’s Global E-Mobility Programme, TAILEV will provide opportunities for regional cooperation with another 6 countries/cities that have similar initiatives with the introduction of clean and soot free buses, including the introduction of electric buses. UNEP is implementing these activities with the International Council for Clean Transportation (ICCT), and the Climate and Clean Air Coalition. Activities include providing technical advice, sharing best practices and developing “marketplaces” where interested cities can discuss with technology providers and financial institutions.
52. Another promising link is the IEA coordinated Electric Vehicles Initiative (EVI), a government-to-government policy forum established in 2009 under the Clean Energy Ministerial dedicated to accelerating the deployment of electric vehicles worldwide²³. The EVI facilitates exchanges between policy makers working in governments that are committed to supporting EV development and a variety of partners, bringing them together twice a year as a platform for knowledge-sharing on policies and programmes. TAILEV will endeavour to involve the MoT in this policy forum.
53. Lastly, there is the involvement of the ADB on the Global Programme for technical assistance to the development of policies and strategies for the development of electric transport in Uzbekistan, analysis of the environmental impact of electric vehicles and its economic consequences (based on global practices on taxation, tariffing, and subsidizing as a means of catalysing interest in EVs). Technical assistance would also include the phased introduction of EVs for public and personal use, enforcing relevant standards, development of charging infrastructure and production of batteries. These technical assistance issues for the development of electric transport fall under the Decree of the President of the Republic of Uzbekistan from 22 August 2019 “on accelerated measures to improve energy efficiency in economic and social sectors, the introduction of energy-saving technologies and the development of renewable energy sources”²⁴.

²³ Governments currently active in the EVI include Canada, Chile, China, Finland, France, Germany, India, Japan, Mexico, Netherlands, New Zealand, Norway, Sweden, United Kingdom and United States

²⁴ <https://kun.uz/ru/news/2020/02/23/abr-razrabotayet-rekomendatsii-po-vnedreniyu-elektrotransporta-v-uzbekistane>

PROJECT RESULTS FRAMEWORK

Table 2: TAILEV Project Results Framework (PRF)

This project will contribute to the following Sustainable Development Goal (s):				
<ul style="list-style-type: none"> • Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable; and • Goal 13. Take urgent action to combat climate change and its impacts 				
This project will contribute to the following country outcome (UNDAF/CPD): Outcome 5: By 2025, most at risk regions and communities of Uzbekistan are more resilient to climate change and disasters, and benefit from increasingly sustainable and efficient management of natural resources and infrastructure, better climate action, environmental governance and protection and Output 1.5: Innovative and sustainable climate change adaptation and mitigation initiatives in agriculture, health water, transport and building/housing sectors are implemented at national and regional levels.				
	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
Project Objective: To accelerate the adoption of electric vehicles in the City of Tashkent that can be replicated in other cities in the Republic of Uzbekistan, significantly reduce greenhouse gas emissions in the transport sector, and improve urban environmental quality	<u>Indicator 1:</u> # direct project beneficiaries disaggregated by gender (number of passengers using new Shota Rustaveli GUTC e-bus route per day)	0	3,000 (50% female/50% male)	6,000 ²⁵ (50% female/50% male)
	<u>Indicator 2:</u> # consequential project beneficiaries disaggregated by gender (individual people)	0	60,000 ²⁶	68,000 ²⁷
	<u>Indicator 3:</u> Emission reductions, cumulative lifetime direct (tonnes of CO _{2eq})	0 ²⁸	9,590	20,700 ²⁹ and
	<u>Indicator 4:</u> Cumulative direct reduction of pollutant load (for CO, NOx and NH) along GUTC corridor (% reduction)	0	5%	10%
Project component 1	Institutionalization of low carbon e-mobility and green urban development			
Project Outcome 1: The government establishes an institutional framework and adopts a	Indicator 5: Number of adopted gender-inclusive national and municipal level strategies and plans that increase the uptake of EVs and development of	0	1	5 ³⁰

²⁵ See Annex 3 – Monitoring Plan, Table 3-1 on Indicator 1.

²⁶ See Annex 3 – Monitoring Plan, Table 3-1 on Indicator 1

²⁷ See Annex 3 – Monitoring Plan, Table 3-1 on Indicator 1

²⁸ See Annex 3 – Monitoring Plan, Table 3-1 on Indicator 2.

²⁹ See Annex 3 – Monitoring Plan, Table 3-1 on Indicator 3.

³⁰ See Annex 3 – Monitoring Plan, Table 3-1 on Indicator 5.

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
strategy for the promotion of gender-inclusive low-carbon electric mobility and GUTCs	GUTCs and include gender considerations			
	Indicator 6: Number of adopted gender-inclusive national policies and regulations to support growth and increased use of EVs and the development of GUTCs that include gender considerations	0	0	3 ³¹
Outputs to achieve Outcome 1	Output 1.1: National Strategy and Roadmap on electric vehicles (EVs) Output 1.2: National Strategy and Roadmap for increasing development of green urban corridors (GUTCs) and improving urban environmental conditions Output 1.3: Municipal-level strategy for increased adoption of EVs and development of GUTCs for cities in Uzbekistan Output 1.4: Proposed new codes and standards for EVs and development of GUTCs corridors in Uzbekistan Output 1.5: Adopted national policy statement on EVs and GUTCs			
Project component 2	Short term barrier removal through low-carbon e-mobility demonstrations and green urban development in Tashkent			
Outcome 2: Pilots in Tashkent provide evidence of technical, financial and environmental sustainability to plan for scale-up of low-carbon e-mobility and GUTCs	Indicator 7: Number of completed feasibility studies for pilot GUTC and e-bus fleet	0	1 ³²	1
	Indicator 8: Kilometers of pilot GUTC corridor developed	0	7.5 ³³	16.6 ³⁴
	Indicator 9: Number of e-buses in operation along pilot GUTCs with gender-inclusive features such as at least 1 or 2 female drivers for e-bus.	0	10	30 ³⁵
Outputs to achieve Outcome 2	Output 2.1: Feasibility study on GUTCs in Tashkent with gender-inclusive features and an emphasis on e-buses for public transport, fast charging stations, NMV infrastructure to increase public transport ridership, and green belts			

³¹ See Annex 3 – Monitoring Plan, Table 3-1 on Indicator 6.

³² See Table 3-1 on Indicator 7, Footnote 62.

³³ See Table 3-1 on Indicator 8, Footnote 63.

³⁴ See Table 3-1 on Indicator 8, Footnote 64.

³⁵ See Table 3-1 on Indicator 9

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
	Output 2.2: An operational GUTC demo project in Tashkent with measures to attract and maximize ridership along corridor with e-buses (with features that are inclusive of gender and vulnerable groups) and green belts for maintaining urban resilience to climate change Output 2.3: An operational fleet of electric buses and fast charging stations within Tashkent City Administration Output 2.4: Additional e-buses under Tashkent management operating along GUTC			
Project component 3	Preparing for scale-up and replication of low-carbon e-mobility and green urban development			
Outcome 3: Conditions are created to shift market towards low-carbon e-mobility and accelerate adoption of e-vehicles and GUTCs	Indicator 10: Number of developed gender-inclusive guidelines and regulatory documents for Tashkent City on EV fleets and GUTC developments	0	2 ³⁶	2
	Indicator 11: Number of personnel involved in the monitoring and reporting of key environmental indicators along the GUTC	0	5 (with a minimum of 20% women)	10 (with a minimum of 30% women)
	Indicator 12: Number of students (% female students) enrolled and graduated on courses for e-vehicles and green urban development	0	50 (with a minimum of 20% women)	100 (with a minimum of 30% women)
	Indicator 13: Number of bankable and gender-inclusive feasibility studies and business plans for scaling-up of e-bus fleets and additional GUTCs in several main cities of Uzbekistan	0	0	3 ³⁷
	Indicator 14: Number of private bankable proposals for financing at EOP	0	0	2 ³⁸
Outputs to achieve Outcome 3	Output 3.1: Guidelines for EV fleet procurement, operation and maintenance Output 3.2: Environmental monitoring program under a cell setup within Goscomecology for key environmental indicators along GUTC Output 3.3: GUTC codes and standards that are gender inclusive			

³⁶ See Table 3-1 on Indicator 10.

³⁷ See Table 3-1 on Indicator 13, Footnote 67.

³⁸ See Table 3-1 on Indicator 14.

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
	<p>Output 3.4: Workshops and technical assistance for municipal personnel (with a minimum of 30% participation by females) to sustain high levels of ridership on public transit e-buses along GUTCs</p> <p>Output 3.5: Curriculum for gender-inclusive development e-vehicles and green urban transport in higher educational institutions in Uzbekistan</p> <p>Output 3.6: Feasibility study and business plans for the scale-up of e-bus fleets and additional GUTCs in Tashkent and other cities in Uzbekistan such as Samarkand and Namangan</p> <p>Output 3.7: Workshops (at least (20-30% female) and technical assistance to promote and increase adoption of EVs focusing on private investment from taxi fleets, delivery companies and private owners</p>			
Project component 4	Long-term environmental sustainability of low-carbon e-mobility and green urban development			
Outcome 4: Measures are developed to ensure the long-term environmental sustainability of e-vehicles and GUTCs	Indicator 15: Number of joint actions proposed by municipalities (with targets and dates) on improving urban environmental quality	0	0	2 ³⁹
	Indicator 16: Number of adopted guidelines for re-use and recycling of downgraded EV batteries and business models for extended supplier responsibility for EV infrastructure and components at EOP	0	0	1 ⁴⁰
	Indicator 17: Number of reports on best practices and lessons learned from the Uzbekistan project that is shared with the global programme	0	0	1 ⁴¹
Outputs to achieve Outcome 4	<p>Output 4.1: National workshops with other Uzbek municipalities to share findings of monitoring program of key environmental indicators along Tashkent GUTC, and joint actions to improve and manage urban environmental quality</p> <p>Output 4.2: Adopted guidelines for tracking, downgrading, re-use and recycling of batteries from electric vehicles and business models for extended supplier responsibility for EV batteries and other EV-related waste streams</p> <p>Output 4.3: Lessons Learned Study</p>			

³⁹ See Table 3-1 on Indicator 15

⁴⁰ See Table 3-1 on Indicator 16.

⁴¹ See Table 3-1 on Indicator 17.

MONITORING AND EVALUATION (M&E) PLAN

54. TAILEV Project results, corresponding indicators and mid-term and end-of-project targets in the PRF will be monitored annually and evaluated periodically during TAILEV implementation. If baseline data for some of the results indicators is not yet available, it will be collected during the first year of project implementation. The Monitoring Plan included in Annex 3 details the roles, responsibilities, and frequency of monitoring project results.
55. Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the [UNDP POPP](#) and [UNDP Evaluation Policy](#). The UNDP Country Office is responsible for ensuring full compliance with all UNDP project monitoring, quality assurance, risk management, and evaluation requirements.
56. Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the [GEF Monitoring Policy](#) and the [GEF Evaluation Policy](#) and other [relevant GEF policies](#)⁴². The costed M&E plan included in Table 3, and the Monitoring Plan in Annex 3, will guide the GEF-specific M&E activities to be undertaken by this project.
57. In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report.

Additional GEF monitoring and reporting requirements

58. Inception Workshop and Report: An Inception Workshop for TAILEV will be held within 60 days of Project CEO endorsement, with the aim to:
 - Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation;
 - Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms;
 - Review the results framework and monitoring plan;
 - Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OPF and other stakeholders in project-level M&E;
 - Update and review responsibilities for monitoring project strategies, including the risk register; SESP report, Environmental Social Management Framework and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies including the early assessment of the post COVID-19 era developments and their effects as well as possible benefits to the project context;
 - Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit;
 - Plan and schedule Project Board meetings and finalize the first-year annual work plan;
 - Formally launch the Project.
59. GEF Project Implementation Report (PIR): The annual GEF PIR covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR. The PIR submitted to the GEF will be shared with the Project Board. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

⁴² See https://www.thegef.org/gef/policies_guidelines

Table 3: Monitoring and Evaluation Plan and Budget

GEF M&E requirements	Indicative costs (US\$)	Time frame
Inception Workshop	US\$8,000 for workshop	Within 60 days of CEO endorsement of this project.
Inception Report	None	Within 90 days of CEO endorsement of this project.
Monitoring of indicators in project results framework	US\$787.50 x 6 yrs = US\$ 4,725	Annually prior to GEF PIR. This will include GEF core indicators.
GEF Project Implementation Report (PIR)	US\$787.50 x 6 yrs = US\$ 4,725	Annually typically between June-August
Monitoring all risks (UNDP risk register)	None	On-going.
Monitoring of stakeholder engagement plan	US\$2,050 x 6 yrs = US\$ 12,300	On-going.
Monitoring of gender action plan and safeguard management	US\$78,720	On-going.
Supervision missions	None ⁴³	Annually
Oversight missions	None	Troubleshooting as needed
Mid-term GEF Core indicators and other required Tracking Tools	None	Before mid-term review mission takes place.
Independent Mid-term Review (MTR) and management response	US\$33,016	Early in Year 4 (Expected date of posting of Mid-Term Review to ERC: 1 July 2024)
Terminal GEF Core indicators and other required Tracking Tools	None	Before terminal evaluation mission takes place
Independent Terminal Evaluation (TE)	US\$37,000	Late in Year 6 (at least 3 months prior to EOP-operational closure) (Expected date of posting Terminal evaluation report to ERC: 31 March 2027)
Total Indicative Cost	US\$ 178,486	

60. GEF Core Indicators: The GEF Core indicators included as Annex 15 will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the indicator status. The updated monitoring data should be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent groundtruthing. The methodologies to be used in data collection have been defined by the GEF and are available on the GEF [website](#).
61. Independent Mid-term Review (MTR): The terms of reference, the review process and the final MTR report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the [UNDP Evaluation Resource Center \(ERC\)](#).
62. The evaluation will be ‘independent, impartial and rigorous’. The consultants (independent evaluators) that will be hired by the UNDP Country Office to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the consultants (independent evaluators) should not be in a position where there may be the possibility of future contracts regarding the project under review. The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the evaluation process. Additional quality assurance support is available from the BPPS/UNDP-NCE Directorate.

⁴³ The costs of UNDP Country Office and UNDP-NCE Unit’s participation and time are charged to the GEF Agency Fee

63. The final MTR report and MTR ToR will be publicly available in English and will be posted on the UNDP ERC by **1 July 2024**. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report's completion.
64. Terminal Evaluation (TE): An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the [UNDP Evaluation Resource Center](#).
65. The evaluation will be 'independent, impartial and rigorous'. The consultants (independent evaluators) that will be hired by UNDP Country Office to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the consultants (independent evaluators) should not be in a position where there may be the possibility of future contracts regarding the project being evaluated. The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the BPPS/UNDP-NCE Directorate. The final TE report and TE ToR will be publicly available in English and posted on the UNDP ERC by **31 March 2027**. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report's completion.
66. Final Report: The project's terminal GEF PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.
67. Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information: To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy and the GEF policy on public involvement.
68. Knowledge management: The project team will ensure extraction and dissemination of lessons learned and good practices to enable adaptive management and upscaling or replication at local and global scales. Results will be disseminated to targeted audiences through relevant information sharing fora and networks. The project will contribute to scientific, policy-based and/or any other networks as appropriate (e.g. by providing content, and/or enabling participation of stakeholders/beneficiaries).

GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Roles and responsibilities of the project's governance mechanism:

69. Implementing Partner: The Implementing Partner for this project is the Ministry of Transport, the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document (HACT assessment for MoT is contained in Annex 17). The Implementing Partner is responsible for executing this project. Specific tasks include:
- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by TAILEV supports national systems;
 - Risk management as outlined in this Project Document;
 - Procurement of goods and services, including human resources;
 - Financial management, including overseeing financial expenditures against TAILEV budgets;
 - Approving and signing the multiyear workplan;
 - Approving and signing the combined delivery report at the end of the year; and
 - Signing the financial report or the funding authorization and certificate of expenditures.

Responsible Parties:

70. The Responsible Party of TAILEV will be JSC "Toshshakhartranskhizmat" or TBC who will serve the role during TAILEV of supporting the selection of potential corridors for the pilot GUTC, serving as the lead agency for preparing and undertaking a tender to procure e-buses and charging infrastructure and the collection of pre- and post-GUTC data on electric buses, and the training and organization of e-bus drivers and maintenance personnel. A HACT assessment for TBC is contained in Annex 17.

Project stakeholders and target groups:

71. Key project stakeholders, in addition to the Ministry of Transport and TBC include:
- Tashkent City Municipality whose primary roles will be in advising on specific infrastructural developments along the proposed pilot Shota Rustaveli GUTC, securing capital financing for construction of this GUTC, and serving as the lead agency for the planning, engineering, construction and maintenance of Shota Rustaveli GUTC infrastructure. In addition, it will also serve as the coordination body for entities within the TCM who will serve as key players in TAILEV including the Department of Transport of Tashkent City of the Ministry of Transport, the Main Department for Beautification, Committee for Ecology for Tashkent City, and the Public Council of Tashkent;
 - The State Committee for Ecology and Environmental Protection (Goscomecology) whose primary roles will be in coordination of programme for the collection of ambient air quality data along the GUTC, and cooperation in policymaking for environmental protection, air quality, battery waste disposal, raising awareness on low-emission vehicles;
 - JSC "Regional Electric Networks" whose role during implementation will be the provision of electricity to the charging stations for electric buses;
 - ToshkentboshplanLITI whose primary roles during implementation would be to serve as the Chief Advisory body to TCM on the Shota Rustaveli GUTC planning, engineering design, tendering process for selection of general contractor for the GUTC construction;

- JSC “Uzavtosanoat” whose role will be to provide market surveys on the opinions and uses of electric vehicles in Uzbekistan and to facilitate opportunities for their member companies to increase sales of locally manufactured electric vehicles in both domestic and international markets;
- Innovation Center at Turin Polytechnic University in Tashkent (capacity building and design of EVs and associated charging stations) whose roles during implementation include the provision of training services for the maintenance and operation of electric buses, charging stations, transit-priority signalling and other equipment;
- Samarkand City Municipality who will utilize lessons learned from Tashkent GUTC which can be used to develop their own GUTC project;
- Namangan City Municipality who will actively use lesson learned from the pilot Shota Rustaveli GUTC (as well as the Fargona Yuli BRT corridor) to accelerate low-emission transport investments in their City, and developing and applying regulations and standards aimed at stimulating and accelerating private investment in low-carbon transport in the City of Namangan;
- Valley Fruits LLC, a private sector entity with a proposed investment in a green zone with e-vehicles and supporting green infrastructure;
- Other stakeholders to be identified during the project including automobile transport enterprises, and manufacturers (for electric buses and vehicles, photovoltaic stations, battery charging batteries).

Details of these entities are provided in Annex 4.

UNDP:

72. UNDP is accountable to the GEF for the implementation of this project. This includes oversight of project execution to ensure that the project is being carried out in accordance with agreed standards and provisions. UNDP is responsible for delivering GEF project cycle management services comprising project approval and start-up, project supervision and oversight, and project completion and evaluation. UNDP is responsible for the Project Assurance role of the Project Board/Steering Committee.
73. Moreover, in addition to its oversight role, UNDP will play a limited and specific role providing execution support to the MoT in two targeted areas, namely (i) hiring two of the PMU staff, the Admin and Financial Assistant, and the Driver⁴⁴, and (ii) providing capacity building trainings to PMU under MoT to manage TAILEV successfully in the future⁴⁵. UNDP will not provide any additional execution support, except for the two areas detailed above. To ensure the strict independence required by the GEF and in accordance with the UNDP Internal Control Framework, these execution services will be delivered independent from the GEF-specific oversight and quality assurance services (i.e. not done by same person to avoid conflict of interest). Associated

⁴⁴ Justification: (1) For the Admin and Finance assistant position, the MoT and UNDP agrees that having the Admin and Finance Assistant position on a UNDP contract will have several advantages such as utilization of UNDP’s ERP system Atlas, which has established modules for project monitoring, risk management, travel etc. (Budget note 30); (2) For the driver, in Uzbekistan it is a common approach to hire drivers with private cars to the projects to provide transport services to project teams. This is to ensure secure transportation between offices and project localities, transferring goods and assets and for other purposes. Based on discussions with the Implementing Partner, it was decided to hire this post under UNDP contract due to the contractual effectiveness. (Budget note 30)

⁴⁵ Justification: Micro assessment for HACT and PCAT findings have identified some capacity gaps in the implementing partner and responsible party in terms of technical and operational issues concerning execution of UNDP and GEF financed projects. UNDP Country Office will provide training services to the implementing partner at the beginning of the project and also later during the project, as per the needs arise. Associated staff costs and general operating expenses are given in the budget notes 31 and 32. Some of the capacity building themes will include:

* HR and procurement services including development of quality TORs, request for quotations, hiring procedures and competitive tenders for the procurement of services;

* Results based project management and monitoring skills including preparation of annual work plans and budgets, budget revision procedures, development of procurement plans, preparation of Project Implementation Reports etc.

costs of these positions will be covered from UNDP's co-finance contribution (Please see budget notes 30, 31 and 32 for the detailed budget explanations, under Total Budget and Work Plan section).

Project organization structure:

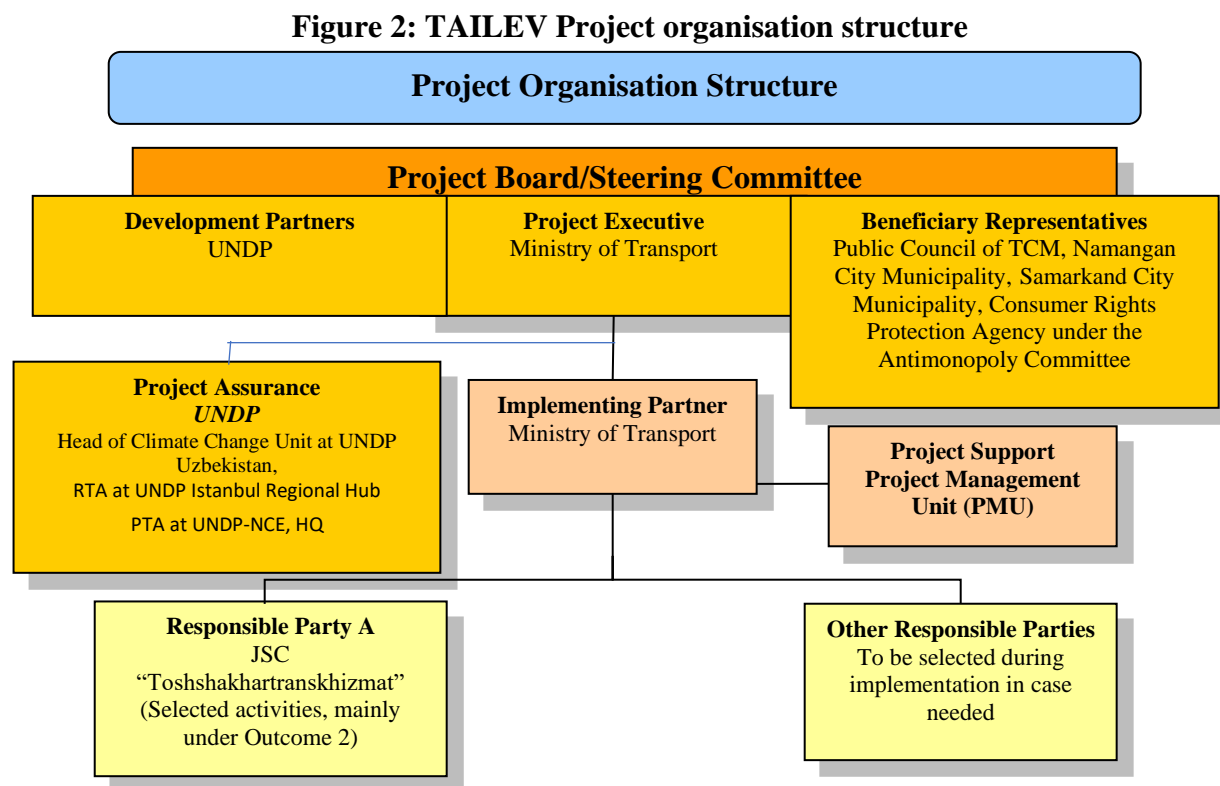
74. The Project Board (also called Project Steering Committee) is responsible for taking corrective action as needed to ensure the project achieves the desired results. The Ministry of Transport will Chair the Project Board. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.

In case consensus cannot be reached within the Board, the UNDP Resident Representative (or their designate) will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

75. Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks, and agree on possible mitigation and management actions to address specific risks;
- Agree on project manager's tolerances as required, within the parameters set by UNDP-NCE, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded;
- Advise on major and minor amendments to the project within the parameters set by UNDP-NCE;
- Ensure coordination between various donor and government-funded projects and programmes;
- Ensure coordination with various government agencies and their participation in project activities;
- Track and monitor co-financing for this project;
- Review the project progress, assess performance, and appraise the Annual Work Plan for the following year;
- Appraise the annual project implementation report, including the quality assessment rating report;
- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project;
- Review combined delivery reports prior to certification by the implementing partner;
- Provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Address project-level grievances;
- Approve the project Inception Report, Mid-term Review and Terminal Evaluation reports and corresponding management responses;
- Review the final project report package during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up;
- Ensure highest levels of transparency and take all measures to avoid any real or perceived conflicts of interest.

The TAILEV organization structure is illustrated on Figure 2.



76. The composition of the TAILEV Project Board must include the following roles:

- a. **Project Executive:** Is an individual who represents ownership of the project and chairs the Project Board. The Executive is normally the national counterpart for nationally implemented projects, and will be the First Deputy Minister of the Ministry of Transport;
- b. **Beneficiary Representative(s):** Individuals or groups representing the interests of those who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often civil society representative(s) can fulfil this role. The Beneficiary representative (s) is/are: the Public Council of Tashkent City, the Mayor of Samarkand, the mayor of Namangan, as well as the Consumer Rights Protection Agency under the Antimonopoly Committee;
- c. **Development Partner(s):** Individuals or groups representing the interests of the parties concerned that provide funding and/or technical expertise to the project. The Development Partner will be the Resident Representative to UNDP Country Office;
- d. **Project Assurance:** UNDP performs the quality assurance and supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed, and conflict

of interest issues are monitored and addressed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. UNDP provides a three – tier oversight services involving the UNDP Country Offices and UNDP at regional and headquarters levels. Project assurance is totally independent of project execution.

77. Project extensions: The UNDP Resident Representative and the UNDP-NCE Executive Coordinator must approve all project extension requests. Note that all extensions incur costs and the GEF project budget cannot be increased. A single extension may be granted on an exceptional basis and only if the following conditions are met: one extension only for a project for a maximum of six months; the project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs will be covered by non-GEF resources; the UNDP Country Office oversight costs in excess of the CO's Agency fee specified in the DOA during the extension period must be covered by non-GEF resources.

FINANCIAL PLANNING AND MANAGEMENT

78. The total cost of the project is US\$ 29,439,725. This is financed through a GEF grant of US\$ 3,569,725, UNDP TRAC resource of US\$300,000 and US\$ 25,570,000 in other co-financing. UNDP, as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co-financing transferred to UNDP bank account only. Under NIM, the entire TAILEV budget under GEF will be transferred to MoT.

Confirmed Co-financing:

79. The actual realization of project co-financing will be monitored during the mid-term review and terminal evaluation process and will be reported to the GEF. Co-financing will be used for all project activities and outputs as detailed in Table 4.

Budget Revision and Tolerance:

80. As per UNDP requirements outlined in the UNDP POPP, the TAILEV Project Board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board. Should the following deviations occur, the Project Manager and UNDP Country Office will seek the approval of the UNDP-NCE team to ensure accurate reporting to the GEF: a) Budget re-allocations among components in the project budget with amounts involving 10% of the total project grant or more; b) Introduction of new budget items that exceed 5% of original GEF allocation. Any over expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

Audit:

81. The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies. Audit cycle and process must be discussed during the Inception workshop. If the Implementing Partner is an UN Agency, the project will be audited according to that Agencies applicable audit policies.

Project Closure:

82. Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. All costs incurred to close the project must be included in the project closure budget and reported as final project commitments presented to the Project Board during the final project review. The only costs a project may incur following the final project review are those included in the project closure budget.

Operational completion:

83. The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. **Operational closure must happen with 3 months of posting the TE report to the UNDP ERC.** The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the relevant parties will have already agreed and confirmed in writing on the arrangements for the disposal of any equipment that is still the property of UNDP

Transfer or disposal of assets:

84. In consultation with the Implementing Partner and other parties of TAILEV, UNDP is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the Project Board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of TAILEV. In all cases of transfer, a transfer document must be prepared and kept on file. The transfer should be done before the PMU complete their assignments.

Table 4: TAILEV Project Co-Financing Summary

Co-financing source	Co-financing type	Co-financing amount	Planned Co-financing Activities/Outputs	Risks	Risk Mitigation Measures
UNDP	Grant	\$300,000	Project management	None identified	n/a
Ministry of Transport	In kind	\$500,000	Project management, PMU office space	Lack of capacity for managing project	Building capacity for relevant MoT personnel
	Equity investment	\$6,500,000	Procurement of 20 e-buses and charging stations for Fargona Yuli <u>BRT corridor</u>	Funding does materialize prior to EOP	No measures since this is a decision being made by the Ministry of Transport
JSC “Toshshakhartranskhizmat” (TBC)	In-kind	\$3,000,000	Operations, maintenance and management of the fleet of 30 e-buses along the Shota Rustaveli GUTC and Fargona Yuli <u>BRT corridor</u>	Lack of capacity for operating and maintaining e-bus fleet	Building capacity of relevant operations and maintenance personnel
	Equity investment	\$3,600,000 ⁴⁶	Procurement of 10 e-buses and 2 fast-charging stations for Shota Rustaveli GUTC	Funding does materialize prior to EOP	Benefit information on e-buses will increase likelihood of financing for additional e-buses
Tashkent City Municipality (TCM)	Public investment	\$2,800,000 ⁴⁷	Planning, engineering, tendering and construction of the Shota Rustaveli GUTC infrastructure	Funding insufficient for construct functional GUTC	Informing TCM of the risks of a poor demonstration and its adverse impacts to future GUTC projects
ToshkentboshplanLITI	In-kind	\$70,000	Technical assistance for the planning, design and engineering of pilot Shota Rustaveli GUTC	None identified	n/a
Uzhydromet	In-kind	\$450,000	Professional time of personnel	Lack of qualified personnel to manage data collection and analyses of air pollution data	Linking best practices for air pollution data analyses with Uzhydromet
International Solar Energy Institute	In-kind	\$300,000	Technical assistance	None identified	n/a
JSC Uzavtosanoat	In-kind	\$300,000	Technical assistance	None identified	n/a
Municipality of Namangan City	In-kind	\$700,000	Professional time of personnel	Lack of capacity for absorbing concepts of GUTC and e-buses	Technical assistance to link the City with best international practices
Goscomecology	In-kind	\$350,000	Professional time of personnel	Lack of qualified personnel to manage air pollution monitoring program	Linking best practices for air pollution monitoring with Uzhydromet
Turin Polytechnic University	In-kind	\$300,000	Professional time of personnel in training and curriculum development	Lack of qualified training personnel	Providing training of trainers for specific topics

⁴⁶ This amount does not include the additional investments made for an estimated 20 electric bus and 2 charging stations for the Fargona Yuli GUTC proposed for 2021. If this investment is made on this electric bus fleet, it should be included in the co-financing during TAILEV implementation.

⁴⁷ Similar to the possible TBC investments being made on electric buses for the Fargona Yuli BRT corridor, TCM has not included its investment into the construction of the infrastructure for the Fargona Yuli BRT corridor. This should be included in the co-financing if implemented during TAILEV.

Co-financing source	Co-financing type	Co-financing amount	Planned Co-financing Activities/Outputs	Risks	Risk Mitigation Measures
JV UzTruck and Bus Motors Ltd.	In-kind	\$500,000	Technical assistance	None identified	n/a
JV Sam Auto LLC	In-kind	\$3,000,000	Technical assistance	None identified	n/a
Valley Fruits LLC	Equity investment	\$3,200,000	Investments into e-vehicles and associated infrastructure for a district in Fergana Valley	Funding does not materialize prior to EOP	Participation of personnel associated with Valley Fruits on activities related to technology transfer of e-vehicles and green infrastructure and information on the benefits of e-vehicles will increase likelihood of financing for this investment.
Total:		\$25,870,000			

Financial completion (closure):

85. TAILEV will be financially closed when the following conditions have been met: a) TAILEV is operationally completed or has been cancelled; b) the Implementing Partner, MoT, has reported all financial transactions to UNDP; c) UNDP has closed TAILEV accounts; d) UNDP and MoT have certified a final Combined Delivery Report (which serves as final budget revision).
86. TAILEV will be financially completed **within 6 months of operational closure or after the date of cancellation**. Between operational and financial closure, MoT will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the UNDP-NCE Unit for confirmation before TAILEV is financially closed in Atlas by the UNDP Country Office.

Refund to GEF:

87. Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the BPPS/NCE Directorate in New York. No action is required at CO level on the actual refund from the TAILEV Project to the GEF Trustee.

TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan													
Atlas Award ID:		00120488			Atlas Output Project ID:			00116678					
Atlas Proposal or Award Title:		Tashkent - Accelerating investments in low emission vehicles (TAILEV)											
Atlas Business Unit		UZB 10											
Atlas Primary Output Project Title		Tashkent - Accelerating investments in low emission vehicles (TAILEV)											
UNDP-NCE PIMS No.		6417											
Implementing Partner		Ministry of Transport											
Atlas Activity	Responsible Party	Atlas Fund ID	Donor Name	ATLAS Code	ATLAS Budget Account Description	Amount (USD) Year 1 2021	Amount (USD) Year 2 2022	Amount (USD) Year3 2023	Amount (USD) Year 4 2024	Amount (USD) Year 5 2025	Amount (USD) Year 6 2026	Total (USD)	See Budget Note:
COMPONENT 1 <i>Institutionalization of low-carbon electric mobility</i>	MoT	62000	GEF	71200	International Consultants	0	0	0	32,000	24,000	0	56,000	0, 1
				71300	Local Consultants	0	0	0	8,300	9,120	23,880	41,300	2
				72100	Contractual Services-Companies	0	0	0	160,534	40,000	0	200,534	3
					sub-total GEF	0	0	0	200,834	73,120	23,880	297,834	
					Total Outcome 1	0	0	0	200,834	73,120	23,880	297,834	
COMPONENT 2: <i>Short term barrier removal through low-carbon e-mobility demonstrations</i>	JSC Toshshakha rtrankhizm at (Also called TBC)	62000	GEF	71200	International Consultants	64,000	64,000	64,000	24,000	24,000	24,000	264,000	0, 4
				71300	Local Consultants	101,930	83,070	61,420	48,790	47,150	30,750	373,110	5
				72100	Contractual Services-Companies	45,000	45,000	15,000	15,000	15,000	15,000	150,000	6
				71600	Travel	40,000	15,000	0	0	0	0	55,000	7
				72200	Equipment and Furniture	150,000	1,000,000	250,000	0	0	0	1,400,000	8
					sub-total GEF	400,930	1,207,070	390,420	87,790	86,150	69,750	2,242,110	
					Total Outcome 2	400,930	1,207,070	390,420	87,790	86,150	69,750	2,242,110	
COMPONENT 3: <i>Preparing for scale-up and replication of low-carbon electric mobility</i>	MoT	62000	GEF	71200	International Consultants	0	0	20,000	32,000	32,000	0	84,000	0, 9
				71300	Local Consultants	0	6,560	18,860	27,720	29,000	20,275	102,415	10
				71600	Travel	0	0	15,000	15,000	0	0	30,000	11
				72100	Contractual Services-Companies	30,000	10,000	0	85,000	0	20,000	145,000	12
				72200	Equipment and Furniture	0	0	0	0	0	0	0	13
				74200	Audio-Visual Print Production Costs	0	0	0	15,000	0	0	15,000	14
				75700	Training Workshops and Conferences	0	0	24,000	16,000	48,000	48,000	136,000	15
				72600	Grants	0	0	15,000	15,000	15,000	0	45,000	16
					sub-total GEF	30,000	16,560	92,860	205,720	124,000	88,275	557,415	
					Total Outcome 3	30,000	16,560	92,860	205,720	124,000	88,275	557,415	
COMPONENT 4:	MoT	62000	GEF	71300	Local Consultants	0	0	0	0	3,740	14,105	17,845	17

Long-term environmental sustainability of low-carbon electric mobility				71600	Travel	0	0	0	0	0	15,000	15,000	18
				72100	Contractual Services-Companies	0	0	0	0	0	75,000	75,000	19
				75700	Training Workshops and Conferences	0	0	0	0	16,000	20,000	36,000	20
					sub-total GEF	0	0	0	0	19,740	124,105	143,845	
				Total Outcome 4	0	0	0	0	19,740	124,105	143,845		
COMPONENT 5: Monitoring and Evaluation	MoT	62000	GEF	71200	International Consultants	0	0	0	24,000	0	28,000	52,000	21
				71300	Local Consultants	15,170	15,170	15,170	18,320	18,320	18,320	100,470	22
				71400	Contractual Services - Individual	0	0	0	9,016	0	9,000	18,016	23
				75700	Training Workshops and Conferences	8,000	0	0	0	0	0	8,000	24
					Sub-total GEF	23,170	15,170	15,170	51,336	18,320	55,320	178,486	
				Total M&E	23,170	15,170	15,170	51,336	18,320	55,320	178,486		
PROJECT MANAGEMENT UNIT	MoT/UNDP	62000	GEF	71300	Local Consultants	16,800	16,800	22,050	9,450	5,250	5,250	75,600	25
				72200	Equipment and Furniture	6,000	5,000	3,000	2,000	1,000	0	17,000	26
				72400	Communic & Audio Visual Equip	1,000	1,000	1,300	1,035	1,000	1,000	6,335	27
				72500	Office Supplies	6,000	5,100	5,000	3,000	1,000	1,000	21,100	28
				74100	Professional services	5,000	5,000	5,000	5,000	5,000	5,000	30,000	29
			sub-total GEF	34,800	32,900	36,350	20,485	13,250	12,250	150,035			
		04000	UNDP	71400	Contractual Services - Individuals	31,980	31,980	31,980	31,980	31,980	31,980	191,880	30
				74596	Services to projects - GOE for CO	40,545	27,030	13,515	0	0	0	81,090	31
				64397	Services to projects - CO staff	13,315	8,910	4,505	100	100	100	27,030	32
			sub-total UNDP	85,840	67,920	50,000	32,080	32,080	32,080	300,000			
	Total Management	120,640	100,820	86,350	52,565	45,330	44,330	450,035					
Total GEF Project						488,900	1,271,700	534,800	566,165	334,580	373,580	3,569,725	
Total UNDP Project						85,840	67,920	50,000	32,080	32,080	32,080	300,000	
Total Project						574,740	1,339,620	584,800	598,245	366,660	405,660	3,869,725	

Summary of Funds:

Donor	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Amount Year 6	Total
GEF	488,900	1,271,700	534,800	566,165	334,580	373,580	3,569,725
UNDP	85,840	67,920	50,000	32,080	32,080	32,080	300,000
Co-financing:	7,620,000	6,780,000	1,920,000	1,905,000	3,205,000	4,140,000	25,570,000
Ministry of Transport	50,000	50,000	80,000	80,000	120,000	120,000	500,000
Ministry of Transport (INV)	4,000,000	2,500,000	0	0	0	0	6,500,000

Donor	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Amount Year 6	Total
JSC "Toshshakhartranskhizmat" (TBC)	500,000	500,000	500,000	500,000	500,000	500,000	3,000,000
JSC "Toshshakhartranskhizmat" (TBC) (INV)	1,400,000	2,200,000	0	0	0	0	3,600,000
Tashkent City Municipality (INV)	1,400,000	1,000,000	400,000	0	0	0	2,800,000
ToshkentboshplanLITI	20,000	10,000	10,000	10,000	10,000	10,000	70,000
Uzhydromet	50,000	50,000	75,000	90,000	95,000	90,000	450,000
International Solar Energy Institute	0	20,000	55,000	55,000	85,000	85,000	300,000
JSC Uzavtosanoat	0	0	0	100,000	100,000	100,000	300,000
Municipality of Namangan City	100,000	150,000	100,000	150,000	175,000	25,000	700,000
Goscomecology	100,000	100,000	0	100,000	0	50,000	350,000
Turin Polytechnic University	0	0	0	100,000	100,000	100,000	300,000
JV UzTruck and Bus Motors Ltd.	0	0	0	20,000	220,000	260,000	500,000
JV Sam Auto LLC	0	200,000	700,000	700,000	800,000	600,000	3,000,000
Valley Fruits LLC	0	0	0	0	1,000,000	2,200,000	3,200,000
Total:	8,194,740	8,119,620	2,504,800	2,503,245	3,571,660	4,545,660	29,439,725

Budget note number	Budget note description
0	All daily rates in this table for international specialists and experts includes both travel and DSAs.
1	This includes consultancy services from the International Electric Bus Specialist (IEBS) and an International Green Urban Development Specialist (IGUDE) each @ US\$800 per day for 4 and 3 weeks for Yrs 4 and 5 respectively.
2	This includes Project Manager (PM) for 8 weeks during Yrs 4, 5 and 6 @ US\$525 per week; Chief Technical Advisor (CTA) for 10, 8 and 8 wks in Yrs 4, 5 and 6 respectively @ US\$410 per week; Urban Planning Specialist (UPS) for 2 and 20 wks in Yrs 5 and 6 respectively @ US\$410 per week; and a Public Transport Specialist (PTS) for 2 and 20 wks in Yrs 5 and 6 respectively @ US\$410 per week.
3	In Yr 4: a) \$50,000 for study on public opinion of GUTC, and its economic impact from retail and real estate developments along the GUTC for Activity 1.2.1; b) \$65,000 to develop municipal level strategies to accelerate EV adoption as part of Activity 1.3.2 that may include how city provides permits to EV fleets (i.e. taxis, delivery companies) based on pipeline EV investment plans and infrastructural readiness of the municipality to accommodate an influx of EVs; c) \$45,534 for contracts for specialists for preparing policy and legal documents. In Yr 5, d) \$40,000 for contract to undertake updated market surveys of e-vehicle usage and infrastructure (i.e. charging stations and number of e-vehicles in use) and consumer opinions of e-vehicles for Activity 1.1.1.
4	This includes IEBS for 6 wks during Yrs 1 to 3 and 3 wks during Yrs 4 to 6 @ US\$800 per day; IGUDE for 6 wks during Yrs 1 to 3 and 3 wks during Yrs 4 to 6 @ US\$800 per day; and the International Procurement Specialist (IPS) for 4 wks during Yrs 1, 2 and 3 @ US\$800 per day.
5	This includes Project Manager (PM) for 20, 20 and 10 weeks during Yrs 1, 2 and 3 respectively @ US\$525 per week; CTA for 50, 34, 24, 18, 18 and 6 wks in Yrs 1 to 6 respectively @ US\$410 per week; Procurement Specialist (PS) for 52, 22 and 12 wks in Yrs 1 to 3 respectively @ US\$410 per week; UPS for 51, 52, 42, 41, 38 and 24 wks in Yrs 1 to 6 respectively @ US\$410 per week; the PTS 50, 49, 39, 40, 39 and 25 wks in Yrs 1 to 6 respectively @ US\$410 per week; and Gender Safeguards Officer (GSO) for 20 wks for each year from Yrs 1 to 6 @ US\$410 per week.
6	\$20,000 to meet with affected residents in the area of the GUTC in Yr 1 under Activity 2.1.2, and \$25,000 for preparation of public transit awareness campaign in Yr 1 under Activity 2.2.5 and \$15,000 each year to conduct the campaign from Yrs 2 to 6 also under Activity 2.2.5, and \$30,000 in Year 2 for operation and maintenance manuals for TBC personnel under Activity 2.3.5.

Budget note number	Budget note description
0	All daily rates in this table for international specialists and experts includes both travel and DSAs.
7	\$25,000 for GUTC travel (in Year 1) for Activity 2.1.6 for 6 MoT persons to visit Almaty (Airfare \$400, DSA \$170 for 3 days =\$5,500) and Istanbul (Airfare \$1,000, DSA \$235 for 4 days=\$11,640) with sum of both trips being \$17,000. Added a contingency to the \$17,000 so that budgeted amount for travel under Activity 2.1.6 is \$25,000. UNEP budget for Global E-Mobility programme is \$15,000 each for Yrs 1 and 2. This could include an e-bus study tour to Moscow and for UNEP events for 6 MoT persons (Airfare to Moscow \$1,200, DSA for 4 days \$250=\$13,200 during Yr 1 or 2).
8	Partial buydown on e-buses (assumed to be in the range of US\$300,000 to US\$550,000 each for a 40-seater bus) and fast charging stations (assumed to be in the range of US\$300,000 to US\$1.0 million each). Fund will be used to maximize leverage of e-buses to be procured through performance-based tenders and payment schedules as detailed on Para 13-1. A conservative assumption on the utility of this fund is the procurement of 10 e-buses (each at US\$500,000) where this fund will contribute US\$100,000 to the purchase of each e-bus, and procurement of 2 fast-charging stations (each at US\$1.0 million) where this fund will contribute US\$200,000 to the purchase of each charging station. GEF fund support can be as high as 20% of the total cost of the equipment for TBC.
9	This includes in the IEBS for 2, 4 and 4 wks for Yrs 3, 4 and 5 respectively @ US\$800 per day; the IGUDE for 2, 4 and 4 wks for Yrs 3, 4 and 5 respectively @ US\$800 per day; and the IPS for 1 wks in Yr 3 @ US\$800 per day.
10	This includes PM for 20, 24 and 23 weeks from Yrs 4 to 6 respectively @ US\$525 per week; and the CTA for 16, 26, 22, 20 and 20 wks in Yrs 2, 3, 4, 5 and 6 respectively @ US\$410 per week; UPS for 10, 10 and 10 wks in Yrs 3, 4 and 5 respectively @ US\$410 per week; the PTS for 10, 10 and 10 wks in Yrs 3, 4 and 5 respectively @ US\$410 per week.
11	Expenses under Activity 3.7.1 for travel to UNEP E-Mobility Global events focusing on the promotion of EVs and green urban transport in Yrs 3 and 4
12	In Yr 1, \$30,000 for baseline survey as defined in Activity 3.1.3, \$20,000 in both Yrs 4 and 6 for impacts surveys as defined in Activity 3.1.5, \$10,000 in Yr 2 and \$15,000 in Yr4 for e-bus and charging station guidelines, codes and regulations in Activity 3.1.6, and \$35,000 in Yr 4 for pilot GUTC operational experiences and draft GUTC codes and standards for Tashkent under Activity 3.3.3, in Yr4, \$15,000 for materials to be published under activity 3.4.1.
13	<i>"This note has been left empty intentionally to prevent further changes that were reflected during the project revision based on GEF review."</i>
14	In support of Activity 3.7.1 where audio-visual print materials will be required to assist potential private sector investors in e-vehicle investments, and Activity 4.1.1 where audio-visual print materials will be required for workshop on GUTC environmental indicators
15	Activity 3.4.2 workshops assumed to be \$8,000 per workshop with 4 in Tashkent in Yrs 3 and 4, and two each in Namangan and Samarkand (total of 8 workshops). Workshops for Activities 3.6.2 and 3.7.2 assumed to be \$8,000 each with 9 workshops scheduled, 3 in Yr 5 and 3 in Yr 6.
16	\$15,000 for Yrs 3, 4, and 5 for selected higher educational institutes to provide training and capacity building mainly for Activity 3.5.2, but also for technical support for Activities 3.1.6 and 3.3.3. These grants will have to follow the Micro-Capital Grants policy.
17	This includes PM for 4 and 5 weeks from Yrs 5 to 6 respectively @ US\$525 per week; the CTA for 4 and 16 wks in Yrs 5 and 6 respectively @ US\$410 per week; the UBS for 6 wks in Yr 6 @ US\$410 per week; and the PTS for 6 wks in Yr 6 @ US\$410 per week. Most of their time will be used in Year 6 to deliver Output 4.4, the Lessons Learned Study that will serve as the TAILEV Exit Strategy the PM and CTA will also devote some time to supervising consultants for activities within Output 4.2.
18	Expenses under Activity 4.2.1 for travel to UNEP Global E-Mobility events focusing global practices for waste management from EV programmes
19	For Activities 4.2.1 and 4.2.2 in Yr 6 for international consulting team to develop guidelines for tracking, downgrading, re-use and recycling of batteries from electric vehicles and preparing business models for extended supplier responsibility for EV infrastructure and EV components
20	Towards 1 national workshop to unveil the LL Study of Output 4.4. There is also \$16,000 for Activity 4.1.1 consisting of 2 workshops in Yrs 5, each workshop assumed to be \$10,000 each.
21	International Evaluation Specialists (IES) for Mid Term Review (early in Yr 4), and Terminal Evaluation (late in Yr 6).
22	PM involved in "monitoring of indicators in project results framework", and PIR preparation for 6 wks during Yrs 4, 5 and 6 @ US\$525 per week. The CTA, UPS, and PTS together are monitoring of stakeholder engagement plan for 5 wks each year from Yrs 1 to 6 @ US\$410 per week, and the GSO for 32 wks each year from Yrs 1 to 6 @ US\$410 per week.
23	These are costs for a National Evaluation Specialist to support the Mid Term Review and the Terminal Evaluation in Yrs 4 and 6.
24	This is the cost for conducting the Inception Workshop in Yr 1
25	This includes PM for 32, 32, 42, 18, 10 and 10 weeks for Yrs 1 to 6 respectively @ US\$525 per week.
26	For office equipment such as computers, copy machines and desks.
27	For mobile phone communications.

Budget note number	Budget note description
0	All daily rates in this table for international specialists and experts includes both travel and DSAs.
28	Budget set up for office supplies used in PMU
29	Budget set up for Project audit
30	This includes UNDP TRAC resources for two PMU staff (making them full-time for entire 6-year duration) that includes Admin and Finance Assistant for 52 weeks each year from Yrs 1 to 6 respectively @US\$350 per week; the Driver for 52 weeks each year from Yrs 1 to 6 respectively @ US\$265 per week. Further explanation at paragraph 72 of the Project Document.
31	General Operational Expenses for UNDP Country Office. Costs are associated with UNDP Country Office programme and operation related general expenses for the capacity building related tasks. UNDP will be tasked to improve the Implementing Partner (Ministry of Transport) and Responsible Party (Tashkent Public Transport Company) capacities as a transition to full NIM arrangement. Please see paragraph 72 of the project document for details. In Year 1, \$40,545 covers advice, consultations and trainings that will be provided by UNDP CO Programme and Operations staff contributions to PMU capacity building over the year as related to development of planning of project annual activities and budgeting, financial monitoring and reporting of expenses and commitments, development of procurement plan, selection and hiring national and international consultants, mid-year and annual reporting requirements to UNDP and GEF; in Year 2, \$27,030 will be spent on targeted trainings on development of technical requirement for tender-based procurement cases (requests for quotations and proposals), GEF required reporting (Progress Implementation Reports), travel arrangement requirements as well as required consultations based on the lessons learned from Year 1 to cover the remaining gaps; in Year 3, \$13,515 is envisaged for consultations and advice to PMU related to preparations and arrangement for Mid-Term and Terminal Evaluations as well as for development/implementation of a project 'exit' strategy to ensure national ownership for project results sustainability through wider dissemination and scaling up.
32	UNDP CO staff costs associated with capacity building related tasks. UNDP will be tasked to improve the Implementing Partner (Ministry of Transport) and Responsible Party (Tashkent Public Transport Company) capacities as a transition to full NIM arrangement. Please see paragraph 72 of the project document for details. In Year 1 \$13,315, in Year 2 \$8,910 and in Year 3 \$4,505 will be allocated to the costs that are associated with expenses related to conducting trainings and consultations executed in UNDP Country Office, development of required guidance and knowledge products, as well as processing and payments related to 2 service contracts holders indicated in the note 30. In years 4-6, \$100 is foreseen related to the costs of annual contracts extensions and payments processing by CO HR and Finance Unit staff.

LEGAL CONTEXT

88. This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Uzbekistan and UNDP, signed on 10 June 1993. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner.”
89. This project will be implemented by the Ministry of Transport (“Implementing Partner”) in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.
90. The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

RISK MANAGEMENT

91. Consistent with the Article III of the SBAA *[or the Supplemental Provisions to the Project Document]*, the responsibility for the safety and security of the Implementing Partner, MoT, and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:
 - put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
 - assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.
92. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.
93. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/ag_sanctions_list.shtml.
94. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document:
 - In the implementation of the activities under this Project Document, the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA");
 - Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment.
95. In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities), and shall require from its sub-parties referred to in paragraph 4 (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include: policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will and will require that such sub-parties will take all appropriate measures to:
 - Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;
 - Offer employees and associated personnel training on prevention and response to SH and SEA, where the Implementing Partner and its sub-parties referred to in paragraph 4 have not put in place its own training

- regarding the prevention of SH and SEA, the Implementing Partner and its sub-parties may use the training material available at UNDP;
- Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties referred to in paragraph 4 have been informed or have otherwise become aware, and status thereof;
 - Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and
 - Promptly and confidentially record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in paragraph 4 with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.
 - The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties referred to in paragraph 4, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.
96. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (<http://www.undp.org/ses>) and related Accountability Mechanism (<http://www.undp.org/secu-srm>). The Implementing Partner shall:
- conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards;
 - implement any management or mitigation plan prepared for the project or programme to comply with such standards; and
 - engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.
97. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.
98. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.
99. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner, MoT, agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.
100. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes in accordance with UNDP's regulations, rules, policies and procedures. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on

reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

101. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality. Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.
102. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail the Implementing Partner's obligations under this Project Document. Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document⁴⁸, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.
103. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.
104. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.
105. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.

⁴⁸ The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

MANDATORY ANNEXES

1. Project Map and geospatial coordinates of the project area
2. Multiyear Workplan
3. Monitoring Plan
4. Stakeholder Engagement Plan
5. Background Information on Urban Transport and Fuel Consumption by the Transport Sector in Uzbekistan
6. Background information on pilot e-bus programme for TCM
7. TAILEV GHG emission reduction estimates
8. Social and Environmental Screening Procedure (SESP) – Attached separately
9. UNDP Risk Register
10. Overview of technical consultancies and technical services to be provided by UNDP
11. Environmental Social Management Framework (ESMF) – Attached separately
12. Gender Analysis and Gender Action Plan
13. Procurement Plan
14. Co-financing letters – Attached separately
15. GEF Core indicators
16. GEF Taxonomy
17. Partners Capacity Assessment Tool and HACT assessment
18. Problem Tree
19. TAILEV Theory of Change

Annex 1: Project map and Geospatial Coordinates of project sites

Figure 1-1: Proposed Shota Rustaveli GUTC (7.5 km length) connecting the South Train station to North Train station (provided from the Tashkent Bus Company)

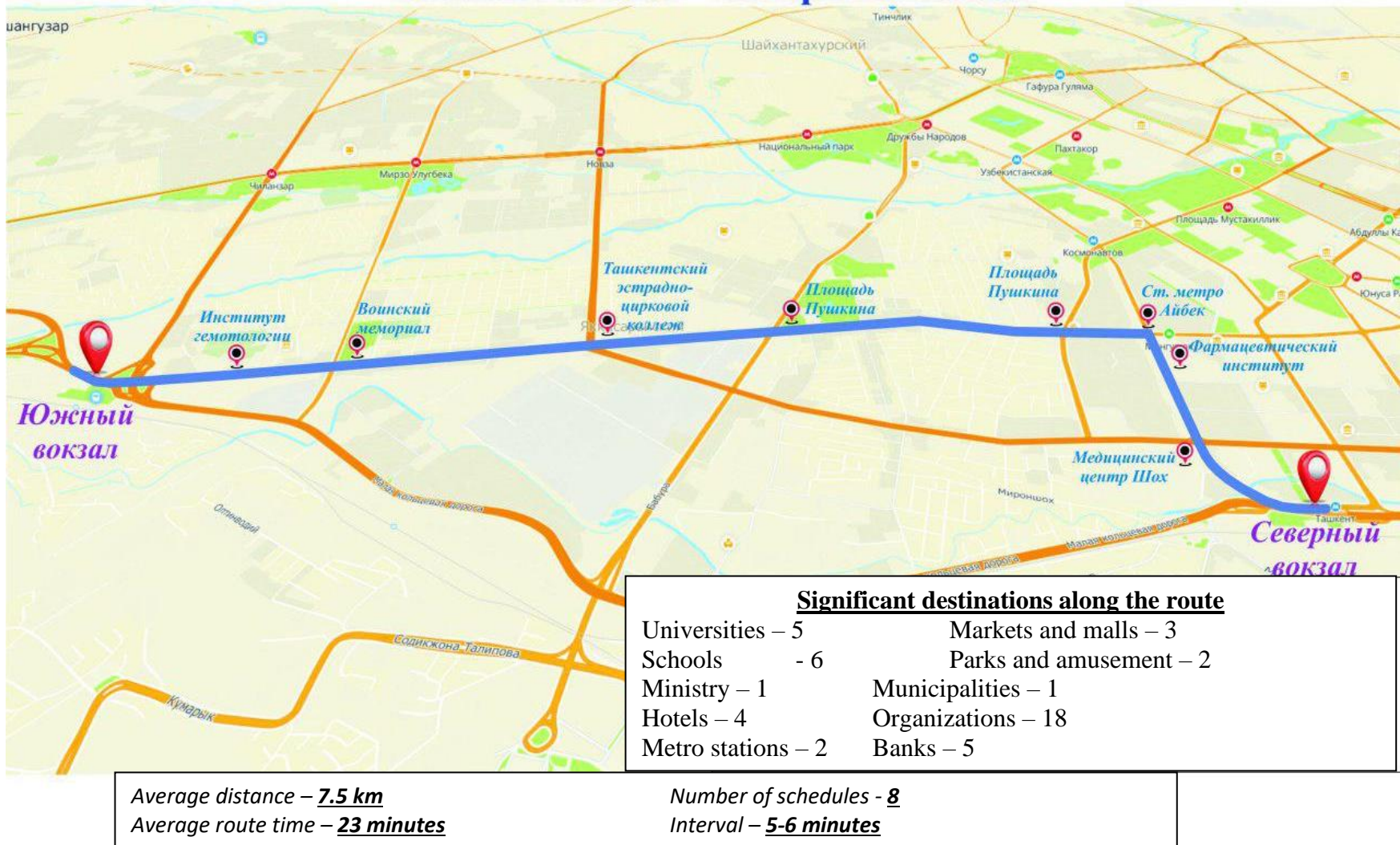
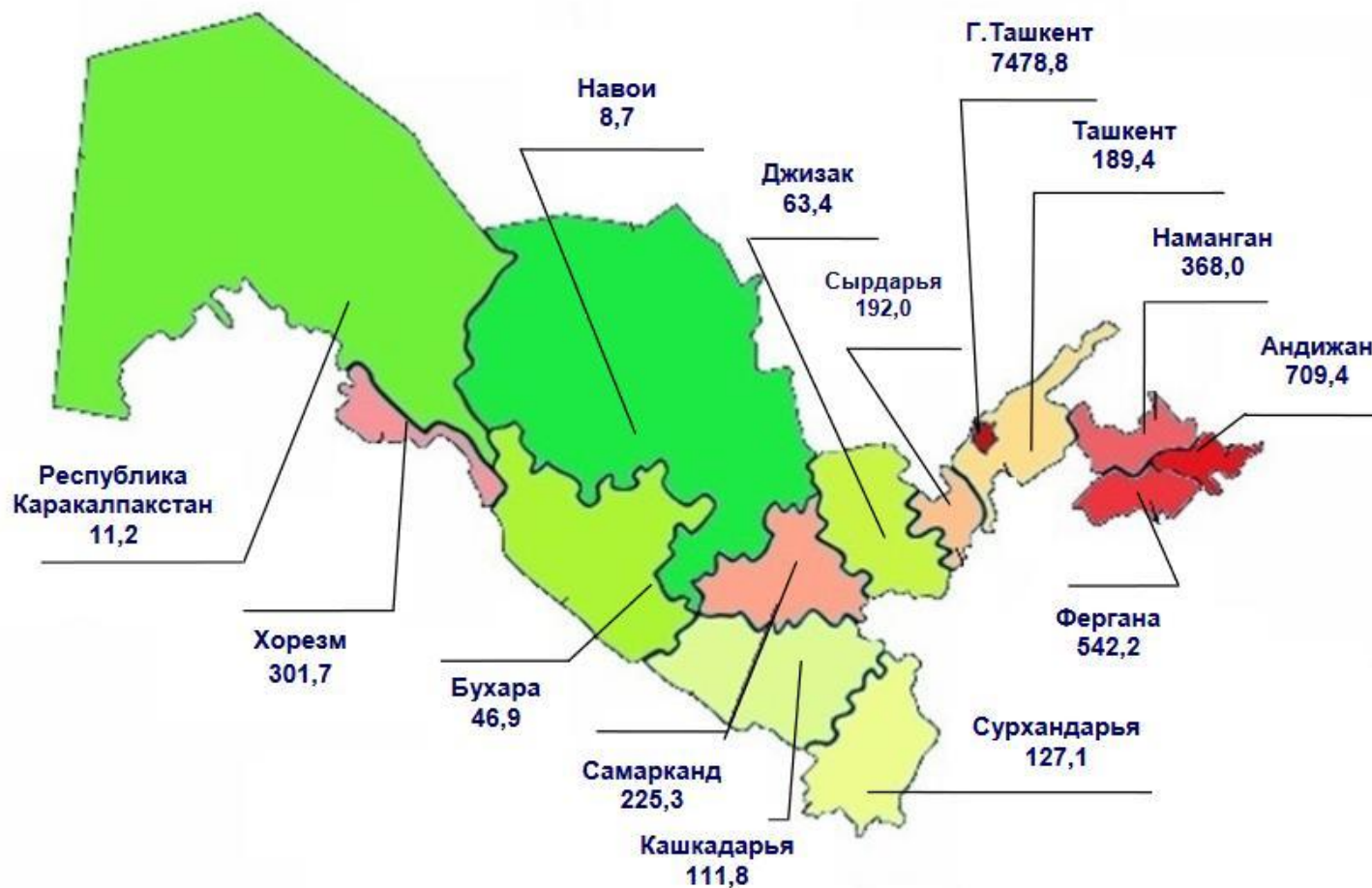


Figure 1-2: Assumed 1 km² areas around the Shota Rustaveli GUTC (length 7.5 km) to calculate consequential beneficiaries⁴⁹



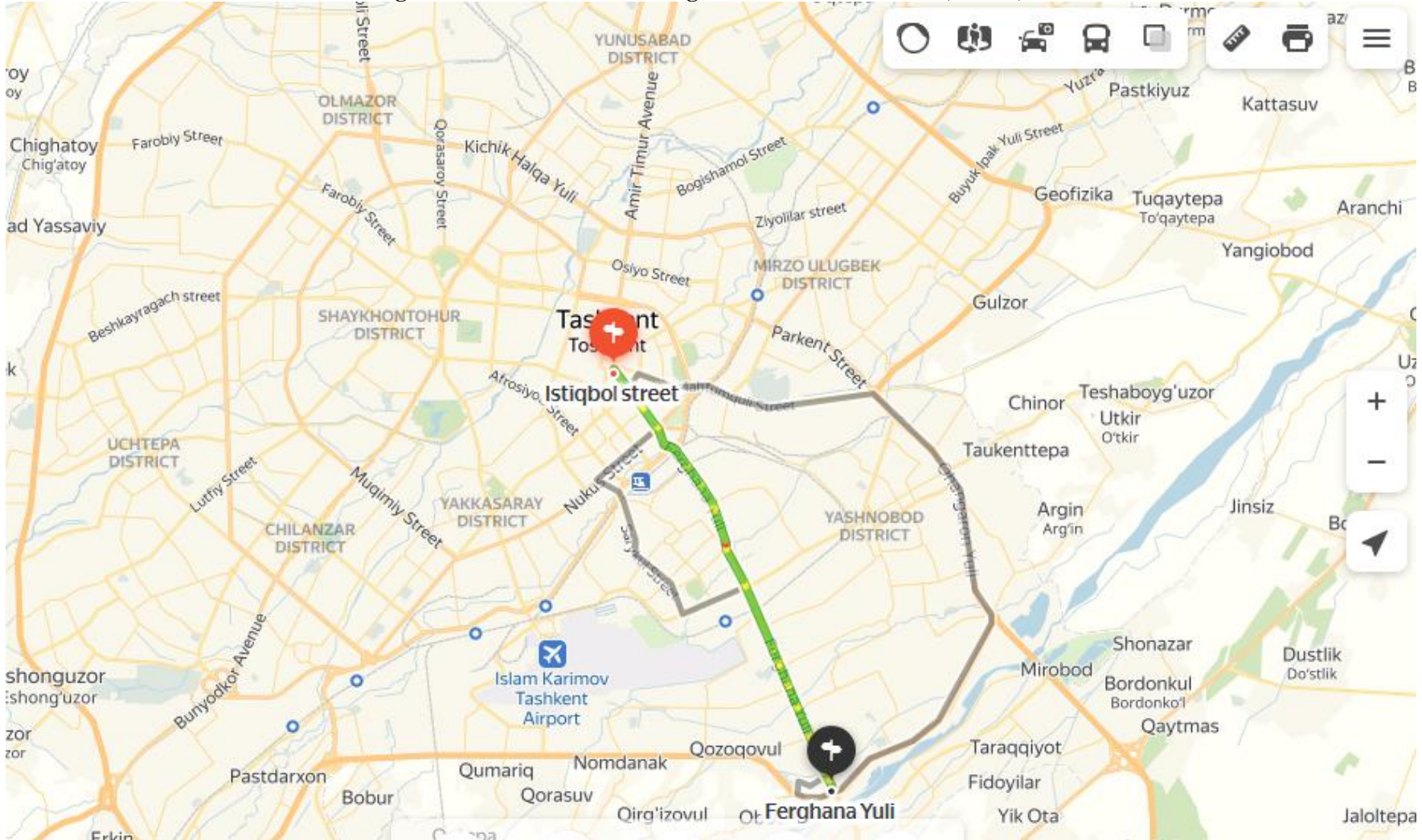
⁴⁹ The number of residents living along the route with a maximum distance of 0.5 km can be estimated by inserting 1 km² blocks around the Shota Rustaveli GUTC route as seen in Figure 1-2. With an assumed population density of 7,479 per km² (see Figure 1-3), the consequential beneficiaries within the 8 km² of area around the GUTC would be 59,832 people (with gender disaggregation of females 51.2%, males 48.8% according to www.stat.uz).

Figure 1-3: Population densities in Uzbekistan⁵⁰



⁵⁰ From www.stat.uz



Figure 1-4: Location of the Fargona Yuli BRT Corridor (9.1 km)



Annex 2: Multi Year Work Plan

Outcomes and Outputs	Responsible Party	Year 1 – 2021-22				Year 2 – 2022-23				Year 3 – 2023-24				Year 4 – 2024-25				Year 5 – 2025-26				Year 6 – 2026-27			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Outcome 1: The government establishes an institutional framework and adopts a strategy for the promotion of low-carbon electric mobility and GUTCs	MoT																								
Output 1.1: National Strategy and Roadmap for increasing development of GUTCs																									
Output 1.2: National Strategy to promote increased adoption of EVs																									
Output 1.3 Municipal-level strategy for increased adoption of EVs and development of GUTCs																									
Output 1.4: Proposed new codes and standards for EVs and development of GUTCs corridors																									
Output 1.5: Adopted national policy statement on EVs and GUTCs																									
Outcome 2: Pilots in Tashkent to provide evidence of technical, financial and environmental sustainability to plan for scale-up of low-carbon e-mobility and GUTCs	TBC																								
Output 2.1: Feasibility study on GUTCs in Tashkent with e-buses for public transport																									
Output 2.2: An operational pilot GUTC project in Tashkent																									
Output 2.3 An operational fleet of e-buses and fast charging stations within Tashkent																									
Output 2.4: Additional e-buses under Tashkent management operating along GUTC																									
Outcome 3: Conditions are created to shift market towards low-carbon e-mobility and accelerate adoption of e-vehicles and GUTCs	MoT/State Committee for Ecology																								
Output 3.1: Guidelines for EV fleet procurement, operation and maintenance	TBC/MoT																								
Output 3.2: Environmental monitoring program for key environmental indicators along GUTC	State Committee for Ecology																								
Output 3.3: GUTC codes and standards	MoT/TCM																								
Output 3.4: Workshops and technical assistance for municipal personnel	MoT/TCM																								
Output 3.5: Curriculum for e-vehicles and GUTC development in higher educational institutions	MoT																								

Outcomes and Outputs	Responsible Party	Year 1 – 2021-22				Year 2 – 2022-23				Year 3 – 2023-24				Year 4 – 2024-25				Year 5 – 2025-26				Year 6 – 2026-27			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 3.6: Feasibility study and business plans for the scale-up of e-bus fleets and additional GUTCs	MoT/ municipal governments																								
Output 3.7: Workshops and technical assistance to promote and increase adoption of EVs	MoT																								
Outcome 4: Measures are developed to ensure the long-term environmental sustainability of e-vehicles and GUTCs	MoT/ Municipal governments																								
Output 4.1: National workshops with other Uzbek municipalities on monitored key environmental indicators along Tashkent GUTC	State Committee for Ecology																								
Output 4.2: Adopted guidelines for tracking, downgrading, re-use and recycling of batteries from electric vehicles and business models for extended supplier responsibility for EV infrastructure and EV components	MoT/State Committee for Ecology																								
Output 4.3: Lessons Learned Study	MoT																								

-  Intense activity
-  Intermittent activity

Annex 3: Monitoring Plan:

Table 3-1: TAILEV Monitoring Plan

Monitoring	Indicators	Mid-Term Targets	EOP Targets	Description of indicators and targets	Data source/ Collection methods	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
Project objective: To accelerate the adoption of electric vehicles in the City of Tashkent that can be replicated in other cities in the Republic of Uzbekistan, significantly reduce greenhouse gas emissions in the transport sector, and improve urban environmental quality	Indicator 1: # direct project beneficiaries disaggregated by gender (number of passengers using new Shota Rustaveli GUTC e-bus route per day)	3,000	6,000	Baseline: Current no bus route along GUTC Project targets are suggested by JSC “Toshshakhartranskhizmat” for the proposed Shota Rustaveli GUTC. ⁵¹	Data sources from JSC “Toshshakhartranskhizmat” (TBC) who will continue collection of ridership data during GUTC operations (through electronic gate receipts)	Daily but reported to Project on a monthly basis	Project consultant	Data reports from bus company dispatch center	Data collected by TBC is shared with TAILEV
	Indicator 2: # Consequential project beneficiaries disaggregated by gender (individual people)	60,000	68,000	For mid-term Project targets the number of consequential beneficiaries was assumed to be those residents who live within 0.5 km of the Shota Rustaveli GUTC ⁵² . For EOP Project target, assumes that transit-oriented development in the form of real estate development or growth in	TCM as data source with supplemental data from www.stat.uz . TAILEV will commission socio-economic survey of areas that include the consequential beneficiaries.	In Year 4 (early) and Year 6 (late)	Project consultant and survey team	Data collection report by TAILEV survey team	Availability of data with TCM Willingness of those surveyed to answer socio-economic questions

⁵¹ The public bus average speed will be 25 kph with an 18-minute route time (including stops), with 40-seat buses to be operated over a 10-hour day with a frequency ranging from 6 to 10 minutes depending on the time of day. The e-bus fleet will be a total of 10 buses for the entire route with a 6 to 10-minute charging time. Mid-term target assumes 63% capacity used (with frequency every 10 minutes) increasing to 100% capacity used (with frequency varying between 6 and 10 minutes depending on demand).

⁵² Due to the lack of specific census for neighborhoods along the GUTC, the number of consequential beneficiaries was assumed to be those residents who live within 0.5 km of the Shota Rustaveli GUTC. Assuming that there are 8 km² of residential area along the Shota Rustaveli GUTC and a population density of Tashkent assumed to be 7,479 persons per km² (based on statistics available from www.stat.uz), the total number of consequential beneficiaries is estimated to be 60,000 in March 2020. Figure 1-2 illustrates the assumed location of the 8 km² for the consequential beneficiaries. A follow-up survey needs to be conducted by TAILEV in early 2021, as mentioned in Output 3.1 (Para 29) in discussion with TCM (with regards to available data and survey methodology as a part of the M&E plan) on the actual figure at the commencement of TAILEV.

Monitoring	Indicators	Mid-Term Targets	EOP Targets	Description of indicators and targets	Data source/ Collection methods	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
				population around the Shota Rustaveli GUTC is around 4.2% per annum. ⁵³					
	<u>Indicator 3:</u> Emission reductions, cumulative lifetime direct by EOP (tonnes of CO _{2eq})	9,590	20,700	Baseline: No public buses operate along the entire proposed Shota Rustaveli GUTC ⁵⁴ Cumulative direct: See Para 7-4 ⁵⁵ .	Data sources from TBC (who will collect e-bus operational data during GUTC operations) and passenger survey on displacement of private vehicles financed by TAILEV. Emission reductions will be calculated using the TEEMP model	Bus operational data on a daily basis but reported to Project on a monthly basis Passenger survey on private vehicle displacement in Year 6 (late)	Project consultant	Data reports from bus company dispatch center	Data collected by TBC is shared with TAILEV
	<u>Indicator 4:</u> Cumulative direct reduction of pollutant load (for CO, NOx	5%	10%	Pollution load as measured by instrumentation setup along the GUTC. Targets are set to measure any reduction of these	Uzhydromet instrumentation setup along the GUTC that is collected on a daily basis	In Year 4 (early) and Year 6 (late)	Goscom-ecology	Report compiled by TAILEV survey team	Continued high level support for air pollution monitoring program

⁵³ This would translate into a 13.3% increase from Year 4 to Year 6. These figures will change depending on the baseline number of consequential beneficiaries counted in Year 1 (as described in Footnote 22).

⁵³ Since there are no public buses that operate along the entire proposed Shota Rustaveli GUTC, the baseline will be assumed to be existing bus routes that can transport passengers between the 2 destinations of the Shota Rustaveli GUTC: the North Station and South Station. JSC “Toshshakhartranskhizmat” will be consulted on the routes and types of buses (CNG or diesel) between these two destinations as well as an estimate of the number of passengers going between these destinations. In addition, baseline data and information will be made available for the Fargona Yuli BRT corridor

⁵⁴ Since there are no public buses that operate along the entire proposed Shota Rustaveli GUTC, the baseline will be assumed to be existing bus routes that can transport passengers between the 2 destinations of the Shota Rustaveli GUTC: the North Station and South Station. JSC “Toshshakhartranskhizmat” will be consulted on the routes and types of buses (CNG or diesel) between these two destinations as well as an estimate of the number of passengers going between these destinations. In addition, baseline data and information will be made available for the Fargona Yuli BRT corridor

⁵⁵ Based on Goscomecology estimates of GHG benefits from diesel and CNG bus baselines to e-buses, details of which are found in Paras 7-1 and 7-2. These estimates do not include GHG emission reductions from additional corridor conveyance efficiencies from GUTC infrastructure (such as transit priority signalling or parking policies), and number of private vehicles displaced from increased use of public transport along the pilot GUTC.

Monitoring	Indicators	Mid-Term Targets	EOP Targets	Description of indicators and targets	Data source/ Collection methods	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
	and NH) along GUTC corridor (% reduction)			pollutants by Uzhydromet instrumentation.					
Outcome 1: The government establishes an institutional framework and adopts a strategy for the promotion of gender-inclusive low-carbon electric mobility and GUTCs	<u>Indicator 5:</u> Number of gender-inclusive national and municipal level strategies and plans that increase the adoption of EVs and development of GUTCs and include gender considerations	1	5	This should include a National Roadmap (Output 1.1), the National Strategy (Output 1.2), and 3 municipal-level strategies for green city development with EVs and GUTCs (Output 1.3 for Tashkent, Samarkand and Namangan), all of which are adopted by the respective levels of government	Ministry of Transport and participating municipal governments including Tashkent, Samarkand and Namangan who will inform PMU of the completion of these strategies and plans	In Year 4 (early) and Year 6 (late)	PMU	Reports from MoT and participating municipal governments	Continued high level support for a transition to a green economy
	<u>Indicator 6:</u> Number of gender-inclusive national policies and regulations to support growth and increased use of EVs and development of GUTCs that include gender considerations	0	3	This should include i) codes and standards for EV vehicle systems, batteries, interface (between EV and power source) and infrastructure (EV charging equipment); ii) GUTCs that have standards set by the Ministry of Transport for bus lanes, NMV infrastructure (cycling and walking), bus stops, passenger waiting areas, cross walks, and other GUTC infrastructural features; and iii) a national policy on EVs and GUTCs	Ministry of Transport who will inform PMU of the completion of these policies and regulations	In Year 4 (early) and Year 6 (late)	PMU	Reports from MoT	Continued high level support for a transition to a green economy

Monitoring	Indicators	Mid-Term Targets	EOP Targets	Description of indicators and targets	Data source/ Collection methods	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
				that confirm the Government's intention of supporting the National Roadmap, National Strategy and municipal-level strategies (Outputs 1.1, 1.2 and 1.3 respectively).					
Outcome 2: Pilots in Tashkent to provide evidence of technical, financial and environmental sustainability to plan for scale-up of low-carbon e-mobility and GUTCs	<u>Indicator 7:</u> Number of completed feasibility studies for pilot GUTC and e-bus fleet	1 ⁵⁶	1	Feasibility study justifying GUTC investment as well as e-buses to be operated along the GUTC	TCM, the Ministry of Transport and TashkentboshplanLITI who will inform PMU of the completion of these studies	In Year 1	PMU	Report from Tashkentboshplan-LITI	Continued high level support for a transition to a green economy
	<u>Indicator 8:</u> Kilometers of pilot GUTC corridor developed	7.5 ⁵⁷	16.6 ⁵⁸	See Footnotes 63 and 64	Information will be collected through TCM. observation of the developing GUTC	In Year 4 (early) and Year 6 (late)	PMU	Observation	Sufficient funding available for replicated GUTC
	<u>Indicator 9:</u> Number of e-buses in operation along pilot	10	30	Number of operational e-buses that have charging stations. This includes the 10 e-buses along the Shota Rustaveli GUTC and the 20	Data source from JSC "Toshshakhartranskhizmat" (TBC) who will be operating e-buses along the pilot GUTC	In Year 4 (early) and Year 6 (late)	PMU	Observation	Sufficient funding available for procurement of e-buses

⁵⁶ The feasibility study should include creation of features that maximizes usage of the pilot Shota Rustaveli GUTC by females and vulnerable groups such as persons with special needs, senior citizens and children (features such as priority seating on e-buses, wheelchair access to e-buses and bus stops, bright illumination at bus stops, security cameras, etc.), and strategies to promote greater participation of women in all facets of implementation and operation from management to regular operating staff levels (such as drivers, technicians, mechanics, etc.). This study will not include the Fargona Yuli BRT corridor since the Fargona Yuli BRT corridor is designed prior to the commencement of TAILEV

⁵⁷ New bus route to be designed by State Unitary Enterprise "TashkentboshplanLITI" for the construction of a dedicated bus lane along the pilot Shota Rustaveli GUTC from South Station - North Station, complete with features for gender and vulnerable groups as provided in the feasibility study in footnote 28. The route for the pilot Shota Rustaveli GUTC is shown on Figure 1-1.

⁵⁸ This target will depend on how TCM or other cities (such as Namangan) undertake replication of the pilot Shota Rustaveli GUTC of Output 2.2. Target is designed with a lower ambition in the event that financing of the Shota Rustaveli GUTC is an issue during TAILEV implementation. The target is set at 16.6 km which essentially adds the 9.1 km from the Fargona Yuli BRT corridor to the GUTC target

Monitoring	Indicators	Mid-Term Targets	EOP Targets	Description of indicators and targets	Data source/ Collection methods	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
	GUTCs with gender-inclusive (1-2 female drivers of e-bus) features			e-buses along the Fargona Yuli <u>BRT corridor</u> (as per CoM Resolution No. 157 as detailed in Para 11).					
Outcome 3: Conditions are created to shift market towards low-carbon e-mobility and accelerate adoption of e-vehicles and GUTCs	Indicator 10: Number of developed gender-inclusive guidelines and regulatory documents for Tashkent City on EV fleets and GUTC developments	2 ⁵⁹	2	This will correspond to one guideline for codes and standards to guide e-bus and charging station procurement for Tashkent City (Output 3.1), and one document for GUTC standards in Tashkent (Output 3.3). See Paras 28 and 29 for description of this indicator	Output 3.1 from JSC “Toshshakhartranskhizmat” (TBC) Output 3.3 from ToshkentboshplanLITI	Output 3.1 in Year 2 Output 3.3 in Year 4	PMU	Reports	Sufficient data exists from pilot GUTC to compile guidelines and regulatory documents
	Indicator 11: Number of personnel involved in the monitoring and reporting of key environmental indicators along the GUTC	5 (minimum 20% women)	10 (minimum of 30% women)	See Footnote 42. Number of personnel involved with this programme will be an indicator of strengthened capacity of Uzhydromet and Goscomecology	Uzhydromet and Goscomecology	In Year 4 (early) and Year 6 (late)	PMU	Observation	Continued high level support for air pollution monitoring program
	Indicator 12: Number of students enrolled and graduated on	50 (minimum of 20% women)	100 (minimum of 30% women)	Indicator would be a reflection of the success in providing educational assistance for e-vehicles and green urban	Turin Polytechnic University or selected host educational institute	In Year 4 (early) and Year 6 (late)	PMU	Registrar of university for graduate count	Assumes there is interest amongst higher educational institutes in

⁵⁹ Ibid 41

Monitoring	Indicators	Mid-Term Targets	EOP Targets	Description of indicators and targets	Data source/ Collection methods	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
	courses for e-vehicles and green urban development			development. These persons could be from the Tashkent City Department of Ecology and Environment Protection, Uzhydromet or from Goscomecology					providing such curriculum.
	Indicator 13: Number of bankable feasibility studies and business plans for scaling-up of e-bus fleets and additional GUTCs in several main cities of Uzbekistan	0	3 ⁶⁰	This indicator would reflect the success in catalyzing interest of the private and public sectors in scaling-up TAILEV pilot activities	MoT's E-Mobility Unit who will be a focal point for monitoring interest in preparing studies and plans and their progress in preparation	Semi-annually commencing Year 4	PMU	Reports from E-Mobility Unit	Existence of good business cases for e-vehicle investments catalyses interest amongst private and public sector investors.
	Indicator 14: Number of private bankable proposals for financing at EOP	0	2	This would be an indicator of the quality of proposals provided in Indicator 11 that can move to actual investments. These feasibility studies and business plans are required to have a gender analysis and gender action plan	MoT's E-Mobility Unit who will be a focal point for monitoring interest in preparing studies and plans and their progress in preparation	Semi-annually commencing Year 4	PMU	Reports from E-Mobility Unit	Existence of good business cases for e-vehicle investments catalyses investment from both private and public sector investors.
Outcome 4: Measures are developed to	Indicator 15: Number of joint actions	0	2	Examples of joint actions may include i) agreement amongst municipalities to	Proceedings to National workshop with other Uzbek municipalities to share	One time in Year 5	PMU	Reports from Proceedings to National workshop	Continued high level support for air pollution

⁶⁰ Examples of additional studies and plans include another GUTC route in Tashkent, a privately-owned e-vehicle fleet in Namangan to serve as mini-buses, and a privately-funded e-vehicle fleet for delivery services or taxi services. These studies should include section on maximizing inclusivity: equal participation in decision making, equal opportunities in labor, gender and vulnerable group considerations in planning and constructing infrastructure, opportunities for equal usage of the amenities (such as seating arrangements in e-buses, wheel chair access at bus-stops, female washrooms at work premises, etc.).

Monitoring	Indicators	Mid-Term Targets	EOP Targets	Description of indicators and targets	Data source/ Collection methods	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
ensure the long-term environmental sustainability of e-vehicles and GUTCs	proposed by municipalities (with targets and dates) on improving urban environmental quality			implement GUTC routes with low carbon transport modes in a number of municipalities; and ii) monitoring programmes harmonized amongst all participating municipalities for gauging similar environmental parameters (to be specified during design of these joint actions).	findings of monitoring program of key environmental indicators along Tashkent GUTC				monitoring program
	Indicator 16: Number of adopted guidelines for re-use and recycling of downgraded EV batteries and business models for extended supplier responsibility for EV infrastructure and components at EOP	0	1	These guidelines will cover management of the <u>tracking, downgrading, re-use and recycling of EV</u> batteries that can be applied in Uzbekistan, and business models for the concept of extended supplier or manufacturer responsibility (more details contained in description of Output 4.2.	Report of consultants preparing guidelines that have been endorsed by Goscomecology and MoT	One time in Year 6	PMU	Reports from consultants preparing guidelines Consultations with Goscomecology and MoT	Continued high level support for EV waste management programme design
	Indicator 15: Number of reports on best practices and lessons learned from TAILEV that is	0	1	Details of this report are related to the delivery of Output 4.3, Activity 4.2.2 on Para 38.	Report of consultants on best practices and lessons learned from TAILEV	One time in Year 6	PMU	Reports from consultants on best practices and lessons learned from TAILEV	Continued high level support for TAILEV project

Monitoring	Indicators	Mid-Term Targets	EOP Targets	Description of indicators and targets	Data source/ Collection methods	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
	shared with the global programme							Consultations with Goscomecology and MoT	

Annex 4: Stakeholder Engagement Plan

- 4-1. The stakeholder engagement plan (SEP) for TAILEV has been designed to maximize effectiveness of the proposed project interactions with stakeholders during the 6-year implementation period. The aims of the SEP are to maintain effective dialogue primarily with relevant government stakeholders, including both national ministries, municipal governments, and state-owned companies as well as groups representing the beneficiaries of this project, primarily the urban citizens of Uzbekistan's largest cities: Tashkent, Namangan and Samarkand.
- 4-2. For the residents of Tashkent, a significant entity for engagement on TAILEV is the Public Council of Tashkent whose members are nominated citizens of Tashkent who serve on this platform on a voluntary basis to address Tashkent resident concerns over its municipal services. Further details are provided in the Table 4-1. For the residents of Namangan and Samarkand, similar engagement mechanisms to the Public Council of Tashkent are proposed on the condition that the municipal governments of these cities become engaged with the replication of TAILEV activities and pilot projects.
- 4-3. Levels of stakeholder engagement are defined in this plan as follows:
- informing stakeholders of TAILEV activities and intentions;
 - consultation and collaboration where TAILEV activities can enhance ongoing activities by these stakeholders;
 - consenting engagement where the stakeholder is able to inform the PMU of desired levels of assistance, consultation and collaboration from TAILEV; and
 - empowerment that encourages the stakeholder to undertake control of a TAILEV activity.
- 4-4. Table 4-1 below provides a listing of all relevant TAILEV stakeholders, their profile along with a description of recent consultations with TAILEV, proposed role on TAILEV, a preliminary ToR of a partnership agreement with these stakeholders, and planned activities for their effective engagement on TAILEV. Figure 1 provides a map of all TAILEV stakeholders and their relationships with other TAILEV stakeholders.

Table 4-1: Proposed TAILEV Stakeholder Engagement Plan

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
Government	Ministry of Transport (MOT)	<p>Stakeholder profile:</p> <p>The Ministry of Transport (MoT) is the government body for the development and implementation of a unified state policy in the field of development of automobile, railway, air, river transport, subway, as well as road facilities.</p> <p>MoT carries out state regulation of the activities of organizations in the field of transport and the road</p>	<p>Stakeholder Role:</p> <p>Role will include serving as implementing partner who will provide support and cooperation in the pilot Shota Rustaveli GUTC construction and e-bus operations, monitoring and evaluation of pilots, and setting of roadmaps, strategic plans and national policies and standards for green urban transport. This will also include their role</p>	<p>As the implementing partner of TAILEV, the Project will have frequent engagement with MoT with through:</p> <ul style="list-style-type: none"> • informing them of Project activities and intentions (at informal and Project Board meetings); • consulting and collaborating with them on

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
		<p>sector through the adoption of legal acts, the issuance of licenses and permits, certification, and the implementation of an effective technical and tariff policy.</p> <p>The MoT also has a Department of Transport of Tashkent City, that is responsible for the planning, design and execution of road improvements in Tashkent that includes <i>inter alia</i> ensuring compliance with municipal legislation on road safety, development of proposals and implementation of measures for the developing and improving urban transport corridors, efficient use of the City’s transport potential, development of public-private partnerships and increasing the investment attractiveness of the City in urban transport and road facilities.</p> <p>History of consultations:</p> <p>The first round of consultations began during November 2019 to identify MoT’s core interests in TAILEV, possible areas of influence and potential impact on urban transport efficiencies, a review of GUTC concepts, their alignment with the newly formed MoT, and selection of a route for the pilot GUTC that can be incorporated into the TAILEV ProDoc.</p> <p>In January 2020, consultations were held with the Department of Transport of Tashkent City to discuss how international expertise from the Project can be utilized to confirm Tashkent City Municipality’s ongoing plans for the GUTC</p>	<p>in the procurement of 20 e-buses for the Fargona Yuli GUTC.</p> <p>In addition, their role will include the oversight of the financing, planning, design, construction and implementation of GUTC construction and e-bus operations in Tashkent for the Shota Rustaveli GUTC and Fargona Yuli <u>BRT corridor</u>, ensuring adoption of best practices to ensure the delivery of an operational and efficient GUTC that demonstrates the social and environmental benefits of green urban transport.</p> <p>TOR for partnership:</p> <ul style="list-style-type: none"> • serve as Chair on TAILEV Steering Committee; • provide policy guidance and links to finances for construction of the pilot Shota Rustaveli GUTC and the procurement and operations of the electric bus fleet along the Shota Rustaveli GUTC and Fargona Yuli <u>BRT corridor</u>; • coordination of pre- and post-GUTC construction data collection and analysis of data related to the energy savings resulting from urban transport along the Shota Rustaveli GUTC and Fargona Yuli <u>BRT corridor</u>; • lead discussion forums on the future of green urban transport based on data analysis from the Shota Rustaveli GUTC and Fargona Yuli <u>BRT corridor</u>; • setting of national roadmaps, standards, policies and codes for the development of GUTC and scaling-up on the use of low carbon vehicles. 	<p>developing the Shota Rustaveli GUTC design that includes route selection (under Component 2);</p> <ul style="list-style-type: none"> • consenting with them on optimized e-bus fleet operations and management based on best international practices (under Component 3); and • empowering them to undertake control of the development of green urban transport and scaled-up use of electric vehicles in Uzbekistan, mainly through technical assistance to formulate roadmaps, policies, standards and codes for green transport developments in Uzbekistan (under Component 1).

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
		<p>development, and TAILEV’s role in the introduction of best international practices for the operation of pilot electric bus fleets and developing more efficient and green urban public transport for Tashkent. A deeper discussion was also held on how this will inform Tashkent City on developing additional GUTCs in Tashkent and other large cities in Uzbekistan. Consultations also covered baseline data collection, cooperation in policymaking, route planning for the pilot the Shota Rustaveli GUTC, electric bus fleet operations and international urban development concepts.</p>	<p>Specifically, the Department of Transport of Tashkent City will:</p> <ul style="list-style-type: none"> • provide lead role in the bankable design of the pilot Shota Rustaveli GUTC to enable a high-profile operation of an electric bus fleet along the GUTC; • secure financing for the construction and maintenance of a GUTC; • provide management and coordination of the procurement of engineering designs for the Shota Rustaveli GUTC and all its features; • provide coordination and management of the tendering and construction phase of the Shota Rustaveli GUTC up to and including the commissioning of the GUTC signaling and street lighting equipment; • coordinate and prepare pre- and post-GUTC data collection and analysis of data related to the energy savings resulting from urban transport along the Shota RustaveliGUTC and Fargona Yuli <u>BRT corridor</u> for submission to MoT; • participate in discussion forums on the future of green urban transport based on data analysis from the Shota Rustaveli GUTC and Fargona Yuli <u>BRT corridor</u> and e-bus operations, and future private investments in e-vehicles in Tashkent; • setup facilitation centers to assist private sector and other Uzbek municipalities into investments in e-vehicle fleets. 	

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
Government	State Committee for Ecology and Environmental Protection (also known as Goscomecology)	<p>Stakeholder profile:</p> <p>Goscomecology is the main regulatory body in the field of environmental protection that works towards assurances of a favorable ecological state of the environment, protection of ecological systems, and improvement of the environment. It exerts state environmental control through legislation on the quality of atmospheric air, coordination of work on ecology and environmental protection, and ensuring interdepartmental cooperation in developing and implementing a unified environmental and resource-saving policy. Goscomecology also organizes education and awareness raising on environmental issues.</p> <p>History of consultations:</p> <p>The first round of consultations began on 1 April 2019 to identify Goscomecology’s interest in TAILEV that was mainly focused on the potential impact on the environment from TAILEV activities.</p> <p>In September 2019, another meeting was held with the senior Goscomecology management to discuss international involvement in assessing environmental impacts associated with green urban development, specifically in Tashkent. Consultations covered baseline data collection, cooperation in policymaking, potential impacts of TAILEV on air quality and on the quality of urban transport, urban development, battery waste disposal, and national and international urban development concepts.</p>	<p>Stakeholder Role:</p> <p>Role during implementation includes:</p> <ul style="list-style-type: none"> • coordination of programme for the collection of ambient air quality data along the pilot Shota Rustaveli GUTC • cooperation in policymaking for environmental protection, air quality, battery waste disposal, raising awareness on low-emission vehicles. <p>TOR for partnership:</p> <ul style="list-style-type: none"> • provide assistance and guidance on the design of an ambient air quality programme along the Shota Rustaveli GUTC including what air quality indicators should be monitored for air quality; • provide assistance to avail baseline air quality data, if agreeable between both parties; • provide assistance to determine the best course of action for calculating air quality fused with best international practices in close collaboration with Uzhydromet who will be responsible for the setup of hardware for monitoring Shota Rustaveli GUTC air quality; • lead the analysis of baseline and post-project air quality data, and assessment of the impact of the Shota Rustaveli GUTC on air quality, based on best international practices; • lead efforts for the formulation of environmental policies regarding the development of GUTCs and emissions from electric vehicles. 	<p>TAILEV will engage with Goscomecology through:</p> <ul style="list-style-type: none"> • regularly informing them of Project activities and intentions; • consulting and collaborating with them on developing the Shota Rustaveli GUTC air quality monitoring programme, and analysis of the monitoring results based on best international practices; • consenting with them on the type of hardware required to meet the requirement of the Shota Rustaveli GUTC air quality monitoring programme and the location of the monitoring station; • empowering them to undertake control of post-project air quality monitoring activities along the pilot Shota Rustaveli GUTC, and other replicated GUTCs in Tashkent and other cities; and • empowering them to improve air quality policies based on their data and information collected

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
		<p>In January 2020, another meeting was held with Goscomecology and Uzhydromet who provide ambient air quality monitoring services. A verbal agreement was made between TAILEV Project developers, Goscomecology and Uzhydromet to provide TAILEV support for ambient air quality monitoring activities along the GUTC before and after its construction.</p>		<p>during the pilot Shota Rustaveli GUTC air quality monitoring programme.</p>
Government	Center for Hydrometeorological Services of Uzbekistan (Uzhydromet)	<p>Stakeholder profile:</p> <p>Uzhydromet is the state governing body specially authorized and tasked in conducting national activities related to hydrometeorology in the Republic of Uzbekistan. Monitoring air quality is one of the main tasks of Uzhydromet.</p> <p>History of consultations:</p> <p>In January 2020, State Committee for Ecology and Environmental Protection initiated the meeting with the representatives of Uzhydromet to discuss possible cooperation within the framework of TAILEV.</p> <p>On 4 February 2020, the PPG team met with Uzhydromet to discuss environmental parameters for monitoring along the pilot Shota Rustaveli GUTC, possible locations for online monitoring stations to install along Shota Rustaveli GUTC, types of online monitoring stations, and appropriate equipment to be used for the monitoring station.</p>	<p>Stakeholder Role:</p> <p>Role during implementation includes:</p> <ul style="list-style-type: none"> • assistance for monitoring air quality and other environmental parameters along the pilot Shota Rustaveli GUTC; • the collection, processing and sharing of environmental data collected along the pilot Shota Rustaveli GUTC and other to showcase the benefits of the pilot project; • serving as a focal point to UNFCCC on behalf of GoU on reporting of national GHG emissions. <p>TOR for partnership:</p> <ul style="list-style-type: none"> • provide assistance and guidance for the design of an ambient air quality programme along the pilot Shota Rustaveli GUTC including identifying air quality indicators that should be monitored; • provide assistance to avail baseline air quality data, if agreeable between both parties; • provide assistance to determine the best course of action for calculating air quality fused with best international practices in 	<p>Project will frequently engage with Uzhydromet throughout TAILEV, primarily on Outputs 3.2 and 4.2 by:</p> <ul style="list-style-type: none"> • informing them of Project activities and intentions; • consulting and collaborating with them on developing the pilot Shota Rustaveli GUTC air quality monitoring programme, and analysis of the monitoring results based on best international practices; • consenting with them on the type of hardware required to meet the requirement of the Shota Rustaveli GUTC air quality monitoring programme and the location of the monitoring station; • empowering them to undertake control of post-

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
		<p>On 6 February 2020, Uzhydromet attended the validation workshop and confirmed their participation on TAILEV.</p>	<p>close collaboration with State Committee for Ecology and Environmental Protection who is the main state body in the area of environmental protection;</p> <ul style="list-style-type: none"> manage instrumentation and data collection of air quality monitoring programme along the pilot Shota Rustaveli GUTC; collate and analyze air quality data for the purposes of quantifying air quality improvements from GUTCs and low carbon public transport. 	<p>project air quality monitoring activities along the Shota Rustaveli GUTC, other GUTCs in Tashkent and other cities, and to formulate air quality policies based on data and information collected during the pilot Shota Rustaveli GUTC air quality monitoring programme.</p>
Regional Municipality	Tashkent City Municipality (TCM)	<p>Stakeholder profile:</p> <p>Tashkent is Uzbekistan’s largest city and main administrative center for national government agencies. The City with its population of almost 2.5 million, is noted for its tree-lined streets, numerous fountains and parks, with many trees planted under the leadership of the local government. With its City known as the "cultural capital of the Islamic world" with its numerous historic mosques and significant Islamic sites, TCM also maintains and operates green public areas (through its Main Department for Beautification) according to architectural and construction standards and rules as well as bridges, roads, sidewalks, bus stops, underground crossings, transport intersections, overhead passages, side curbs, drainage systems, and other municipal infrastructure. TCM administration also has a vision for Tashkent to transform into a modern city through its Integrated Master Plan.</p> <p>History of consultations:</p>	<p>Stakeholder Role:</p> <p>Under TAILEV implementation, TCM will play a lead role in:</p> <ul style="list-style-type: none"> advising on specific infrastructural developments along the proposed pilot Shota Rustaveli GUTC; allocating space for pedestrian and cycle lanes along the Shota Rustaveli GUTC, and paid parking spaces adjacent to the GUTC; securing capital financing for construction of the Shota Rustaveli GUTC; serving as the lead agency for the planning, engineering, construction and maintenance of GUTC infrastructure. <p>Several other entities within the TCM will play significant roles including:</p> <ul style="list-style-type: none"> the Department of Transport of Tashkent City whose role is defined above under the Ministry of Transport; the Main Department for Beautification of the Tashkent City Municipality whose role would 	<p>TAILEV will engage with the TCM through on a frequent basis throughout the course of implementation of Outputs 2.1, 2.2 and 3.3 by:</p> <ul style="list-style-type: none"> informing them of Project activities and intentions; consulting and collaborating with them on planning, engineering, constructing, and commissioning the Shota Rustaveli GUTC based on best international practices; consenting with them on their selection of pilot Shota Rustaveli GUTC routing in Tashkent; empowering them to making decisions on developing other GUTCs within TCM and contributing to codes and standards for greening other

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
		<p>On 16 September 2019, the PPG team visited with senior management of the TCM to discuss their potential roles on TAILEV including the implementation of the Shota Rustaveli GUTC, complete with beautification activities along the Shota Rustaveli GUTC, and the construction of segregated bus lanes, NMV infrastructure, and passenger-friendly bus stops along the Shota Rustaveli GUTC.</p> <p>On 4 February 2020, another meeting was held with TCM that basically reiterated their commitment and lead role in implementation of the Shota Rustaveli GUTC as discussed during the September 2019 meeting.</p>	<p>include inputs for GUTC concepts for public green areas (based on internal and state policies and integrated with international best practices) and supervision of implementation of beautification activities along the Shota Rustaveli GUTC;</p> <ul style="list-style-type: none"> • Committee for Ecology for Tashkent City whose role is defined above under Goscomecology; • The Public Council of Tashkent whose role is defined below; and • JSC “Toshshakhartranskhizmat” (TBC) whose role is defined below as a State-Owned company. <p>TOR for partnership:</p> <ul style="list-style-type: none"> • provide inputs for overall pilot Shota Rustaveli GUTC concept based on internal and state policies along with international best practices; • provide inputs into the general architecture of the proposed pilot Shota Rustaveli GUTC including segregated bus lanes, NMV infrastructure, paid parking spaces, special considerations for physically challenged users, and creation of a safe and green environment along the GUTC for passengers; • securing of finance and procurement of engineering services and contractor to construct the Shota Rustaveli GUTC; • oversight of the construction, commissioning, management and operation of the Shota Rustaveli GUTC. 	<p>GUTCs to be developed in Uzbekistan</p>

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
	Public Council of Tashkent City	<p>Stakeholder profile:</p> <p>Public Council of TCM is a voluntary public association (and not a legal entity) as well as a platform representing politically and socially active residents as a bridge between residents and TCM to address socially significant problems, and to generate new ideas based on best international practices. Personnel on the Public Council attracts specialists for municipality affairs whose priorities include strategic development of Tashkent City, enhancing transparency of TCM, keeping the city green, promoting an inclusive society and accessible urban environment, promoting entrepreneurship, and facilitating a services-based economy.</p> <p>History of consultations:</p> <p>The first meeting was held on April 2019 to introduce and discuss project initiation as well as to identify common areas of interest.</p> <p>On 18 September 2019, another consultation was conducted to discuss TAILEV concepts and solicit the Council’s feedback on dedicated bus and cycle lanes, parking policy, synchronized traffic signaling, renewable energy sources, and the educational aspects of TAILEV.</p> <p>On 6 February 2020, the Public Council provided additional feedback with regards to the need for providing access to the most vulnerable users of GUTCs (such as physically challenged, senior citizens and young children), and the need for the</p>	<p>Stakeholder Role:</p> <p>Role during implementation can include:</p> <ul style="list-style-type: none"> • feedback on Shota Rustaveli GUTC designs to improve passenger comfort and experience and maximize corridor ridership; • inputs into the resolution of parking problems along most streets of Tashkent City, which can create obstacles to dedicated bus lanes and reliable bus operations; • feedback during implementation; • monitoring and data collection of Shota Rustaveli GUTC usage and impacts; • raising awareness on the advantages of GUTC and electric buses. <p>TOR for partnership:</p> <ul style="list-style-type: none"> • to be defined on an “as needed” basis with some of their advisors since the Public Council is a voluntary public association, and not a legal entity. This may include partnerships with advisors on the Public Council who are linked with Tashkent-based CSOs such as the Green Building Council of Uzbekistan who could potentially provide services related to the setup and implementation of an educational and information campaign to work with the public, conduct educational programs for residents along the pilot Shota Rustaveli GUTC, and programs on behavioral changes with pedestrians, school kids and drivers on the GUTC. 	<p>TAILEV will engage the Public Council of Tashkent City through:</p> <ul style="list-style-type: none"> • informing them of Project activities and intentions; • consulting with them on developing specific GUTC features that promotes an inclusive society and accessible urban environment; • collaborating with them on monitoring selected indicators that can provide impact indicators of the GUTC on urban transport quality and environmental benefits in Tashkent, and promoting green urban transport in Tashkent.

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
		creation of an environment along GUTCs that assures the safety of the users, notably women.		
	Samarkand City Municipality	<p>Stakeholder profile:</p> <p>Samarkand is Uzbekistan’s second largest city that is experiencing rapid growth, in part due to the rapid increase in the number of tourists visiting Ancient Samarkand city. Subsequently, the municipality recognizes the increased demand for public transport services and need for innovative solutions that incorporate and preserve the City’s hilly landscape, narrow streets, and UNESCO protected historical areas.</p> <p>History of consultations:</p> <p>On 19 September 2019, consultations were conducted with Samarkand City to meet with the leadership of the city municipality. Consultations covered such topics as the TAILEV project, the GUTC draft concept, electric buses and charging stations, and intended environmental improvements and possible replication of the project.</p> <p>On December 16, 2019, consultations were held with the Head of Office of the Deputy Mayor of Samarkand city for Capital Construction, Communications, Public Utility, and Transport to explore the scope of cooperation. Discussions centered around the development of the ongoing road reconstruction programme and the proposed ring road. Key conclusions of the meeting included: (1) The municipality’s need for time to confirm the</p>	<p>Stakeholder Role:</p> <p>During implementation, Samarkand City will utilize lessons learned from Tashkent GUTCs which can be used to develop its own GUTC project.</p>	<p>TAILEV will engage with Samarkand City, likely after Year 3, through:</p> <ul style="list-style-type: none"> • informing them and their newly formed Transport Authority on a semi-annual basis on TAILEV progress; • consulting with them if they request assistance on possible GUTC plans and procurement of e-vehicle equipment.

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
		<p>city's involvement in the project officially; (2) Regional municipal budget cannot fund major long-term project without help from the state budget; (3) Mostly narrow streets of the city makes it hard to replicate the project in Samarkand.</p> <p>As of March 2020, Samarkand City municipality has not confirmed their interest in cooperation with TAILEV.</p>		
	Namangan City Municipality	<p>Stakeholder profile:</p> <p>Namangan City is Uzbekistan's third largest city with a population of more than 600,000 people that is rapidly growing due to the over 300,000 people commuting daily into the city from surrounding towns. With insufficient public transport funding, the City does not have well-organized public transport. Current public transport demand is served by 300 minibuses that compete with thousands of private taxis and minivans, resulting in city congestion and worsening environment conditions.</p> <p>History of consultations:</p> <p>Consultations with Namangan City were conducted on 20-21 September 2019 to meet with city municipality leaders and discuss the elements of TAILEV, TAILEV's potential impacts, replication potential and the urban transport challenges in Namangan.</p> <p>Namangan City Municipality also attended the 6 February stakeholder validation meeting to express</p>	<p>Stakeholder Role:</p> <p>During implementation, Namangan city municipality will serve as the focal entity for the development of low-emission transport investments for Namangan City and regulations and standards to stimulating and accelerating private investment in low-carbon transport.</p> <p>Stakeholder Role:</p> <ul style="list-style-type: none"> • use lessons learned from the pilot Shota Rustaveli GUTC and the operation of an electric bus fleet for public transport in Tashkent in efforts to replicate this experience in Namangan; • use the information on the impact of the pilot Shota Rustaveli GUTC (including the social, economic and environmental benefits as well as the methods of analyzing the information and data on the operation of the pilot electric bus fleet along the GUTC); 	<p>Communication Plan (during implementation)</p> <p>TAILEV will engage with Namangan City through:</p> <ul style="list-style-type: none"> • informing them and their newly formed Transport Authority from Year 1 onwards as required, on TAILEV progress and lessons learned that can be applied to Namangan; • consulting with them if they request assistance on possible GUTC plans and procurement of e-vehicle equipment based on best international practices; and • collaborating with them if requested to develop low emission vehicle solutions for their public transport.

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
		their serious interest and possible co-financing with TAILEV.	<ul style="list-style-type: none"> collaborate with TAILEV international urban transport experts to accelerate low-emission transport investments in their City; develop and apply regulations and standards aimed at stimulating and accelerating private investment in low-carbon transport that can be applied to the City of Namangan. 	
State-owned company	JSC “Toshshakhartranskhizmat” (also referred to as the Tashkent Bus Company or TBC)	<p>Stakeholder profile:</p> <p>JSC “Toshshakhartranskhizmat” is a semi-autonomous company responsible for providing urban passenger transport of the Tashkent City. It manages and regulates public passenger transportation as well as improvement policies for passenger transportation, reports to TCM and the Cabinet of Ministers, and organizes and maintains bus fleet and operations. The Company also has an advanced dispatch room for monitoring in real-time bus operations of throughout Tashkent City.</p> <p>History of consultations:</p> <p>Consultations were held in April 2019 to introduce the project and explore their interest and level of participation.</p> <p>A second consultation was held on 16 September 2019 after positive feedback from senior management. This consultation provided an opportunity to observe the existing bus fleet and possible GUTC routes (Routes #51 and #60), and other capabilities of the company that included testing of the first and only Belarus-made electric</p>	<p>Stakeholder Role:</p> <p>Roles during implementation will be to serve as a Responsible Party to support the selection of potential corridors for the pilot Shota Rustaveli GUTC, serve as the lead agency for preparing and undertaking a tender to procure e-buses and charging infrastructure, provide services related to pre- and post-GUTC data on electric buses, and the training and organization of e-bus drivers and maintenance personnel.</p> <p>TOR for partnership:</p> <ul style="list-style-type: none"> preparation of tender documents for the procurement of electric buses and charging equipment; setting up electric bus operations along the pilot Shota Rustaveli GUTC and the Fargona Yuli <u>BRT corridor</u> including scheduling; training drivers, mechanics, and management on the operation and maintenance of electric buses; application of an automatic fare payment system for electric buses; conduct monitoring and collection of operational data for the electric buses; 	<p>TAILEV will have frequent engagement with JSC “Toshshakhartranskhizmat” through:</p> <ul style="list-style-type: none"> informing them of Project activities and intentions commencing early in Year 1; consulting and collaborating with them on the tendering process for procuring e-buses and charging stations (Outputs 2.1 and 2.3) and developing e-bus operations guidelines based on GUTC operations (Outputs 3.1); consenting with them on e-bus fleet operations that optimize the features of the GUTC and are based on best international practices (Outputs 2.3, 3.1 and 3.4); and empowering them to undertake control of other e-bus operations with other GUTCs in Tashkent based on their experiences and their

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
		<p>bus in Tashkent. Consultation also covered areas of cooperation on potential GUTC routes.</p> <p>A third consultation was held in late November 2019 to select a GUTC route in closer consultation with the MoT.</p> <p>A fourth consultation was held during the 6 February 2020 validation workshop which confirmed the routing of the pilot Shota Rustaveli GUTC between the North and South Railway Stations (as illustrated in Annex 1).</p>	<ul style="list-style-type: none"> provide analyzed information that measures the impact of electric buses over CNG and diesel buses. 	<p>contributions to the pilot e-bus operation in Tashkent (Output 4.1).</p>
	<p>JSC “Regional Electric Networks” (REN)</p>	<p>Stakeholder profile:</p> <p>“Regional Electric Networks” JSC (formerly known as Uzbekenergo JSC) is reorganized into separate companies in charge of the generation, transmission, and distribution of electricity to retail consumers. It also builds, operates and maintains electric grids under 110kV. The 500kW lines fall under the jurisdiction of REN that are required for charging stations for electric buses.</p> <p>History of consultations:</p> <p>The first consultation was held in April 2019 with REN to informing them of TAILEV and to identify areas of common interest.</p> <p>A second consultation was held on 17 September 2019 with the newly established JSC Regional Electric Networks (REN) who inherited the responsibility and commitments of former Uzbekenergo in energy distribution. Consultations covered such topics as cooperation during the</p>	<p>Stakeholder Role:</p> <p>Role during implementation will be to provide the power to fast-charging stations for electric buses.</p> <p>TOR for partnership:</p> <ul style="list-style-type: none"> prepare technical parameters of the charging stations; advise on location of the charging station; prepare engineering sketches for the charging station that will be used to prepare technical parameters of the fast charging station for tendering; provide high voltage cable, transformer, and an electricity meter for the fast charging station; advise on regulatory and technical requirements for setting up infrastructure for the fast charging stations; 	<p>TAILEV will engage with REN through:</p> <ul style="list-style-type: none"> informing them of Project activities and intentions in Year 1 during the installation of the fast charging stations for the pilot e-bus fleet; consulting and collaborating with them on obtaining permits for conveyance of electricity to charging equipment for e-buses along the Shota Rustaveli GUTC (under Output 2.3).

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
		project preparation, tariffs, responsibilities of line construction from transmission to the charging infrastructure, technical requirements of charging stations for electric buses, and power consumption of charging stations.	<ul style="list-style-type: none"> provides electric power, transformer, meter and term of usage (legal basis) for power consumption by the fast charging stations; and share hourly, daily, and monthly electricity usage data of the charging station to analyze operational efficiency. 	
	State Unitary Enterprise (SUE) ToshkentboshplanLITI	<p>Stakeholder profile:</p> <p>SUE ToshkentboshplanLITI is an autonomous state-owned, for-profit entity. Their main activities include urban planning, research and development, long-term development concepts, and master plans of Tashkent city and cities of Tashkent region, and Samarkand city. They have conducted a feasibility study of main city development concepts, development projects of social, engineering and transport infrastructure, and detailed projects of residential and public areas.</p> <p>History of consultations:</p> <p>The first consultation was conducted in April 2019 to informing them of TAILEV and to identify areas of common interest.</p> <p>A second consultation was conducted on 17 September 2019 with SUE transport management to discuss city development concepts, elements of GUTC, promotion and possible replication of the project concept in other cities, residential housing along GUTC and other related topics.</p>	<p>Stakeholder Role:</p> <p>Roles during implementation would be to serve as the Chief Advisory body to TCM on the GUTC planning, engineering design, tendering process for selection of general contractor for the GUTC construction, and construction oversight as well as supporting advice on other urban development concepts.</p> <p>ToR for Partnership:</p> <ul style="list-style-type: none"> provision of inputs into the GUTC concept that align with Tashkent Integrated Master Plans; oversight of the preparation of GUTC planning, engineering design, tendering process for selection of general contractor for the Shota Rustaveli GUTC construction, and construction oversight; advising on other urban development concepts that align with GUTCs elements and parking policy, and workshops for capacity building, training, and management on GUTCs. 	<p>TAILEV will engage with the State Unitary Enterprise (SUE) during delivery of selected outputs through:</p> <ul style="list-style-type: none"> informing them of Project activities and intentions; consulting and collaborating with them in close collaboration with the Department of Transport of Tashkent City on developing the engineering design for the Shota Rustaveli GUTC that includes route selection (during Output 2.1); consenting with them on Shota Rustaveli GUTC designs and features that can be adopted for optimization of e-bus fleet operations based on best international practices (during Outputs 2.2 and 2.3); and empowering them to undertake further development of other GUTC developments in Tashkent

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
				and other Uzbek cities based on their experiences and their contributions to the pilot Shota Rustaveli GUTC design in Tashkent (during Outputs 3.3 and 4.1).
State owned company	JSC “Uzavtosanoat”	<p>Stakeholder profile: JSC “Uzavtosanoat” is a group of companies established by the initiative and governance of President of the Republic of Uzbekistan Islam Karimov. More than 85 enterprises are members of the group who partner with more than 200 foreign enterprises and organizations. Several of the automotive industry enterprises have foreign capital participation from Korea, Italy, Germany, USA and others. The main production companies consist of JSC “GM Uzbekistan”, LLC “SamAvto”, JV LLC “JV MAN Auto – Uzbekistan”, and CSC “GM Powertrain Uzbekistan”, all of whom have or can develop capacities for the manufacture of electric buses.</p> <p>History of consultations: First consultations with the company was held on 18 September 2019 to introduce the project and discuss its impacts on the company’s activities. This included discussions with production companies such as JSC “GM Uzbekistan”, LLC “SamAvto”, JV UzTruck and Bus Motors Ltd. (formerly JV LLC “JV MAN Auto – Uzbekistan”).</p>	<p>Stakeholder Role: Role during implementation will be to seek opportunities for their member companies to increase sales of locally manufactured electric vehicles including buses, taxis, delivery vehicles, and private electric automobiles as well as charging stations.</p> <p>TOR for partnership:</p> <ul style="list-style-type: none"> to be defined on an “as needed” basis if appropriate and required, and on the condition that the supplier of e-buses needs have strong links with the Uzbek automotive industrial sector. 	<p>TAILEV will engage with JSC “Uzavtosanoat” through:</p> <ul style="list-style-type: none"> informing them of tenders for the supply of electric buses for JSC “Toshshakhartranskhizmat” (TBC); consulting and collaborating with them or their production company, if one of their companies is successful on an e-bus tender, on: <ul style="list-style-type: none"> the operation and maintenance of their electric buses; training of operators and mechanics for e-buses; promoting sales of electric vehicles especially to fleet owners; and developing an appropriate charging network for electric vehicles.

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
Educational and Research institutes	Turin Polytechnic University	<p>Stakeholder profile:</p> <p>Turin Polytechnic University (TPU) in Tashkent is a high-level educational institute with capacity for training highly-qualified specialists for the automotive, machine-building, and energy industries. TPU also has an innovation center and an electric bus prototype where students can conduct research and improve their knowledge.</p> <p>History of consultations:</p> <p>First consultations were held in April 2019 to inform them of TAILEV and to identify areas of common interest.</p> <p>The second consultation was held on 18 September 2019 to discuss cooperation during the project preparation and role in implementation in terms of capacity building.</p>	<p>Stakeholder Role:</p> <p>Possible role during implementation include the provision of training services for the maintenance and operation of electric buses, charging stations, and synchronized signaling, and delivery of training activities for the operation and maintenance of e-buses for operators, drivers and managers and students of the University.</p> <p>TOR for partnership:</p> <ul style="list-style-type: none"> • Prepare curriculum and training materials on electric buses, synchronized traffic signaling, charging stations, and other green transport subjects as requested by TAILEV; • Provide capacity building activities and support for senior bus managers, drivers, and bus maintenance personnel. 	<p>TAILEV will engage with TPU through:</p> <ul style="list-style-type: none"> • informing them of Project activities and intentions; • consulting and collaborating with them on curriculum development and providing training on e-bus operations and maintenance and other features along the GUTCs.
	International Solar Energy Institute (ISEI) ⁶¹	<p>Stakeholder profile:</p> <p>The International Solar Energy Institute (ISEI) was established in 2012 with the assistance of ADB and is involved in contracts for research and training of personnel with international organizations, research and development work in the field of solar energy, and conducting testing and certification of solar technology installations in accordance with the rules of the National Certification System of the Republic of Uzbekistan.</p>	<p>Stakeholder Role:</p> <p>Possible roles in development of plans for placement of charging stations for electric vehicles, and developing the application and use of solar energy technologies for charging stations for electric vehicles in in Uzbekistan.</p> <p>TOR for partnership:</p> <ul style="list-style-type: none"> • To be defined on an “as needed” basis if appropriate and required, and on the condition 	<p>TAILEV will engage with ISEI through:</p> <ul style="list-style-type: none"> • informing them of developments on the procurement and setup of electric buses for JSC “Toshshakhartranskhizmat” (TBC); • consulting and collaborating with them on design and research projects as they

⁶¹ <http://isei.uz/?maqola=1>

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
		<p>History of consultations:</p> <p>First consultations were held in February 2020 on their potential involvement with TAILEV and to identify areas of common interest.</p>	<p>that there is close collaboration with TBC on the setup of pilot e-bus routes</p>	<p>arise from these developments.</p>
Public/Community	The Consumer Rights Protection Agency	<p>Stakeholder profile:</p> <p>The Consumer Protection Agency is an authorized state body responsible for implementation of a unified state policy and coordination of activities with other related state organizations in the field of consumer protection and regulation of the advertising market.</p> <p>History of consultations:</p> <p>No consultation was made with the Agency as it is not directly involved with the public transport services.</p>	<p>Stakeholder Role</p> <p>The Agency will be a member of Project Board as a Beneficiary Representative to defend the interests of those who will ultimately benefit from the project. Their primary function within the board will be to ensure the realization of project results from the perspective of project beneficiaries.</p> <p>TOR for Partnership:</p> <p>The Agency has been founded on September 11, 2019 and assumed its functions in 2020. Therefore, no specific TOR has been prepared for the Agency. This is to be done during the project implementation.</p>	
Private Sector	Valley Fruits LLC	<p>Stakeholder profile:</p> <p>Valley Fruits” LLC is an investment entity with plans to establish a new eco-tourism area in the territory of Nanay, Kuk yor and Oqtom villages of Yangiqo’rg’ in the district of Namangan region in Fergana Valley with electric vehicle transportation by 2024.</p> <p>History of consultations:</p>	<p>Stakeholder Role:</p> <p>A beneficiary that becomes familiar with best international practices to be adopted for the eco-tourist investment including the economic and environmental benefits of electric vehicles in Nanay, Kuk yor and Oqtom villages; use of technology transfers to design electric transport system and build local capacity of local experts and staff; promoting and adopting of best practices for this green investment.</p>	<p>TAILEV will engage with TPU through:</p> <ul style="list-style-type: none"> • informing them of Project activities and intentions; • consulting and collaborating with them on design of their green investments; • providing training on e-vehicle operations and maintenance and other green infrastructure.

Stakeholder type	Stakeholder list	Stakeholder profile History of consultations with the stakeholder	Proposed role of stakeholder during TAILEV and ToR for partnership	Engagement plan with the stakeholder during TAILEV implementation
		First consultations were held in June 2020 on their potential involvement with TAILEV and to identify areas of common interest.	TOR for partnership: <ul style="list-style-type: none"> • Inclusion on study tours to countries with well-developed electric transport infrastructure to learn best practices; • Inclusion on seminars and trainings within the framework of TAILEV; • Further refinement of TOR to be done during implementation as appropriate and required, and on the condition that their participation on the project will lead to e-vehicle and green infrastructure investment. 	

Annex 5: Background Information on Urban Transport and Fuel Consumption by the Transport Sector in Uzbekistan

- 5-1. The Government of Uzbekistan seeks to reduce the growth trajectory of GHG emissions from the country's transport sector through indigenous production and operation of electric vehicles, a clean mode of transport that receives its energy from electricity. Such an initiative also presents an opportunity to focus on integrated solutions to urbanization across sectors that includes *inter alia* improving urban mobility, ecosystem conservation, climate change adaptation, and smart technologies. This aligns with Uzbekistan's NDC to decrease specific GHG emissions per GDP unit (against the baseline of 2010) by 10% by 2030, and the President of Uzbekistan's Decree (issued January 2019) on "measures to fundamentally improve the processes of urbanization", which envisages widespread adoption of best practices on "green urban development", and sustainable management of the urban environment, of which the development of sustainable urban transport is significant and imperative. Table 5-1 summarizes the main legislation, policies and strategies that seek to reduce the growth trajectory of GHG emissions from the country's transport sector.

Table 5-1: Summary of Uzbekistan legislation, policies and strategies to reduce the growth trajectory of GHG emissions from transport sector

Date	Name	Purpose
2016	Uzbekistan's Third National Communications (TNC)	Acknowledges Uzbekistan's programme "Towards 2030: Transition to Resources-efficient Growth Model (Vision 2030)" that the "improvement of system of transportation and logistical communications enabling efficient use of energy resources" is required to maintain the country's high economic growth rate of 8% (see Para 3).
11 March 2017	Cabinet of Ministers Decree No. 129 "On measures for the further development of passenger transport in Tashkent until 2021".	Regulation of public transport development in Tashkent that includes, <i>inter-alia</i> , updating fleet with modern buses and taking measures to improve the safety of passenger transportation and quality of services provided (see Paras 5-9 and 5-10).
19 April 2017	Paris Agreement signature	Commits Uzbekistan towards the sustainability and modernization of its economy and global environmental commitment is made through nationally determined contributions (NDCs) declared by the country that seek to decrease specific emissions of greenhouse gases per unit of GDP by 10% by 2030 from 2010 levels (see Para 1).
27 September 2018	Law "On Paris Agreement Ratification"	
28 September 2018	Paris Agreement ratification	
1 February 2019	No. UP-5647 " On measures for radical improvement of the public administration system in the field of transport "	To radically improve the public administration system in the field of transport, increase the investment attractiveness and export potential of the republic, ensure strategic development and sustainable functioning of transport communications, as well as in accordance

Date	Name	Purpose
		<p>with the tasks defined by the Action Strategy for the five priority areas of development of the Republic of Uzbekistan in 2017 - 2021 :</p> <p>1. To establish the Ministry of Transport of the Republic of Uzbekistan (hereinafter - the Ministry) on the basis of the Uzbek Agency for Road Transport.</p>
4 October 2019	Presidential Decree: <u>"Strategy for the transition of the Republic of Uzbekistan to the green economy for the period 2019-2030"</u> ,	Strategy includes priorities in mitigating the environmental impact of the transport sector, leading to a significant reduction in emissions of polluting substances and GHGs, with a focus on integrated solutions for "greening" urbanization across sectors that includes <i>inter alia</i> , improving urban mobility, ecosystem conservation, climate change adaptation, and smart technologies (Paras 3 to 5)
30 October 2019	Concept "On Environmental Protection of the Republic of Uzbekistan for the Period until 2030"	To meet the targets of SDG 11 (see Para 9), this Concept was approved by the President. Within the framework of the Concept, a "Road Map" was developed for environmental management to improve the quality of life of the population that includes increasing environmental sustainability of the transport sector in the country.
30 October 2019	"Concept for the further development of transport, communications and transit potential of the Republic of Uzbekistan until 2030" or 2030 Transport Concept	To improve environmental quality in Uzbekistan's transport sector (including reduction of the negative impact of transport on environment that includes reducing emissions of pollutants and GHGs) and the introduction of clean, innovative technologies, as well as the implementation of a number of environmental priority measures in transport (see Para 9).
16 March 2020	Cabinet of Ministers (CoM) Resolution No. 157 on "measures to improve the system of urban passenger transport in Tashkent"	This joint GoU-TCM resolution was for the adoption of a design to increase the efficiency of the services provided for passenger transport, traffic safety, and the integration of modes of the transport system (see Para 11).
Currently in draft	Strategy for the development of the transport system of the Republic of Uzbekistan until 2035 (ID-3867) (otherwise referred to as the draft 2035 Transport Strategy)	<p>There is a draft Strategy for transport development in Uzbekistan under the newly formed Ministry of Transport, which is under consideration, designed to further improve the transport system of Uzbekistan, to provide affordable and quality transport services for business and the public, to increase the competitiveness of the country's transport sector, as well as in accordance with the aforementioned Decree of the President of the Republic of Uzbekistan dated February 1, 2019 No. UP-5647 " On measures for radical improvement of the public administration system in the field of transport ", The goals and objectives of this Strategy follow from the goals of the fundamental Action Strategy for the period 2017-2021. and aimed at creating an integrated single transport system in Uzbekistan, providing conditions for sustainable economic growth and meeting the demand of the population for high-quality transport services</p> <p>This draft Strategy has 7 goals:</p>

Date	Name	Purpose
		<p>Goal 1. Improving the effectiveness of institutions that shape and implement a single national transport policy</p> <p>Goal 2. Ensuring the quality and accessibility of transport services in the field of freight transportation to ensure accelerated modernization of the economy</p> <p>Goal 3. Improving the quality and accessibility of transport services for the population</p> <p>Goal 4. Realization of transport and transit potential through the accelerated development of efficient transport and logistics infrastructure, active entry into international transport corridors</p> <p>Goal 5. Ensuring a high level of security of the transport system</p> <p>Goal 6. Ensuring environmentally friendly transport, creating conditions for the development of green transport</p> <p>Goal 7. Increasing the innovativeness of the transport system, accelerated digitalization of the transport sector</p>

- 5-2. Figure 5-1 illustrates the proportion of the transport sector to overall pollutant levels in Uzbekistan as measured by Goscomecology or the State Committee for Ecology and Environmental Protection. Figure 5-2 illustrates the breakdown of specific pollutants to overall pollutants that form the basis of these measurements.
- 5-3. Goscomecology also has data regarding total and transport-related pollution loads of the 3 major cities of Uzbekistan as illustrated on Figures 5-3 and 5-4 respectively and indicating that Tashkent transport-related pollution loads are 95% of the total load for the city, followed by 60% for Samarkand.

Figure 5-1: Total pollutant emission load in Uzbekistan (thousand tons)

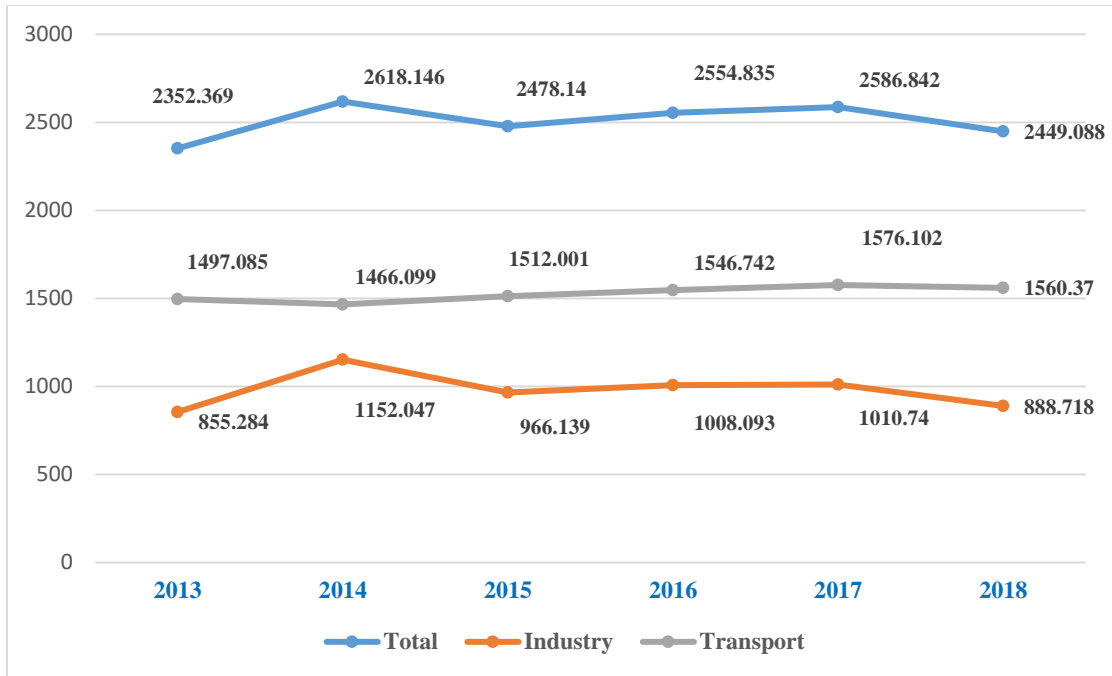


Figure 5-2: Breakdown of pollutant in total pollutant load

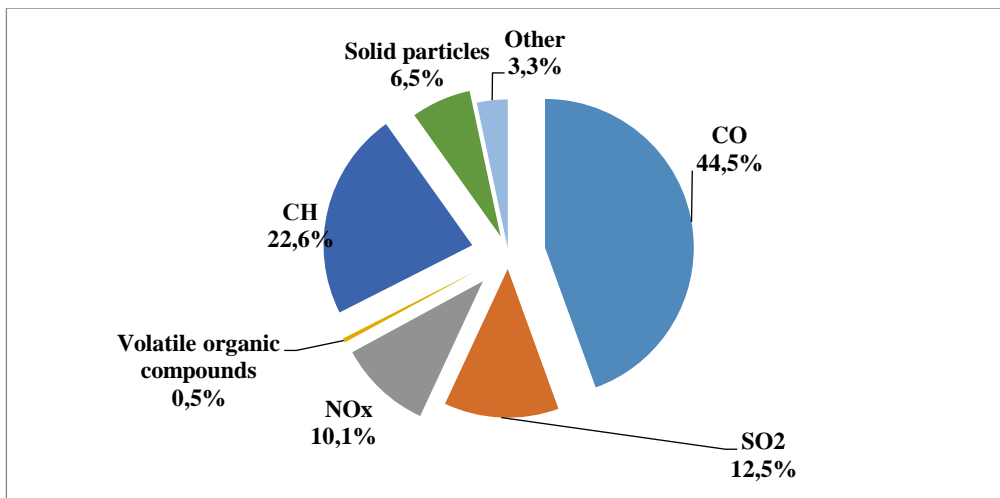


Figure 5-3: Gross pollutant emissions loads for Tashkent, Samarkand and Namangan (thousand tons)

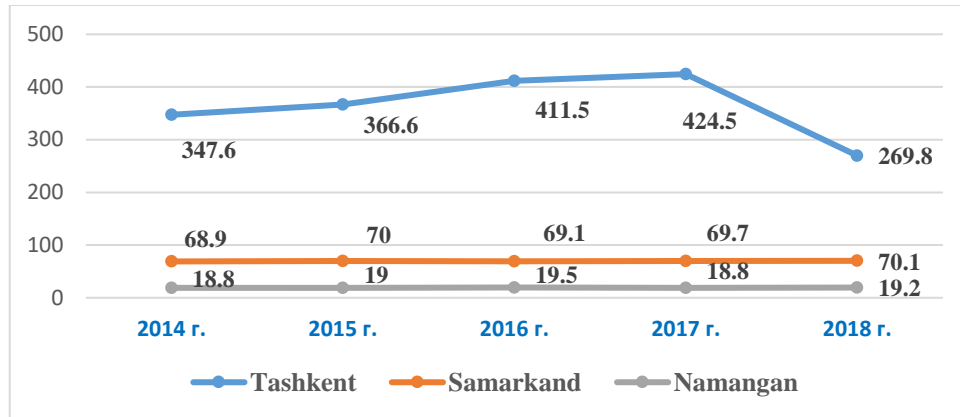
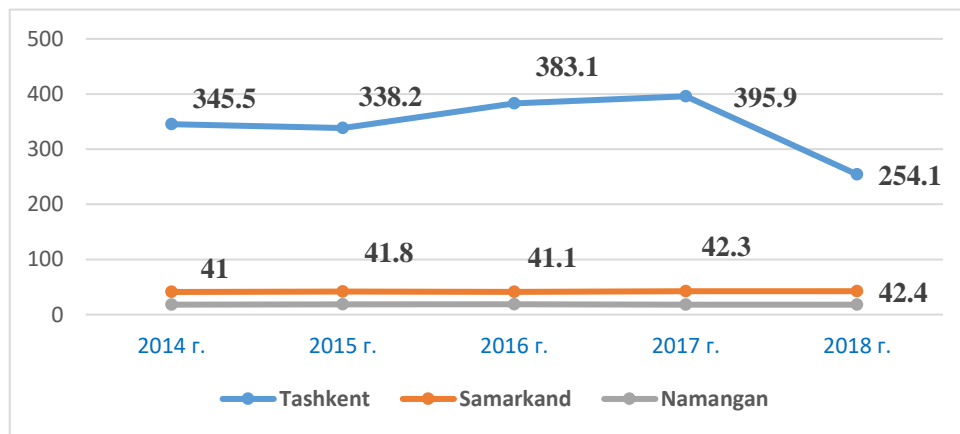


Figure 5-4: Transport-related pollutant loads for Tashkent, Samarkand and Namangan (thousand tons)



GHG emissions from the transport sector in Uzbekistan

5-4. The main contribution to total transport-sector GHG emissions is from road transport (which is more than 91%) followed by air transport at 4% and rail transport at 5% as illustrated on Figure 5-5. Table 5-2 provides national data on transport-related GHG emissions which indicate the road transport sector being the primary source of GHG emissions that has been growing at a steady rate since 2014. A further breakdown of GHG emissions from the transport sector for each of Uzbekistan’s main cities is provided in Figure 5-4. In 2018, the estimated transport-related GHG emissions was 1.97 million tons. The proportion of vehicle fuels responsible for these GHG emissions is provided on Figure 5-6 where petrol comprises the main fuel followed by natural gas and diesel. When combusted, these fuels also emit other pollutants such as carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen oxides (NO_x) and volatile non-methane hydrocarbons.

Figure 5-5: Transport-related GHG emissions by mode of transport (2018)

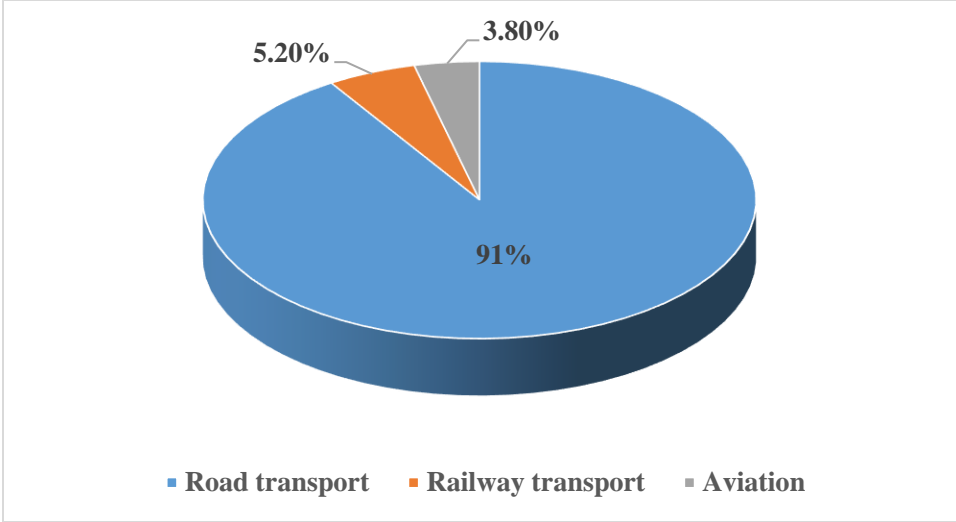


Figure 5-6: Fuel consumption structure by road, % (2018)

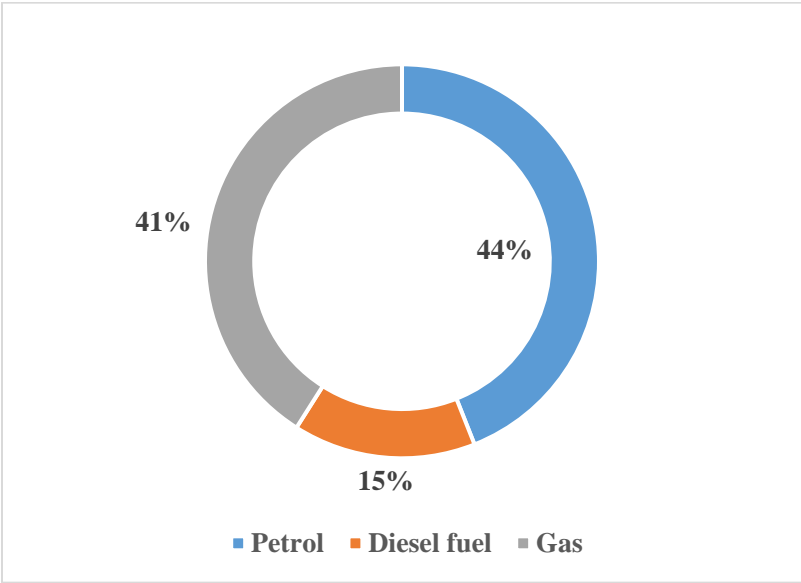


Table 5-2: Direct greenhouse gas emissions (GHG) in the Uzbekistan transport sector

(million tons in CO_{2eq})⁶²

Years	Transport Mode				Total
	Road transport	Rail transport	Air transport	Pipelines for natural gas	
2013	7.725	0 434	0.039	3.872	12.071
2014	7.219	0 379	0.026	3.597	11.221
2015	7.976	0 497	0.026	3.626	12.125
2016	7.598	0 389	0.030	3.729	11.746
2017	7.707	0 392	0.031	3.762	11.892
2018 ⁶³	8.500	0 400	0.030	3.900	12.830

Profile of Urban Transport Scenario in Uzbekistan's major cities

Tashkent

- 5-5. The road network of Tashkent City Municipality (TCM) is known for its wide transport corridors, many with 8 to 12 lanes of common traffic. While these corridors are common for the main routes of the City, the secondary road system that accesses residential areas is typically 2 to 4 lanes with no policies for parking along these roads. The City is served by 36 km of Metro lines with 29 stations, and a city bus system managed by JSC "Toshshakhartranskhizmat" (also referred to as TBC or the Tashkent Bus Company) that operates over 1,000 buses. There is connectivity between different modes of transport within the City (between Metro stations, bus routes and train stations) that can be improved to encourage more use of public transport. While there are sidewalks for pedestrians along most of the key transport corridors in Tashkent, there are only a few kilometers of cycling pathways observed in the City. The increase in the number of privately-operated automobiles has created more congestion in Tashkent over the past 10 years that has impacted the efficiencies of City-operated public buses as well as urban mobility within the City. This is a trend that needs to be reversed.
- 5-6. During 2017-2018, 475 buses were purchased from MAN factories in Samarkand including 130 buses of large capacity with gas engines, 30 buses of high capacity with diesel engines, and 315 buses of medium capacity brand "ISUZU" with diesel engines. In 2019, another 390 buses were being purchased including 190 buses of large capacity with gas engines and 200 buses of medium capacity brand "ISUZU" with diesel and gas engines.
- 5-7. According to the data of Tashgorpasstrans JSC, an estimated 1,000 buses service 136 routes on a daily basis for more than 600,000 passengers. In 2018, the buses counted by Tashgorpasstrans JSC transported more than 200 million passengers (Tashgorpasstrans JSC accounts for 70% of passenger traffic in the city of Tashkent with the remainder distributed between six private carriers using minibuses with a capacity of 12 passengers).
- 5-8. Tashgorpasstrans JSC now have more than 70 bus surveillance cameras installed. A new system has been introduced for several routes that are tied to a GPS navigator. As rolling stock becomes obsolete and old buses are decommissioned, TBC will purchase new rolling stock with air conditioning with a minimum Euro-5. There are currently around 150 air-conditioned buses in operation.
- 5-9. The development of public transport in Tashkent is regulated in accordance with Cabinet of Ministers decree No. 129 dated on 03/11/2017 "On measures for the further development of passenger transport in Tashkent until 2021". The main directions of further development of passenger transport in the Tashkent city were identified as:

⁶² Data from Goscomecology

⁶³ Preliminary data

- Ensuring that bus transportation meets the requirements of the residents and guests of the Tashkent city, including updating fleet with modern buses and taking measures to improve the safety of passenger transportation;
- Optimization of the existing route network of urban passenger transport, the opening of new routes, the construction of final stops should take into account the commissioning of new metro lines, roads, overpasses, and bridges;
- Optimization of city schemes and suburban routes by moving out final stopping points of suburban routes along the Tashkent Ring Road and the construction of passenger bus terminals;
- Improving the quality of services provided, the effectiveness of compliance with schedules and intervals on routes;
- Ensuring the rational and efficient operation of comfortable modern buses;
- The widespread adoption of modern information and communication technologies in passenger transport services.

5-10. The following Programs are approved by this government decree:

- a comprehensive program of measures for further improvement in the organization of passenger transport in the Tashkent city for the period 2017-2019;
- the program for updating the fleet of the enterprises of JSC "Toshshahartranskhizmat" with the large and medium capacity city buses of domestic production for the period of 2017-2019;
- measures to optimize the route network of passenger transport in the Tashkent city for the period 2017-2021.

5-11. To ensure environmental safety of transport vehicles, a draft concept on "the development of transport and road transport infrastructure in the Tashkent city for the period 2019-2025" has been formulated. The draft concept provides for implementation of measures aimed at:

- the development of a public transportation system;
- optimization of road transport infrastructure;
- optimization of the public transport route network;
- the introduction of dedicated lanes for public transport, particularly for buses;
- development of bike lanes and cycle infrastructure;
- the use of alternative energy sources in public transport.

5-12. As of 7 March 2020, testing of the Chinese Yutong electric bus has begun in Tashkent according to reports from a Podrobno.uz correspondent reports with reference to Toshshahartranskhizmat. On March 7, the new bus entered the passenger service of route No. 51 "Beshagach - Yunusabad". The 12-meter low-floor electric bus Yutong ZK6128BEVG is capable of driving 300-350 kilometers on a single charge. It has 32 passenger seats, with a total passenger capacity of 90 people. The maximum speed is 85 km/h. The electric bus is equipped with three doors, autonomous heating, air conditioning, 5 cameras. This type of bus is assembled in Kazakhstan at the facilities of the SaryarkaAvtoProm enterprise. Its cost, depending on the configuration, ranges from US\$ 380,000-400,000. The buses are equipped with a lithium-iron-polymer battery with a range of 350 kilometers. Battery life is 10 years. The warranty is 7 years for the battery and 5 years for the electric motor. More observations of the Yutong tests being carried out in Tashkent includes:

- The bus costs US\$ 320,000 each with charging facility;
- It rides up to 350 km, no fast charging facility at both termini, only garage night charging;
- 12 meter, 40 seats, 41 standing, 1 seat for person with disability;

- The electric bus is being tested on the route #51; and
 - Consumes 1.1 kWh per 1 km.
- 5-13. In conclusion, given the characterization of the deteriorating conditions of public transport and urban mobility in Tashkent, achieving compliance with Decree #129 will prove to be an increasingly difficult challenge.

Samarkand

- 5-14. Samarkand's popularity as a global tourist destination has grown significantly with its unique UNESCO protected historical areas, an increasing number of tourists, and its population of 950,000. The City's public transport is serviced by 20 companies that operate more than 800 buses (ISUZU brands mainly working on gas fuels) and 35 taxis (cars running on gasoline and gas fuels) on 105 bus lines. There are ongoing efforts to transfer the functions of a public transport regulator to a newly created transport department of the Samarkand region to the Ministry of Transport. The City also has tram lines routed along key corridors including the Gagarin Street, one of the central and widest streets of the city that accesses the UNESCO protected attractions.
- 5-15. There are plans in Samarkand to improve its urban road network including a large capital project for the reconstruction of Gagarin Street, and an improvement of the City's unique tram system. However, the City is also challenged by a growing number of motor vehicles on its roads significantly contributing the traffic congestion and local air pollution. In response, Samarkand municipality have expressed interest in the concepts of green urban transport which has potential for vastly improving urban mobility in Samarkand. Such initiatives will likely require unique measures to preserve the City's unique cultural heritage.

Namangan

- 5-16. Namangan City with a population of 600,000 is Uzbekistan's second largest city that is located in the Fergana Valley to the east of Tashkent. Namangan is also a city experiencing growing congestion from an increase in the number of motor vehicles, many of which are marshrutkas that provide the bulk of public transport for the city. The City is well known for its manufacturing base. With regards to public transport, Namangan lacks a single operator for regulating public transport issues. Currently, there are 4 large private companies for the transport of passengers operating 300 Isuzu gas buses. Currently, the city's Hokimiyat is working on transferring the function of the regulator of public transport to a newly created transport department of the Namangan region that would reports to the Ministry of Transport.
- 5-17. This has resulted in the City not having a well-developed public transport system contributing to the current congestion. Furthermore, there is a lack of parking policies that allow motor vehicles to be parked in a manner that partially obstructs road spaces for more efficient urban mobility. City municipal officials are interested in green e-mobility projects that will improve their current state of public transport and reduce their transport-related carbon footprint.

GHG emission reduction impact from a shift to electric vehicles

- 5-18. Goscomecology in collaboration with JSC "Toshshakhartranskhizmat" (TBC) have provided information and estimates on the GHG emission reduction impact of a shift to electric vehicles:
- Conversion of 1 passenger diesel vehicle (10 passengers) to an e-vehicle will reduce GHG emissions by 31.0 tCO_{2eq} per year;
 - Conversion of 1 passenger CNG vehicle (10 passengers) to an e-vehicle will reduce GHG emissions by 20.0 tCO_{2eq} per year;
 - Conversion of 1 passenger diesel bus (40 passengers) to an e-bus will reduce GHG emissions by 248.0 tCO_{2eq} per year;

- Conversion of 1 passenger CNG bus (40 passengers) to an e-bus will reduce GHG emissions by 160.0 tCO_{2eq} per year;
 - The life cycle of an e-bus is 8 years;
 - The public transport bus fleet in recent years has been replaced with buses with improved environmental performance and, accordingly, greenhouse gas emissions;
 - In 2017, over 1,500 domestic and foreign buses were purchased and operated on both diesel and CNG, and where the share of foreign buses is more than 15%.
- 5-19. Looking into the post-project scenario for TAILEV, the “Strategy for the transition of the Republic of Uzbekistan to the green economy for the period 2019-2030” (see Table 5-1) provided the impetus to draft the adopted “2030 Transport Concept” where there are yet any targets to be set for the share of the fleet of vehicles with hybrid, electric, and alternative fuel engines. The “Strategy for the transition of the Republic of Uzbekistan to the green economy for the period 2019-2030”, however, does mention that the share of the fleet of vehicles with hybrid, electric, and alternative fuel engines was expected to be 5% by 2025 and 20% by 2035 (vs the base year of 2018 with the share of 0.89%). In addition, the Concept “On Environmental Protection of the Republic of Uzbekistan for the Period until 2030” adopted in October 2019 does mention a target of an 80% transition of public transport to CNG/LPG and electric traction until 2030.

Annex 6: Background information on pilot e-bus programme for TCM (under Component 2)

Operational Risks and Consideration of Bus Fleet Electrification

6-1. This section summarizes anticipated major changes to bus fleet operations that will be required to accommodate battery electric buses under any fleet electrification scenario. Changes will be required to bus schedules and bus maintenance programs. JSC “Toshshakhartranskhizmat” (also referred to as TBC or the Tashkent city public transport company) will also need to develop completely new capabilities to regularly monitor bus charging activities, and to maintain and repair charging infrastructure. It is noteworthy that TBC to date, has not provided any opinions on their preferred e-bus technology due to the barrier of their current lack of experience and exposure to a wide variety of e-bus technologies globally. While they are currently being approached by several e-bus manufacturers for trial runs of e-buses in Tashkent, the TAILEV feasibility study of Output 2.1 was to resolve this barrier. As such, this report makes the assumption that the pilot Shota Rustaveli GUTC and the Fargona GUTC will operate 40-seat e-buses.

Scheduling

6-2. ***Depot charged buses*** have limited in-service range before needing to be re-charged. Depending on the bus manufacturer chosen, TBC’s scheduling policies will need to be reviewed to ensure that daily bus assignments (blocks) that are too long for depot-charged buses to handle on a single charge are adjusted. Assuming nominal battery pack capacity of 500 kWh for 40-ft buses and 660 kWh for 60-ft buses⁶⁴, all daily bus blocks operating with depot-charged buses will need to be limited to no more than 11 hours or 220 kilometres between the bus leaving and returning to the transit centre⁶⁵. This limitation is projected to increase peak bus requirements at TBC by 15% on average, and to increase dead-head mileage. These increases will need to be accounted for in the bus purchase and charging infrastructure investments, and projections of incremental operating costs.

6-3. ***In-route charged buses*** will need to charge for an average of approximately 6 minutes per in-service hour during their scheduled lay-overs at one or both route termini, after completing each one-way trip or round trip on the route. TBC’s scheduled lay-over time system will need to be reviewed. Often, due to traffic congestion during peak periods much of this time is used for recovery, which will cause buses to run late⁶⁶. To ensure that in-route charged buses have sufficient charge time, while maintaining on-time performance, scheduled layover time will need to be increased. This additional lay-over time will need to be included in projections of incremental operating costs.

Bus Maintenance

6-4. The bus maintenance program at TBC will need to evolve over the next 6 years, to accommodate the introduction of electric buses. This may require re-training of existing employees to develop new skills and recruitment of new employees with different skill sets than those of traditional automotive mechanics.

6-5. Most systems on electric buses will be the same or similar as systems on current internal combustion engine buses; it is estimated that with the adoption of electric buses, approximately 25-40% of current maintenance activities will change. In addition, TBC already maintains hybrid-electric buses which incorporate very similar drive train components as battery electric buses, including electric drive motors, inverters/power electronics, and battery packs. Drive train diagnostics and maintenance activities for battery buses will be similar to those for TBC’s current hybrid buses. The following maintenance issues will require attention:

⁶⁴ Projected industry norm for maximum battery size in 2025.

⁶⁵ If the buses that are eventually chosen have larger battery packs, then these limits can be proportionally extended.

⁶⁶ The Project expects to minimize congestion-related impacts to e-bus operation through the construction of the GUTC with synchronized signalling and public transit priority

- All maintenance employees will require high voltage training, and a greater percentage of maintenance activities will require high voltage awareness and safety procedures (for example, lock-out/tag-out);
- Current preventive maintenance (PM) cycles are often aligned to engine oil change intervals. Since electric buses will not require frequent oil changes, there may be opportunities to re-think current maintenance intervals and packaging of PM activities;
- Drive train diagnostic procedures will change, with an even greater reliance on electronic diagnostics tools;
- Mid-life overhaul programs will need to migrate from engine and transmission overhaul/rebuild to rebuilding and/or replacement of electric drive motors, inverters, and battery packs. These new activities could be performed in-house at a Central Maintenance Facility, or TBC could contract with a third party for this work. If performed in-house, it will require investments in equipment and tooling, as well as employee training;
- Lithium-ion batteries lose capacity (kWh) as they are charged and discharged, but the exact deterioration rate in transit service is unknown. Some bus companies are assuming up to 2.4 percent capacity loss per year, which will require 100 percent battery replacement in 8 years. This will be a major expense which must be budgeted for annually in depreciation. Depreciation expenses will include material purchases and mechanic labour;
- Electric drive components are expected to have a lower in-service failure rate than diesel engines and transmissions, but individual failures are likely to be more consequential, requiring replacement of entire components or major sub-systems at a cost of US\$3,500 or more per unit. These units may also have a long lead time, particularly in the short and medium term when annual production of electric buses is low. TBC must set up appropriate procurement or service contracts to ensure that buses can be repaired expeditiously. This may include holding drive system component replacement inventory locally and/or requiring suppliers to maintain certain inventory levels dedicated to TBC. It will also be advisable to develop a core/exchange program in which failed parts are removed and replaced with factory rebuilt components, with the failed part returned to the factory for rebuild and financial credit.

Cold and Hot Weather Operations

- 6-6. While battery chemistries vary, in general the chemical batteries used in battery-electric buses work best when the internal temperature in the battery pack is between approximately 0°C and 20 °C. Both higher and lower battery temperatures will reduce the allowable charge and/or discharge rate without compromising battery life. In practical terms, failure to maintain appropriate pack temperatures in extreme ambient conditions (hot or cold) can reduce bus power, regen capability, or both.
- 6-7. While the temperature in Tashkent rarely goes below 0° degrees Celsius, the city of Tashkent can see temperatures approaching 40° C for several months of the year. For the rare cold nights (<0°), a cold weather monitoring system will need to be developed in accordance with the selected manufacturer’s recommendations. Similarly, for hot weather operations, TBC will need to prepare and plan for any negative impacts that may result in electric bus operations in very hot weather.

Charge Monitoring

- 6-8. Given the range limitations of battery buses, the negative consequences of mis-fuelling (i.e. not charging when scheduled) are more severe for battery buses than they are for current internal combustion engine buses, which typically have 600 kilometres or greater range from a full tank of fuel. As such, TBC will need to develop specific tools and procedures to minimize the potential for electric buses to miss scheduled charging events due to miscommunications, operator error, or equipment failures. Necessary activities will include fostering awareness of the need to maintain proper charging among bus operators, mechanics, and supervisors; regularly monitoring all charging to ensure that it is proceeding properly; and reacting quickly to malfunctions to re-start charging when it is interrupted. TBC will need to:

- Equip its depots with a centralized monitoring station that displays charge status for every depot charger at the location. Assign a maintenance supervisor to periodically check charging status throughout the night and/or provide the maintenance supervisor with automated real-time alerts if charging is interrupted for any bus;
- Develop the maintenance capability to respond to *depot charger failures* within 30 minutes of detection and maintain a “readily accessible” supply of repair parts to repair common failures within an hour. This maintenance capability should be available 24 hours per day but will be in highest demand during the evening;
- Create a charging network control center with the capability to monitor the status of every in-route charger in real time, and to dispatch maintenance personnel to diagnose and repair identified failures;
- Develop the maintenance capability to respond to *in-route charger failures* within 60 minutes of detection and maintain a “readily accessible” supply of repair parts to repair common failures within two hours. This maintenance capability should be available 24 hours per day but will be in highest demand during the day and early evening;
- Develop procedures and systems to monitor charging status (in-route charging) and state of charge (in-route and depot charging) for buses in service throughout the day, with that information relayed to the bus command centre on an exception basis for buses missing scheduled charges or with low state of charge. Set specific standards and thresholds for when the command centre should intervene to either hold a bus for a longer charge session or take a bus out of service (and return it to the transit centre) due to low charge state.

Charging Infrastructure Maintenance

- 6-9. TBC will need to develop an entirely new maintenance capability, which does not exist today, involving servicing, diagnostics, and repair/replacement of charging infrastructure, for both depot chargers and in-route chargers:
- Annual scheduled charger maintenance will include visual inspection, tightening and retorquing of connectors, cleaning or replacement of filters, and cleaning inside and out; a software diagnostic may also be recommended by some manufacturers. Software and/or hardware updates may also be scheduled during some maintenance visits. For high-use chargers, semi-annual maintenance may be recommended or required;
 - In terms of failures, connectors and cords may require replacement due to wear and abuse from users. Ventilation filters can also become clogged and fans can overheat and/or fail over time. Software can also crash and require rebooting;
 - TBC staff working on electrical components when there is a potential to contact live conductors will likely need to be licensed as an electrical professional. Employees conducting some routine maintenance tasks may not require licensing, but those performing failure maintenance likely will. TBC could recruit and train licensed employees to perform charger maintenance or could contract for maintenance services from the charger manufacturer(s) or from third-party electrical contractors.

Contingency for Loss of Grid Power

- 6-10. For a full fleet roll-out of electric buses, TBC should make contingency plans for maintaining some level of bus charging even if grid power is disrupted to one or more charging locations. Historical information about the reliability of power in Tashkent needs to be reviewed. If reliability is very high, then the recommended alternative is to use mobile diesel generator(s) that can be moved between locations as needed, rather than providing fixed back-up generation at every charging location.
- 6-11. For depot charging one or more 750 kW mobile generators would be required, with each providing the ability to supply power to up to 15 buses charging concurrently overnight at a depot. For in-route charging one or

more, 450 kW mobile generators would be required⁶⁷, with each providing the ability to supply power to one in-route charger.

- 6-12. The number of chargers required would depend on the number of electric buses deployed, and the likelihood of losing power at each charging location separately, and at multiple locations simultaneously. TBC should work with the power authority to further evaluate historical trends and to project future needs. It is possible that TBC can contract for rental or lease of emergency power generation as required, rather than having to purchase and own mobile generating capacity.

Axle Weights

- 6-13. Current electric buses are heavier than diesel and hybrid-electric buses, primarily due to the weight of their battery packs. The additional weight of electric buses could cause them to exceed axle weight limits on certain roads and bridges when heavily loaded during peak periods, though such conditions will may be infrequent. TBC will need to coordinate with Tashkent City road authorities to determine whether electric buses will require axle weight limit exemptions.
- 6-14. Battery electric buses are, as a technology, still very new. Depending on the final vendors and systems chosen, there can be a significant “break in” period for TBC. Initially, TBC needs to prepare by training mechanics and other maintenance personnel, purchase new tools, develop stores and parts inventory for the new fleet. Other items such as hoist capacity (Battery Electric Buses or BEBs are heavy) and safety need to be considered. For example, it is not likely that CNG buses can be serviced in the same building as an electric bus, or at least at the same time. There may be other considerations that would be required by the new vendor such as a safety and training plan.
- 6-15. Once TBC receives the initial fleet of 10 or more e-buses, a minimum 6-month period will be required to identify and rectify and problems or issues with the buses. The lessons learned from this initial break-in period in very valuable in informing future bus purchases. For example, identification during the trial that one aspect of the way the bus is designed or procured could be changed to benefit smoother operations. This change can then be sustained on future orders instead of ordering dozens of buses at once and potentially being stuck with potential major change issues.
- 6-16. To charge battery buses, both depot-based overnight charging and in-route charging are options, with depot charging for the lower-speed routes that generally operate near the city centre (and near a depot), and in-route charging on higher speed routes through the other municipalities. A “conditioning charger” may also be required at the depot for maintenance purposes and depending on the route chosen, a “slow” charging station or an overnight charger could be located at the bus depot instead of one of the fast charging stations on street. This is contingent on current commercial electric bus and charger options in North America and Eurasia, and best available estimates of future technology development. The electric bus market is rapidly evolving worldwide, and there are uncertainties related to future costs and capabilities of electric buses.
- 6-17. Of particular importance are uncertainties related to future battery costs and capabilities, which have profound effects on battery bus life-cycle costs. If batteries improve more rapidly than projected, total electrification costs will be lower than estimated, and decisions around charging strategy may change. Future battery improvements and cost reductions will be based on both technology and market developments, including the pace at which other transit agencies adopt electric buses. Specifications will be developed in tandem with TBC to identify the best-value equipment, technology, and optimum locations for charging stations for the long-term operation of EVs as public transport in Tashkent. This may include clauses such as a charging system compatible for both buses and private cars, flexibility of the charging station to accommodate solar installations that can minimize carbon footprint at these stations to offset the use of fossil-fueled grid-sourced electricity, specific supplier commitment for technical support of the electric buses, and training of bus maintenance and operational personnel. TAILEV Project resources can be deployed to

⁶⁷ It may also be possible to develop a mobile battery pack system that could power an in-route charger for 12-hours or more.

conduct an electrical engineering review of the locations, power requirements and feasibility and cost of bring power when needed⁶⁸.

- 6-18. GEF financing can also be used for implementing the pilot Shota Rustaveli GUTC that features EV buses for public transport complete with public transport priority measures and best international practices for urban greening measures. This would include the preparation of the feasibility study and business plans for the selection and development of the pilot GUTC, oversight of the tendering process for constructing the pilot GUTC, and construction oversight of the pilot GUTC. GEF financing in this component will also be used for technical assistance to prepare tenders to procure a pilot fleet of electric buses and a charging station (slow and/or fast depending on the findings of the study from Output 2.1). The TAILEV project defines an approach for the identification of business models with cost-effective financing options for the procurement of e-buses and associated charging stations. Based on the analysis made during the project preparation phase, the project team proposes that GEF resources can be used for subsidizing the purchase of a number of e-buses and charging stations through covering the incremental upfront cost of the e-buses (with respect to CNG buses) based on the fact that the current public sector monopoly in Uzbekistan. Following consultations with key partners, and based on the current baseline, this upfront-capital subsidy scheme was determined to be the most pragmatic approach to identify at the design stage. This default design is based on subsidizing the incremental cost of e-buses with respect to CNG buses. As per this approach, depending on the funds available and the attractiveness of the e-buses available on the market, one tender can be initially prepared for 10 electric buses. Outcome 2 has a US\$1.4 million budget for the buy-down of each of the new electric buses, the number of them being dependent on unit cost of each bus in the successful e-bus tender (for example, if each bus is US\$500,000, US\$100,000 can be applied against each of the 10 e-bus procured with US\$200,000 applied to each of the 2 fast-charging stations that are assumed to be US\$1.0 million each). If the unit costs of each e-bus are less than US\$500,000, the US\$1.4 million can be applied to more e-buses in a manner that does not exceed 20% of the capital cost of each piece of equipment. On the other hand, the financial analysis around the project's upfront-capital subsidy scheme remains early-stage, given various uncertainties and raising opportunities in Uzbekistan, although the key principle for determining the level of subsidy will be incremental cost. Besides, given to the current developments in the urban public transport sector with indications on willingness of the government performing reforms in the sector towards liberalization, project defines a comprehensive and flexible approach with specific activities on exploring market reform potentials and defining cost effective finance options for TAILEV pilot implementations on the procurement of e-buses. As a first step, the project will carry out analysis on current structures and dynamics of public transport, explore market liberalization potentials through consultations with key stakeholders including finance institutions, and review good practices/models from other countries. These analyses will be undertaken during the first year of the project to enable smooth transition to the second step. Later, based on these findings, the project will detail its investment approach with a default of the current up-front capital subsidy scheme (based on incremental cost), and with the opportunity, should conditions permit, to adopt alternative models.

⁶⁸ This charging station will likely be only for public buses, and not for multi-purpose vehicles such as common automobiles. Charging stations for common automobiles should be located on a separate lot.

Annex 7: TAILEV GHG Emission Reduction Estimates

7-1. The objective-level target for direct GHG emission reductions for TAILEV is 20,700 tCO_{2eq}. This target is a key indicator to be measured in TAILEV, notably under activities of Output 3.1. The estimates for this key TAILEV target was based on GEF guidance from the “Manual for Calculating Greenhouse Gas Benefits of Global Environment Facility Transportation Projects”⁶⁹. The calculation of this estimate was based on the conversion of CNG and diesel buses to electric buses, with the following conservative assumptions:

- In Year 2, 10 existing buses will be replaced with electric buses along the 7.5 km Shota Rustaveli “green urban transport corridor” or GUTC that has or will have developed a number of commercial areas along the route complete with enhanced non-motorized vehicle (NMV) infrastructure as well as a segregated bus lane, transit-priority signalling and improved bus stops (not elevated platforms). The assumption is being made that the existing fleet being replaced are diesel buses;
- In Year 2, 20 electric buses will replace the existing 9.1 km Fargona Yuli BRT fleet (consisting of 100% diesel buses);
- The variance in range of electric bus on one battery charge is considerable:
 - North American electric bus models are in the range of 85 km per 450 kWh charge (40-seater);
 - Chinese electric buses claim a 320 km range using around 500 kWh (32-seater);
 - The default value used in the E-Mobility calculator is 100 km range for 115 kWh. This is being used for this Project (and may change significantly over the next year depending on the selection of e-bus models being made by TCM with the assistance of TAILEV). Seasonal variabilities in range are not known for winter and summer seasons in Tashkent but could reduce range to over 50% depending on air conditioning or heating requirements in the e-buses.

7-2. In Para 5-18, Goscomecology (State Committee for Ecology and Environmental Protection) provided GHG emission estimates for diesel buses within the fleet of JSC “Toshshakhartranskhizmat” (TBC) which have been adjusted reflect global emission factors (CNG buses were excluded since the replacement programme will focus on diesel buses). For emission factors for electric buses, industry standards were applied to the calculation as detailed below. To calculate the direct GHG emission reductions from TAILEV investments from Years 2 to 6, the following calculations were made:

- Goscomecology estimated that 1 passenger diesel bus (40 passengers) will generate GHG emissions of 248.0 tCO_{2eq} per year. This assumes the diesel emissions factor for a bus is 1,179 g/km (at 50 km/hr) with each diesel bus traveling 211,423 km annually (or 58.7 km per hour if the bus is operational for 12 hrs per day for 300 days). In the absence of actual data on diesel fuel efficiency of TBC’s buses and referencing 2 sites on diesel fuel efficiency⁷⁰, fuel efficiency of TBC’s diesel buses was assumed to be 44 liters/100 km (that should be updated at the commencement of TAILEV). The calculation for GHG emissions has thus been adjusted, reducing baseline average bus speeds in Tashkent to 25 kph and the average distance traveled by each bus daily in the order of 300 km (based on the 9.1 km Fargona Yuli BRT corridor and the 7.5 km Shota Rustaveli GUTC); the annual GHG emissions for each diesel bus should be in the order of 106 tCO_{2eq} per year⁷¹ assuming each diesel bus travels 90,000 km annually;
- The estimate of emissions from an electric bus is based on the *kWh of battery charge per kilometer traveled times the grid emissions factor*. There has been a steady improvement in the kWh/km metric since 2015. Current efficiencies of this metric now are in the range of 1.29 kWh/km in 2016⁷² improving

⁶⁹ https://thegef.org/sites/default/files/publications/GEF_CalculatingGHGbenefits_webCD_1.pdf

⁷⁰ According to the Alternative Fuels Data Center of the US Dept of Energy (<https://afdc.energy.gov/data/10310>), diesel bus fuel efficiency is in the order of 72 liters/100 km. A 2013 study in China: <https://www.sciencedirect.com/science/article/abs/pii/S0306261913007642#:~:text=The%20average%20values%20of%20distance,consumption%20relative%20to%20diesel%20buses> notes that this diesel bus fuel efficiency is 32.6 liters/100 km.

⁷¹ The fuel efficiency of a diesel bus of 44 liters diesel/100 km converts to 118 kg CO₂/100 km. For a daily travel distance of 300 km, each diesel bus emits 354 kg CO₂/day. Over an assumed 300 days of operation during a year, this converts to 106,000 kg CO₂/year

⁷² <https://cleantechnica.com/2016/02/22/electric-buses-efficient-as-he-nrel-finds/>

1.13 kWh/km in 2020⁷³. With battery technology improving, the 1.13 factor was used in this calculation along with the current grid emission factor for Uzbekistan of 0.585 tCO_{2eq}/MWh. Thus, emissions from an electric bus traveling displacing a diesel bus is 60 tCO_{2eq} (= 1.13 kWh/km x 0.585 tCO_{2eq}/MWh x 90,000 km);

- Emission reductions resulting from the displacement of diesel buses to an electric bus is 46 tCO_{2eq}/year (106 tCO_{2eq} – 60 tCO_{2eq});
- Based on the aforementioned, *direct lifetime GHG emission calculations for 30 electric buses operating along the pilot GUTC is 20,700 tCO_{2eq}*, (in line with 15-year lifetime investment, with the only GHG emission reductions coming from fossil fuel savings and not modal switches from passenger cars to public transport⁷⁴);
- Updating of this baseline is included in TAILEV project activities as defined within Output 3.1 that specifies baseline surveys for GHG emissions of the GUTC are to be conducted as soon as TAILEV is commenced and prior to GUTC construction.

7-3. With regards to direct energy saved with conversions from diesel buses to electric buses, the following calculations are provided:

- For diesel buses, each bus is assumed to use 1,422,000 MJ of energy⁷⁵;
- For electric buses, each bus is assumed to use 366,120 MJ (101,700 kWh)⁷⁶;
- Energy saved for Indicator 6.3 of the GEF Core Indicators is assumed to be 30 diesel buses each for 15 years or 475,146,000 MJ for diesel buses.

7-4. Direct GHG emission reductions could also be counted during Years 4, 5 and 6 if:

- electric vehicle investments were to be made in the City of Namangan for public transport;
- the GUTC concept was replicated during Years 5 and 6; and
- private sector made investments into electric vehicle fleets (such as taxi fleets, delivery vehicle fleets and private owners).

7-5. This ProDoc, however, has not made any calculations for these possible GHG emission reductions considering there is insufficient information and design criteria for their estimates although there has been an expression of interest expressed by a few private sector entities during the PPG mission in Uzbekistan during September 2019.

7-6. For indirect GHG emission reductions, GHG emission reduction estimates have been estimated according to the “Manual for Calculating Greenhouse Gas Benefits of Global Environment Facility Transportation Projects”⁷⁷ by estimating the “top-down” and “bottom-up” approaches. The *GHG emissions reduction estimate for TAILEV* is based on TAILEV’s objective of “accelerating the adoption of electric vehicles in the City of Tashkent that can be replicated in other cities in the Republic of Uzbekistan, significantly reduce greenhouse gas emissions in the transport sector, and improve urban environmental quality”.

7-7. With this in mind, the following assumptions were used in calculating the top down estimate of indirect GHG emission reductions for TAILEV:

⁷³ <https://www.wired.com/2016/09/new-electric-bus-can-drive-350-miles-one-charge/>

⁷⁴ Based on (46 tCO_{2eq} per year x 30 buses x 15 years)

⁷⁵ Based on 44liters/100 km x 90,000 km converting to 39,600 liters of diesel used by a bus annually. Assuming 35.9 MJ/liter of diesel, each diesel bus consumes 1,422,000 MJ of energy.

⁷⁶ Assumes battery efficiency of 1.13 kWh/km x 90,000 km traveled annually by each EV bus.

⁷⁷ Accessible at : <https://www.thegef.org/publications/manual-calculating-ghg-benefits-gef-transportation-projects>

- The Goscomecology estimate from Table 5-2 of 8.5 million tonnes CO_{2eq} in 2018 for road transport is a key piece of information regarding the GHG emissions from the total number of motor vehicles in Uzbekistan;
- Using the GHG emission estimates from 2013 to 2018 of road transport from Table 5-2, the average annual rise of GHG emissions from road transport over this period of time is 2.2%;
- Applying this 2.2% rise each year for 10 years for the 10 years after completion of TAILEV in 2026, a 10-year potential for GHG emission reductions from road transport can be estimated at 114 million tonnes CO_{2eq}. See Table 7-1 for this calculation;

Table 7-1: Expansion of Table 5-1 for "top-down" calculation

Year	Direct GHG emissions (million tonnes CO _{2eq})					% growth of road transport GHGs
	Road Transport	Rail	Air transport	Pipelines for nat. gas	Total	
2013	7.73	0.434	0.039	3.872	12.071	
2014	7.22	0.379	0.026	3.597	11.221	-6.6%
2015	7.98	0.497	0.026	3.626	12.125	10.5%
2016	7.60	0.389	0.03	3.729	11.746	-4.7%
2017	7.71	0.392	0.031	3.762	11.892	1.4%
2018	8.50	0.400	0.03	3.9	12.83	10.3%
2019	8.69					
2020	8.88					
2021	9.07					
2022	9.27					
2023	9.47					
2024	9.68					
2025	9.89					
2026	10.10					
2027	10.32					
2028	10.55					
2029	10.78					
2030	11.02					
2031	11.26					
2032	11.50					
2033	11.75					
2034	12.01					
2035	12.27					
2036	12.54					
	114.01	This is the P10 or the technical and economic potential GHG savings with the respective application within 10 years after the project (not including direct and direct post-project impacts)				

- The causality factor applied for the top-down GHG emission reduction estimate is 0.1. This is based on an assessment that there is interest amongst private sector investors in the uptake of electric vehicles that can extend to the general public in Uzbekistan. However, the uptake will be constrained by lack of funds to upgrade the charging infrastructure throughout the country, and the possible low price of fossil fuels, particularly CNG which the country has reserves, that may depress demand for electric vehicles;
- The *top-down indirect GHG emission reductions from TAILEV are estimated to be 11.4 million tonnes CO_{2eq}.*

7-8. The following assumptions were used in calculating the *bottom-up* estimate of indirect GHG emission reductions for TAILEV approach:

- The main investment of TAILEV during implementation for replication by the municipalities would be the construction of the 7.5 km Shota Rustaveli GUTC and the 9.1 Fargona Yuli BRT corridor and the 30 electric buses that would have been purchased and operated during TAILEV. The GHG emissions reductions from these e-bus deployments along the 7.5 km Shota Rustaveli GUTC and the 9.1 Fargona Yuli BRT corridor is 20,700 tCO_{2eq} with an estimated lifetime of 15 years as mentioned in Para 7-2;

- The MoT has expressed considerable interest in developing GUTCs with more electric buses, plans that are consistent with the 2030 Transport Concept mentioned in Paras 9 and 9. As such, the number of corridors that could be replicated after the termination of TAILEV in 2026 is estimated to be in the order of 10, assuming that there 6 more such corridors that could be developed for Tashkent and another two each for Namangan and Samarkand;
- *The bottom-up GHG emission reductions from TAILEV are estimated to be 0.207 million tonnes CO_{2eq} (20,700 x 10 GUTCs).*

7-9. Total indirect GHG emission reductions from TAILEV from top down and bottom-up estimates is 11.5 *million tonnes CO_{2eq}*.

7-10. A summary of emission reductions and energy savings from the TAILEV Project is summarized in Table 7-2.

Table 7-2: Summary of GHG emission reductions and energy savings of TAILEV Description	Quantity	Reference
Direct GHG emission reductions	20,700 tCO _{2eq}	Based on the conversion of 30 diesel buses to EVs to operate along 2 corridors. See Para 7-2
Indirect GHG emission reductions (top-down)	<i>11.4 million tCO_{2eq}</i>	See Para 7-7
Indirect GHG emission reductions (bottom-up)	<i>0.207 million tCO_{2eq}</i>	See Para 7-8.
Lifetime direct energy savings	<u><i>475,146,000 MJ</i></u>	See Para 7-3.

Annex 8: UNDP Social and Environmental Screening Procedure (SESP)

Project Information

Project Information	
1. Project Title	Tashkent - Accelerating Investments in Low Emission Vehicles (TAILEV)
2. Project Number	UNDP-NCE PIMS ID No: 6417 and GEFID No: 10282
3. Location (Global/Region/Country)	Uzbekistan

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?

Briefly describe in the space below how the Project mainstreams the human-rights based approach

Strengthening local institutions and actors through joint implementation will be one of the engagement strategies of the program. Local communities and other economic actors within the landscape will be engaged for integrated land use planning, developing road maps and monitoring plans. The project will also design and disseminate information on the benefits of improved public transport along the Shota Rustaveli GUTC with a special focus on the health and economic benefits of electric transportation to vulnerable sectors of the urban populations of Uzbek cities (i.e. women, the elderly and children). In addition, project staff will undertake efforts to ensure equal participation and engagement of women and men in the planning, implementation and monitoring of project interventions.

Through this approach, the project will contribute to several SDGs including:

- **SDG Goal 3: Ensure healthy lives and promote well-being for all at all ages**, through reducing vehicle emissions in the project area;
- **SDG Goal 8: Decent work and economic growth** through providing green jobs in the transport sector;
- **SDG Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable** through providing green urban transport in the project area.

Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment

Consistent with the GEF Policy on Gender Mainstreaming and the [UNDP Gender Equality Strategy \(2018-2021\)](#), the project includes gender dimensions that are key to its success. At the policy formulation level, inclusivity and gender mainstreaming have been included to highlight that women should be a part of this process and have their interests and concerns accounted for. This provides an

opportunity to ameliorate some of the inequities in political power that women generally encounter. TAILEV will thus contribute to the **SDG Goal 5: Achieve gender equality and empower all women and girls**. Towards that end, the project aims to:

- Maximize participation of female personnel in bus operation and maintenance;
- Ensure introduction of the electric bus fleet in Tashkent sustains improvements in gender-inclusive features;
- With strong participation of female employees, prepare and introduce into practice a long-term gender and development strategy that will define ways to make public transportation system in Tashkent more gender-friendly and to improve work places for women within all stakeholder organizations and companies involved with the Project;
- Design and disseminate information on the benefits of improved public transport along the Shota Rustaveli and Fargona Yuli GUTCs with a special focus on the health and economic benefits of electric transportation to vulnerable sectors of the urban populations of Uzbek cities (i.e. women, the elderly and children);
- Project staff undertaking efforts to ensure equal participation and engagement of women and men in the planning, implementation and monitoring of project interventions.

The following are key indicators which include a gender dimension:

- Sex-disaggregated number of direct and consequential project beneficiaries;
- Sex-disaggregated number of jobs created by the project (such as bus operators),
- Sex-disaggregated number of people reached through awareness raising events on the benefits of improved public transport along the GUTC.

Briefly describe in the space below how the Project mainstreams environmental sustainability

One of the expected outcomes of the TAILEV Project is to ensure the long-term environmental sustainability of e-vehicles and GUTCs. This will be achieved through developing public and private commitments to green urban development that can include investments into e-vehicle fleets, e-buses and privately-owned e-vehicles. It contributes to several SDGs related to environmental sustainability including:

- **SDG 12: Ensure sustainable consumption and production patterns** through increasing the energy efficiency of urban transport consumption.
- **SDG 13: Take urgent action to combat climate change and its impacts by reducing greenhouse gas emissions** through the use of e-vehicles and increasing the share of renewable energy for powering e-vehicles.

It will also contribute to target 11.6, which requires the reduction of adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

Relevant indicators to be tracked by the project include:

- Cumulative direct tonnes of CO_{2eq} emission reduction by EOP
- Cumulative direct reduction of pollutant load (for CO, NO_x and NH) along GUTC corridor (% reduction)

As designed, the Program is also consistent with the GEF target area of “climate change mitigation”, specifically CCM-1-2: Promote innovation and technology transfer for sustainable energy breakthroughs for electric drive technologies and electric mobility. Various multilateral environmental agreements and global processes including the United Nations Framework Convention on Climate Change and the Paris Agreement also inform the proposal.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? <i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses).</i>	QUESTION 3: What is the level of significance of the potential social and environmental risks? <i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i>			QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?
<i>Risk Description</i>	<i>Impact and Probability (1-5)</i>	<i>Significance (Low, Moderate, High)</i>	<i>Comments</i>	<i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i>
<p>Risk 1: Limiting women’s ability to benefit from the proposed TAILEV project throughout all phases (design, construction and operation)</p> <p>Women’s opportunities to benefit from the project might be limited by restricting or prohibiting them from engaging in the design process or being employed once the project begins operation.</p> <p>Related to risks:</p> <ul style="list-style-type: none"> - Principle 1, Human Rights; 4 - Principle 2, Gender Equality and Women’s Empowerment; 1, 2 	<p>I=2 P=2</p>	<p>Low</p>		<p>A gender strategy and action plan has been prepared for the project in order to tackle such risks. The approach adopted by the project to reduce these risks includes:</p> <ul style="list-style-type: none"> - Recruitment policies to maximize participation of female personnel in bus operation and maintenance - Ensure introduction of the electric bus fleet in Tashkent has gender-inclusive features - Defined measures to make public transportation system in Tashkent more gender-friendly and to improve work places for women within all stakeholder organizations and companies involved with the project; - Project staff undertaking efforts to ensure equal participation and engagement of women and men in the planning, implementation and monitoring of project interventions
<p>Risk 2: Risk to worker health and safety during construction and operation of the GUTC</p> <p>Workers at the construction site may be exposed to several occupational health risks including, falling from heights, accidents from moving machines, and exposure to high noise levels, and air pollutants. The health of the workers might be affected if sanitary facilities are not adequate. During operation,</p>	<p>I=3 P=2</p>	<p>Moderate</p>		<p>An Environmental and Social Management Plan (ESMP) will be prepared prior to commencement of Output 2.2. This plan will include an Occupational Health and Safety Plan and Traffic Management Plan to ensure that workers are protected during construction and operation of the Shota Rustaveli GUTC or any facility developed by TAILEV.</p>

<p>drivers of the buses may be exposed to accidents if they do not adhere to traffic regulations and speed limits.</p> <p>Related to risks:</p> <ul style="list-style-type: none"> - Principle 3, Standard 3: Community Health, Safety and Working Conditions; 3.7 				<p>The plan will include conditions under which the use of PPE (safety hats and shoes, high visibility vests, safety goggles, respiratory masks, ear plugs) is mandatory. It will ensure that first aid kits are available on site. For major injuries, emergency, primary and preventative care workers will have access to health facilities. The contractor will be required to provide adequate systems for sanitary conditions such as toilet facilities and waste bins.</p>
<p>Risk 3: Community health and safety risks from construction of the GUTC</p> <p>Road accidents may occur due to the movement of heavy machinery on existing roads and temporarily road closures. Impacts also associated with construction works include temporary traffic diversions, frequent generation of noise and dust on hauling routes. Health risks may also result from the improper transportation, disposal of solid waste and storage of used chemicals and fuel.</p> <p>Related to risks:</p> <ul style="list-style-type: none"> - Principle 3, Standard 3: Community Health, Safety and Working Conditions; 3.1,3.2 	<p>I=3 P=2</p>	<p>Moderate</p>		<p>The ESMP that will be prepared prior to project implementation will include the following:</p> <ul style="list-style-type: none"> - Traffic Management Plan during construction and operation - Plan to inform residents and businesses about road closures - Requirement for the contractor to install warning signs to raise awareness and safety issues
<p>Risk 4: Air pollution from construction activities</p> <p>Air quality might be degraded from the generation of pollutants from construction activities such as dust during earth works, fumes from asphalt mixing during road paving and exhaust from movements of heavy machinery.</p> <p>High levels of the above-mentioned pollutants put at risk the health of the workers and local residents of the project area.</p> <p>Related to risks:</p> <ul style="list-style-type: none"> - Principle 3, Standard 3: Community Health, Safety and Working Conditions; 3.1, 3.7 - Principle 3, Standard 7: Pollution Prevention and Resources Efficiency; 7.1 	<p>I=1 P=4</p>	<p>Low</p>		<p>As mentioned previously an ESMP will be prepared for this project. Measures to reduce risks generated from air pollutants will include:</p> <ul style="list-style-type: none"> - Implementation of air quality control measures (spray water regularly to suppress dust, install boards around dusty activities, regular maintenance of construction and turn off engines when not in use, cover material stockpiles, limit the speed on vehicles traveling on unpaved surface) - Implementation of occupational health and safety measures (use of personnel protective equipment)
<p>Risk 5: Water pollution during construction and operation phase</p> <p>The generated construction wastewater contains high levels of suspended material. Construction runoff might pollute nearby</p>	<p>I=1 P=2</p>	<p>Low</p>		<p>The ESMP that will be prepared for the project will include mitigation measures such as:</p> <ul style="list-style-type: none"> - Avoiding certain construction activities in rainy events - Providing portable toilets and temporary storage tanks for the generated domestic wastewater and connect it to existing

<p>water bodies and clog up drains. Domestic wastewater generated from workers may degrade the quality of nearby water bodies and affect the health of the local community using this water.</p> <p>During the operation phase, contaminated runoff from the bus terminals may contain high levels of oil and grease. Accidental spillage of oil, grease and other chemicals from bus terminals might affect nearby water bodies.</p> <p>Related to risks:</p> <ul style="list-style-type: none"> - Principle 3, Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management; 1.1 - Principle 3, Standard 3: Community Health, Safety and Working Conditions; 3.1, 3.2 - Principle 3, Standard 7: Pollution Prevention and Resources Efficiency; 7.1 			<p>sewer network or discharge it into nearby wastewater treatment plant</p> <ul style="list-style-type: none"> - Washing of machinery must be done at designated sites (area having with settling tanks) - Pretreating the surface drainage of the bus terminals before discharging it into main drainage system or natural drains (install oil separator). - Properly storing all chemicals, fuel, oil and grease material on impermeable surfaces - Spill Prevention and Management Plan during both construction and supervision
<p>Risk 6: Noise Pollution</p> <p>Noise generated from construction activities and machineries might disturb nearby sensitive receptors including residential areas. The generated noise might also affect the health of the workers.</p> <p>Related to risks:</p> <ul style="list-style-type: none"> - Principle 3, Standard 3: Community Health, Safety and Working Conditions; 3.1, 3.2, 3.7 - Principle 3, Standard 7: Pollution Prevention and Resources Efficiency; 7.1 	<p>I=1 P=4</p>	<p>Low</p>	<p>An ESMP will be conducted before the commencement of the project and will include mitigation measures to ensure that construction activities are not affecting the health of sensitive receptors (residents of nearby urban areas and workers). Measures will include:</p> <ul style="list-style-type: none"> - Restricting work to day time only - Monitor regularly noise levels near sensitive receptors - Inform residents in the project area about the construction schedule and abide by it - Control speed of heavy machineries - Regular maintenance of machinery - Ensure that workers are wearing PPEs (ear muffers) when needed
<p>Risk 7: Generation of solid waste</p> <p>Solid waste generated from construction activities includes construction and demolition (C&D) waste, removed asphalt layer, wood and metal material as well as old buses and domestic waste generated from labor camps.</p> <p>During GUTC operation, waste will be generated at bus stops and from increased passenger traffic. If not properly managed, the generated waste might impact the aesthetic quality of the GUTC. This will lead to an increase in potential for littering if bins were not available at frequent intervals.</p> <p>Related to risks:</p>	<p>I=3 P=4</p>	<p>Moderate</p>	<p>As mentioned an ESMP will be prepared for this project. it will include proposed mitigation measures to eliminate this risk through:</p> <ul style="list-style-type: none"> - Disposal C&D waste in licensed sites or reuse it whenever possible - Proper storage and disposal or reuse of used oil - Safe storage of used batteries with proper precautionary measures before they are taken away by specialized vendors <p>During its operation, the Tashkent Department of Beautification will undertake measures to ensure the aesthetic quality of the Shota Rustaveli GUTC by providing waste bins for disposal of solid waste at frequent intervals along the GUTC.</p>

<ul style="list-style-type: none"> - Principle 3, Standard 3: Community Health, Safety and Working Conditions; 3.1,3.2 - Principle 3, Standard 7: Pollution Prevention and Resources Efficiency; 7.1 			
<p>Risk 8: Loss of livelihood for local business due to access restrictions during construction of the GUTC</p> <p>Owners of the shops along the proposed road might be economically affected due to the removal of parking lots near their shops.</p> <p>Related to risks:</p> <ul style="list-style-type: none"> - Principle 3, Standard 5: Displacement and resettlement; 5.2 	I=3 P=4	Moderate	Before the implementation of the project, a participatory process will be undertaken with affected communities including shop owners in order to take their concerns in to consideration. As such a stakeholder engagement plan has been prepared to address these issues.
QUESTION 4: What is the overall Project risk categorization?			
Select one (see SESP for guidance)		Comments	
<i>Low Risk</i>		<input type="checkbox"/>	
<i>Moderate Risk</i>		<input checked="" type="checkbox"/>	As the project has been categorized as a Moderate Risk Projects, an Environmental and Social Management Framework has been prepared and a standalone ESMP will be undertaken prior to commencement of project activities. The ESMP will describe how potential risks can be avoided or when avoidance is not possible, minimized, mitigated and managed. The ESMP will include an Occupational Health and Safety Plan, a Traffic Management Plan and a Spill Prevention and Management Plan. In addition, a Stakeholder Engagement Plan and Gender Strategy and Action Plan have already been prepared to ensure participation of all relevant stakeholders and women within the project area.
<i>High Risk</i>		<input type="checkbox"/>	
QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?			
Check all that apply		Comments	
<i>Principle 1: Human Rights</i>		<input checked="" type="checkbox"/>	The project will provide means for local communities and affected populations to raise concerns where activities may adversely impact them through a Stakeholder Engagement Plan.

	Principle 2: Gender Equality and Women's Empowerment	<input checked="" type="checkbox"/>	The implementation of a gender strategy and action plan will address risks of excluding women from decision making in and from benefiting from project
	1. Biodiversity Conservation and Natural Resource Management	<input checked="" type="checkbox"/>	The risk of pollution of natural water bodies within the project area from discharged wastewater and improper disposal of generated waste can be minimized through the adoption of ESMP measures.
	2. Climate Change Mitigation and Adaptation	<input type="checkbox"/>	No identified risks
	3. Community Health, Safety and Working Conditions	<input checked="" type="checkbox"/>	The local community will be exposed to health and safety risks mainly during construction of the Shota Rustaveli GUTC, including noise and air pollution, traffic disruption and water pollution. An ESMP will be prepared to address all these risks and minimize them to the extent possible.
	4. Cultural Heritage	<input type="checkbox"/>	No identified risks
	5. Displacement and Resettlement	<input checked="" type="checkbox"/>	Owners of the shops along the proposed road who may be economically affected due to the removal of parking lots near their shops will be consulted as part of the Stakeholder Engagement Plan.
	6. Indigenous Peoples	<input type="checkbox"/>	Not applicable.
	7. Pollution Prevention and Resource Efficiency	<input checked="" type="checkbox"/>	Air emissions, wastewater discharge and improper waste disposal will be addressed in the ESMP to ensure elimination and/or minimization of these risks, notably during the construction phase.

Final Sign Off

<i>Signature</i>	<i>Date</i>	<i>Description</i>
QA Assessor		UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have “checked” to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have “cleared” the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases, PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks		
Principles 1: Human Rights		Answer (Yes/No)
1.	Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
2.	Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? ⁷⁸	No
3.	Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	No
4.	Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	Yes
5.	Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	No
6.	Is there a risk that rights-holders do not have the capacity to claim their rights?	No
7.	Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	No
8.	Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Principle 2: Gender Equality and Women's Empowerment		
1.	Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	Yes
2.	Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	Yes
3.	Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	No
4.	Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? <i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i>	No
Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
1.1	Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? <i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i>	Yes
1.2	Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	No
1.3	Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	No
1.4	Would Project activities pose risks to endangered species?	No

⁷⁸ Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

1.5	Would the Project pose a risk of introducing invasive alien species?	No
1.6	Does the Project involve harvesting of natural forests, plantation development, or reforestation?	No
1.7	Does the Project involve the production and/or harvesting of fish populations or other aquatic species?	No
1.8	Does the Project involve significant extraction, diversion or containment of surface or ground water? <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i>	No
1.9	Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)	No
1.10	Would the Project generate potential adverse transboundary or global environmental concerns?	No
1.11	Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area? <i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are consequential, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.</i>	No
Standard 2: Climate Change Mitigation and Adaptation		
2.1	Will the proposed Project result in significant ⁷⁹ greenhouse gas emissions or may exacerbate climate change?	No
2.2	Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	No
2.3	Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i>	No
Standard 3: Community Health, Safety and Working Conditions		
3.1	Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	Yes
3.2	Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	Yes
3.3	Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	No
3.4	Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	No
3.5	Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
3.6	Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	No
3.7	Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	Yes
3.8	Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)?	No

⁷⁹ In regards to CO₂, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and consequential sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	No
Standard 4: Cultural Heritage		
4.1	Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect, and conserve Cultural Heritage may also have inadvertent adverse impacts)	No
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	No
Standard 5: Displacement and Resettlement		
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	No
5.2	Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	Yes
5.3	Is there a risk that the Project would lead to forced evictions? ⁸⁰	No
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	No
Standard 6: Indigenous Peoples		
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	No
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	No
6.3	Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the Project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? <i>If the answer to the screening question 6.3 is “yes” the potential risk impacts are considered potentially severe and/or critical and the Project would be categorized as either Moderate or High Risk.</i>	No
6.4	Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No
6.5	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.6	Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	No
6.7	Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	No
6.8	Would the Project potentially affect the traditional livelihoods, physical and cultural survival of indigenous peoples?	No
6.9	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	No
Standard 7: Pollution Prevention and Resource Efficiency		
7.1	Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	Yes

⁸⁰ Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

7.2	Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	Yes
7.3	Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i>	No
7.4	Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	No
7.5	Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	No

Annex 9: UNDP Risk Register

#	Description	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner
1	Unwillingness of municipal partners (Tashkent, Samarkand and Namangan) to develop GUTCs on the basis of best international practices that will maximize corridor ridership and economic opportunities	Organizational, financial	Ridership along both GUTCs does not meet expectations for GHG emission reductions and urban environmental improvements. In addition, interest in replicating GUTCs will be reduced reducing the long-term impact of TAILEV. L = 1 I = 4 Low risk	Activities in Output 2.1 are designed to strengthen the knowledge of GUTC decision makers through informing them of best international practices for such corridors. This will include study tours to cities with high standards of green urban transit corridors.	Project manager
2	Lack of knowledge amongst bus company operational and maintenance personnel to deal with electric buses operational and technical issues	Operational	Ridership along GUTCs does not meet expectations for GHG emission reductions. L = 3 I = 2 Moderate risk	Activities in Outputs 2.3 and 3.4 were designed to mitigate this risk. This will involve training of bus operational and maintenance personnel to undertake high voltage training (mainly for bus company staff) and new maintenance cycles, and training to improve their understanding of “very cold and very hot bus operations”, correct charge monitoring, conducting on-road repair programs, power loss plans, effective and efficient scheduling to allow for charging, and the impact of additional weight of e-buses on road infrastructure	Project manager
3	Reluctance of private companies to own and operate e-buses;	Operational	Scale-up of the use of electric vehicles is hampered thus reducing the long-term impact of TAILEV of GHG emission reductions from the transport sector. L = 3 I = 2 Moderate risk	Outputs 4.1 and 4.3 are designed to provide support for scale-up plans for e-vehicles and e-buses that would include use of financial, technical and environmental information generated from the pilot Shota Rustaveli GUTC from Outcome 2. This would importantly include financial institutions who could provide unique financial products to these private enterprises.	Project manager
4	Limiting women’s ability to benefit from TAILEV throughout all phases (design, construction and operation);	Social	Pilot Shota Rustaveli GUTC and e-bus fleet does not fully address inclusivity of green urban transport. As such, social benefits of the GUTC and low carbon public transport are not fully realized. L = 2 I = 2 Low risk	TAILEV has a gender action plan that will include amongst a number of actions recruitment policies to maximize participation of female personnel in bus operation and maintenance and ensuring introduction of the electric bus fleet and the pilot Shota Rustaveli GUTC have gender-inclusive features. Further details are provided in Annex 7 – Risk 1.	Project manager

#	Description	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner
5	Environmental impacts during GUTC construction including increased air, water and noise pollution and solid waste generation, increasing health and safety risks of workers and the community;	Environmental	Failure to address these impacts may result in stoppages or delays in construction of the GUTC. L = 2 I = 3 Moderate risk	Environmental and Social Management Plan (ESMP) will be prepared prior to commencement of activities associated with Output 2.2. This plan will include an Occupational Health and Safety Plan and Traffic Management Plan to ensure that workers and the community are protected during construction and operation of the Shota Rustaveli GUTC or any facility developed by the project. Further details are provided in Annex 7 – Risks 2 to 7.	Project Manager
6	Loss of livelihood for local business due to access restrictions during construction of the Shota Rustaveli GUTC	Social	Failure to address these impacts may result in stoppages or delays in construction of the Shota Rustaveli GUTC. L = 1 I = 2 Low risk	Before the implementation of pilot Shota Rustaveli GUTC, a stakeholder engagement plan will be executed. This would include a participatory process to be undertaken with the affected shop owners whose businesses may be impacted as a part of Output 2.1.	Project manager
7	Possible COVID-19 related risks and their effect to the i) transport preferences of the community and in turn its effect to the project implementation, ii) possible effects of post COVID-19 era to the priority setting of the government organizations, iii) any other limitations that cannot be guessed at this stage caused by COVID-19 .	Social Operational	Failure to assessment and addressing of these risks may affect the project success. L = 2 I = 3 Moderate risk	The project will continuously assess the impact of COVID-19 in the areas related to the project context. This will commence in the inception period of the project and early findings and project measures to any rising COVID-19 related risks will be addressed with a participatory approach. These assessments will both evaluate the possible negative effects of COVID-19 as well as any “green” opportunities raising.	

Annex 10: Overview of technical consultancies and technical services to be provided by UNDP

Consultant	Time Input	Tasks, Inputs and Outputs
<i>For Project Management</i>		
<i>Local / National contracting</i>		
<p><i>Project Manager (PM)</i> <i>Rate: \$525/week</i></p>	<p><i>52 weeks annually for 6 years</i></p>	<p><i>The PM along with the Chief Technical Advisor (CTA) will be responsible for the overall management of the project including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors.</i></p> <p><i><u>PM Duties and Responsibilities</u></i></p> <ul style="list-style-type: none"> <i>• Manage the overall conduct of the project;</i> <i>• Plan the activities of the project and monitor progress against the approved workplan;</i> <i>• Execute activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work;</i> <i>• Monitor events as determined in the project monitoring plan, and update the plan as required;</i> <i>• Provide support for completion of assessments required by UNDP, spot checks and audits;</i> <i>• Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form;</i> <i>• Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports;</i> <i>• Monitor progress, watch for plan deviations and make course corrections when needed within project board-agreed tolerances to achieve results;</i> <i>• Ensure that changes are controlled, and problems addressed;</i> <i>• Perform regular progress reporting to the project board as agreed with the board, including measures to address challenges and opportunities;</i> <i>• Prepare and submit financial reports to UNDP on a quarterly basis;</i> <i>• Manage and monitor the project risks – including social and environmental risks - initially identified and submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;</i> <i>• Capture lessons learned during project implementation;</i> <i>• Prepare revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required;</i> <i>• Prepare the inception report no later than one month after the inception workshop;</i>

Consultant	Time Input	Tasks, Inputs and Outputs
		<ul style="list-style-type: none"> • <i>Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR;</i> • <i>Prepare the GEF PIR;</i> • <i>Assess major and minor amendments to the project within the parameters set by UNDP-NCE;</i> • <i>Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans;</i> • <i>Monitor and track progress against the GEF Core indicators;</i> • <i>Support the Mid-term review and Terminal Evaluation process.</i> <p><u><i>Required skills and expertise</i></u></p> <ul style="list-style-type: none"> • <i>A university degree (MSc or PhD) in a subject related to urban transport management or environmental sciences.</i> • <i>At least 5 years of demonstrable project/programme management experience.</i> • <i>At least 5 years of experience working with ministries, national or provincial institutions that are concerned with infrastructure development and/or environmental management.</i> <p><u><i>Competencies</i></u></p> <ul style="list-style-type: none"> • <i>Strong leadership, managerial and coordination skills, with a demonstrated ability to effectively coordinate the implementation of large multi-stakeholder projects, including financial and technical aspects.</i> • <i>Ability to effectively manage technical and administrative teams, work with a wide range of stakeholders across various sectors and at all levels, to develop durable partnerships with collaborating agencies.</i> • <i>Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project.</i> • <i>Ability to coordinate and supervise multiple personnel in their implementation of technical activities in partnership with a variety of subnational stakeholder groups, including community and government;</i> • <i>Strong drafting, presentation and reporting skills;</i>

Consultant	Time Input	Tasks, Inputs and Outputs
		<ul style="list-style-type: none"> • <i>Strong communication skills, especially in timely and accurate responses to emails;</i> • <i>Strong computer skills, in particular mastery of all applications of the MS Office package and internet search;</i> • <i>Strong knowledge about the political and socio-economic context related to the Uzbekistan municipal governments, infrastructure development and the transport sector at national and subnational levels.</i> • <i>Excellent command of English and local languages.</i>
<p><i>Administrative and Finance Assistant (AFA)</i> <i>Rate:</i> <i>US\$350/week</i></p>	<p><i>52 weeks annually for 6 years</i></p>	<p><u><i>Duties and Responsibilities of AFA</i></u> <i>Under the guidance and supervision of the PM, the AFA will carry out the following tasks:</i></p> <ul style="list-style-type: none"> • <i>Assist the Project Manager in day-to-day management and oversight of project activities;</i> • <i>Assist the GSO and M&E officer in matters related to M&E and knowledge resources management;</i> • <i>Assist in the preparation of progress reports;</i> • <i>Ensure all project documentation (progress reports, consulting and other technical reports, minutes of meetings, etc.) are properly maintained in hard and electronic copies in an efficient and readily accessible filing system, for when required by PB, UNDP, project consultants and other PMU staff;</i> • <i>Provide PMU-related administrative and logistical assistance;</i> • <i>Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the Project Manager;</i> • <i>Review project expenditures and ensure that project funds are used in compliance with the Project Document and GoU financial rules and procedures;</i> • <i>Validate and certify FACE forms before submission to UNDP;</i> • <i>Provide necessary financial information as and when required for project management decisions;</i> • <i>Provide necessary financial information during project audit(s);</i> • <i>Review annual budgets and project expenditure reports, and notify the Project Manager if there are any discrepancies or issues;</i> • <i>Consolidate financial progress reports submitted by the responsible parties for implementation of project activities;</i> • <i>Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports.</i>

Consultant	Time Input	Tasks, Inputs and Outputs
<i>For Technical Assistance (including Monitoring & Evaluation)</i>		
<i>Local / National contracting</i>		
<i>Chief Technical Advisor (CTA) Rate: \$525/week</i>	<i>52 weeks annually for 6 years</i>	<ul style="list-style-type: none"> • <i>Provide management oversight for TAILEV in close collaboration with PM as required and recommend actions that focus work plans on achieving key milestones in a timely manner;</i> • <i>Recommend special expertise to be deployed on the Project to assist in its achievement of key milestones, and provide the interface between Project team and key specialist consultants, both domestic and international when appropriate;</i> • <i>Provide oversight to the program where pilot e-bus fleet can be managed and operated as public service contracts under the new urban transport authority in Tashkent and other large Uzbek cities;</i> • <i>Ensure all technical reports, equipment, deliverables and any other products or specific terms of references that are produced or purchased by the project are at highest appropriate quality;</i> • <i>Facilitate access of UNDP technical teams as per their oversight role to any technical products and deliverables of key activities both in terms of ad hoc requests and standard procedures;</i> • <i>Provide guidance on baseline characterization of air quality in Tashkent and its causal impacts from improvements to public urban transport;</i> • <i>Contribute to measures to improve traffic flow along the pilot GUTC and other selected traffic corridors of Tashkent;</i> • <i>Recommend implementation modalities for measures to improve traffic flows and traffic management including parking policies along the pilot Shota Rustaveli GUTC;</i> • <i>Under the guidance of the PM, international expert and TBCs, collect on-line data from the TBC bus dispatch system for monitoring private bus operations including number of passengers carried, fares collected, fuel consumed and emissions;</i> • <i>Contribute to workshops in Outcome 4 and to national codes, standards and policies on Outcome 1;</i> • <i>Provide recommendations for other corridors where improved traffic flow measures can be replicated.</i>
<i>Procurement Specialist (PS) Rate: \$410/week</i>	<i>52, 22 and 12 wks for Yrs 1 to 3 respectively</i>	<ul style="list-style-type: none"> • <i>Apply best international standards from the ITE to contracts for private bus operators, and ensure that there are clauses that can be practically used by municipal contract managers to enforce conditions of contract;</i>

Consultant	Time Input	Tasks, Inputs and Outputs
		<ul style="list-style-type: none"> • <i>Under the guidance of the ITE, formulate the public service delivery contracting arrangements in close collaboration with ToshkentboshplanLITI for construction of civil works of the pilot Shota Rustaveli GUTC;</i> • <i>Advise on procurement and tendering approach for pilot e-bus fleet in collaboration with the ITE and TBC;</i> • <i>Take lead on assessing e-bus tender and prepare recommendations for acceptance and refusal.</i>
<i>Urban Planning Specialist (UPS) Rate: \$410/week</i>	<i>52 weeks annually for 6 years</i>	<ul style="list-style-type: none"> • <i>Assist ToshkentboshplanLITI in technical and cost evaluations of proposed civil works required for pilot Shota Rustaveli GUTC infrastructure including road modifications, sidewalks, bicycle lanes, bus stops, traffic signals and signage;</i> • <i>Provide recommendations on the suitability of selected corridors for GUTCs that will require modifications for improved public transport systems and integrated traffic management measures;</i> • <i>Assist in the ToshkentboshplanLITI assessment of bankable feasibility designs and cost estimates of infrastructure works for pilot Shota Rustaveli GUTC that can be submitted to bank for loan finance;</i> • <i>Provide oversight to detailed designs for pilot Shota Rustaveli GUTC for tendering and construction;</i> • <i>Provide oversight to construction quality of pilot Shota Rustaveli GUTC to ensure civil works are constructed according to designs, and make recommendations for field changes wherever appropriate;</i> • <i>Assist in the preparation of replication plans for the development of other GUTCs.</i>
<i>Public Transport Specialist (PTS) Rate: \$410/week</i>	<i>52 weeks annually for 6 years</i>	<ul style="list-style-type: none"> • <i>Provide guidance to the IEBS on local nuances to the development of urban transport projects;</i> • <i>Contribute to the holistic planning of the pilot e-bus fleet along the pilot Shota Rustaveli GUTC under the guidance of the IEBS and IGUDE;</i> • <i>Organize and conduct key actions for data and information collection and stakeholder consultations;</i> • <i>Contribute towards demonstration BRT route design for the Fargona Yuli and its holistic aspects such as feeder routes and economic development at transit points</i>
<i>Gender and Safeguards Officer (GSO) Rate: \$410/week</i>	<i>12 weeks annually for 6 years</i>	<ul style="list-style-type: none"> • <i>Monitor progress in implementation of the project Gender Action Plan ensuring that targets are fully met and the reporting requirements are fulfilled;</i> • <i>Oversee/develop/coordinate implementation of all gender-related work throughout the duration of TAILEV;</i> • <i>Review the Gender Action Plan annually, and update and revise corresponding management plans as necessary;</i> • <i>Ensure reporting, monitoring and evaluation fully address the gender issues of the project;</i> • <i>Monitor progress in development/implementation of the project ESMP/ESMF ensuring that UNDPs SES policy is fully met and the reporting requirements are fulfilled;</i>

Consultant	Time Input	Tasks, Inputs and Outputs
		<ul style="list-style-type: none"> • <i>Oversee/develop/coordinate implementation of all safeguard related plans;</i> • <i>Ensure social and environmental grievances are managed effectively and transparently;</i> • <i>Review the SESP annually, and update and revise corresponding risk register; mitigation/management plans as necessary;</i> • <i>Ensure full disclosure with concerned stakeholders;</i> • <i>Ensure environmental and social risks are identified, avoided, mitigated and managed throughout project implementation;</i> • <i>Work with UNDP’s M&E officer to ensure reporting, monitoring and evaluation fully address the safeguard issues of the project.</i>
<i>International / Regional and global contracting</i>		
<i>International Evaluation Specialist (IES)</i> <i>Rate:</i> <i>US\$4,000/week</i>	<i>6 wks in late Yr 3</i>	<p><i>Under the guidance and supervision of the RTA, PM and CTA, the IES will undertake a Mid-Term Review (MTR) of TAILEV within the MTR framework provided by “Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF- Financed Projects”, with the assessment of project strategy, progress towards results, project implementation and adaptive management, and sustainability. The MTR team will conduct the following tasks (primarily under Component 2):</i></p> <ul style="list-style-type: none"> • <i>Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data);</i> • <i>Define technical issues and questions to be addressed by the MTR prior to the field visit;</i> • <i>Determine key data and information for field collection in close collaboration with the PMU;</i> • <i>Determine the suitable sites to be visited and stakeholders to be interviewed with the PM and CTA,</i> • <i>Conduct TAILEV field mission to the Republic of Uzbekistan that will consist of:</i> <ul style="list-style-type: none"> ○ <i>meetings with relevant project stakeholders, beneficiaries, the GEF Operational Focal Point (OFP), etc. for the collection of data and triangulated information;</i> ○ <i>visit to site works to observe physical progress; and</i> ○ <i>presentation of the MTR mission preliminary findings, conclusions and recommendations to stakeholders in the country, including the GEF OFP, at the end of the mission;</i> • <i>Prepare the draft MTR report, and share this with UNDP Uzbekistan and UNDP Regional (who will also share with stakeholders) for feedback and comments;</i>

Consultant	Time Input	Tasks, Inputs and Outputs
		<ul style="list-style-type: none"> • <i>Revise the draft project MTR report based on feedback and comments and submit a final version of MTR according to UNDP-NCE standards.</i>
<i>International Evaluation Specialist (IES)</i> <i>Rate:</i> <i>US\$4,000/week</i>	<i>7 wks late in Yr 6</i>	<p><i>Under the guidance and supervision of the RTA, PM and CTA, the IES will undertake a Terminal Evaluation of TAILEV with the following tasks:</i></p> <ul style="list-style-type: none"> • <i>Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data);</i> • <i>Define technical issues and questions to be addressed by the evaluation prior to the field visit;</i> • <i>Determine key data to collect in the field utilizing the assistance of the PMU;</i> • <i>In coordination with the PM and CTA, determine the suitable sites to be visited and stakeholders to be interviewed;</i> • <i>Prepare an inception report that streamlines the specific questions to address key evaluation issues, specific methods to be used and data to be collected on field visits, confirms evaluation methodology, draft theory of change, and tentative agenda for field work;</i> • <i>Provide briefing with UNDP Regional in Istanbul prior to conducting the evaluation;</i> • <i>Conduct field mission to the Republic of Uzbekistan that will consist of:</i> <ul style="list-style-type: none"> ○ <i>meetings with relevant TAILEV stakeholders, beneficiaries, the GEF Operational Focal Point (OFP), etc. for the collection of data and clarifications;</i> ○ <i>visit to TAILEV site works to observe physical progress; and</i> ○ <i>presentation of the TAILEV evaluation mission preliminary findings, conclusions and recommendations to stakeholders in the country, including the GEF OFP, at the end of the mission;</i> • <i>Prepare the draft evaluation report, and share this with UNDP Uzbekistan and UNDP Regional (who will also share with stakeholders) for feedback and comments;</i> <p><i>Revise the draft project evaluation report based on feedback and comments and submit a final version of the Terminal Evaluation according to UNDP-NCE standards.</i></p>
<i>International Electric Bus Specialist (IEBS)</i> <i>Rate:</i> <i>US\$4,000/week</i>	<i>6, 6, 8, 14, 14 and 3 wks for Yrs 1 to 6 respectively</i>	<ul style="list-style-type: none"> • <i>Under the guidance and supervision of the PM and CTA, the IEBS will carry out the following tasks:</i> • <i>Provide oversight to activities related to the planning, procurement and operations of the pilot e-bus fleet under Outcome 2;</i> • <i>Advise on the best technical approaches to e-bus procurement and charging infrastructure that will minimize risks related to new electric vehicle technologies that includes international experiences</i>

Consultant	Time Input	Tasks, Inputs and Outputs
		<p><i>with various e-bus technologies, shortlisting of e-bus and charging infrastructure suppliers, and issues related to warranties and the ranges of e-buses on one battery charge;</i></p> <ul style="list-style-type: none"> • <i>Ensure all technical reports, equipment, deliverables and any other products or specific terms of references that are produced or purchased by the project are at highest appropriate quality;</i> • <i>Facilitate access of UNDP technical teams as per their oversight role to any technical products and deliverables of key activities both in terms of ad hoc requests and standard procedures;</i> • <i>Advise and facilitate visits to other cities where e-bus fleets are being procured and operational and where TBC personnel can benefit from foreign experience;</i> • <i>Provide oversight on training programme for e-bus operations and maintenance staff with the intent of infusing best international practices for the pilot e-buses, and in close cooperation with the e-bus and charging infrastructure suppliers;</i> • <i>Provide oversight in the collection and analysis of pilot e-bus operational data for the purposes of comparison with other e-bus fleets globally from Outcome 2;</i> • <i>Contribute to assessment of energy consumption and associated GHG in the existing public transport fleet in Tashkent city based on the information collected by local experts;</i> • <i>Contribute to the efforts in Output 3.1 to prepare guidelines for EV fleet procurement, operation and maintenance through exposing JSC “Toshshakhartranskhizmat” (TBC) and MoT to best international practices for e-bus and charging infrastructure operation and maintenance;</i> • <i>Contribute to Output 3.4 in workshops and technical assistance with the aim to sustain high levels of ridership on public transit e-buses along GUTCs;</i> • <i>Contribute to analysis of information to formulate MoT policies, legal and regulatory and institutional framework on the development of public transport e-mobility in Uzbekistan;</i> • <i>Contribute to efforts under Outputs 4.1 and 4.3 to scale of the use of e-buses and electric vehicles in Tashkent city as well as other municipalities in Uzbekistan. This would include attendance at workshops and seminars to provide assistance to public and private sector investors in carrying feasibility studies and business plans that include electric vehicles.</i>
International Green Urban Development	6, 6, 8, 14, 14 and 3 wks for	<p><i>Under the guidance and supervision of the PM and CTA, the IGUDE will carry out the following tasks:</i></p> <ul style="list-style-type: none"> • <i>Provide guidance and knowledge on best practices for the development of the pilot Shota Rustaveli GUTC for the City of Tashkent (under Output 2.1) and other Uzbek cities as required (under Output</i>

Consultant	Time Input	Tasks, Inputs and Outputs
<p><i>Specialist (IGUDE)</i> <i>Rate:</i> <i>US\$4,000/week</i></p>	<p><i>Yrs 1 to 6 respectively</i></p>	<p><i>4.1) including segregated bus lanes, transit-priority signaling, NMV infrastructure, vegetation selection and placement, and features to improve accessibility of the GUTC and e-buses for females and other vulnerable groups;</i></p> <ul style="list-style-type: none"> <i>• Provide guidance for the use of computing tools (such as dynamic traffic modeling) that can aid in GUTC investment decisions;</i> <i>• Provide oversight in the implementation of pilot Shota Rustaveli GUTC construction (under Output 2.2) to ensure best practices and design features are constructed and utilized during operations of the GUTC;</i> <i>• Contribute to feasibility studies and business plans for the scaling up of additional GUTCs in Tashkent and other cities in Uzbekistan (under Output 4.1) in close collaboration with the respective municipal governments;</i> <i>• Contribute to lessons learned report (Output 4.4) and municipal and national codes, standards and regulations for GUTCs (Outputs 1.2, 1.3 and 1.4).</i>
<p><i>International Procurement Specialist (IPS)</i> <i>Rate:</i> <i>US\$4,000/week</i></p>	<p><i>4, 4 and 3 wks for Yrs 1 to 3 respectively</i></p>	<p><i>Under the guidance and supervision of the PM and CTA, the IPS will carry out the following tasks:</i></p> <ul style="list-style-type: none"> <i>• Provide guidance to the Project team on public procurement rules;</i> <i>• Assist in preparing strategies and action plans for the procurement of imported low carbon technologies for the pilot e-bus fleet as recommended by the PMU and TBC personnel;</i> <i>• Assist municipal procurement personnel to purchase imported low carbon technologies employing procurement strategies that consider the service life of the technology instead of only the purchase cost;</i> <i>• Provide advice on best international standards for contracting private bus operators that would strengthen the municipality's ability manage and enforce compliance of the contract;</i> <i>• Provide lead on contracting arrangements for demonstration civil works under the best international standards for public service delivery contract.</i>

Annex 11: Environmental Social Management Framework (ESMF)

For UNDP-supported, GEF-financed project in Uzbekistan:

Project Title:	Tashkent - Accelerating Investments in Low Emission Vehicles (TAILEV)		
Atlas Project ID (formerly Award ID):		Atlas Output ID (formerly Project ID):	
UNDP-NCE PIMS ID number:	6417	GEF ID number:	10282
Country:	Uzbekistan		
Implementing Partner:	Ministry of Transport		
Management Arrangements:	National Implementation Modality (NIM)		
Co-financing:	40,570,000 USD		
Total Project Cost:	44,369,725 USD		
CEO Endorsement/Approval	Pending	Expected Project Start	01 July 2021

Public Consultation/Disclosure Notice

Date: ----

The United Nations Development Programme (UNDP) is requesting feedback on the attached draft Environmental and Social Management Framework and associated Social and Environmental Screening Procedures for this project.

Comments and questions can be sent to the following address:

United Nations Development Programme

Physical Address:

Tel:

Fax:

Email:

Website: <http://www.uz.undp.org/>

The last date for receiving of comments is TBD.

XI.1 Introduction

11-1 This Environmental and Social Management Framework (ESMF) was developed for the UNDP-supported, GEF-financed project “Tashkent - Accelerating Investments in Low Emission Vehicles (TAILEV)” in Uzbekistan.

Project Objectives

11-2 The project aims to accelerate the adoption of electric vehicles in the City of Tashkent that can be replicated in other cities in the Republic of Uzbekistan, significantly reduce greenhouse gas emissions in the transport sector, and improve urban environmental quality. This will be done by providing evidence, through a demonstration, of the technical, financial and environmental sustainability to plan for scale-up of low-carbon e-mobility and Green Urban Transportation Corridors (GUTCs). The project will also support the government to establish an institutional framework and adopt a strategy for the promotion of low-carbon electric mobility and GUTCs.

11-3 The project will directly support the Government of Uzbekistan in achieving the following SDGs:

- **SDG Goal 3: Ensure healthy lives and promote well-being for all at all ages**, through reducing vehicle emissions in the project area;
- **SDG Goal 5: Achieve gender equality and empower all women and girls** through inclusivity and gender mainstreaming at all project levels;
- **SDG Goal 8: Decent work and economic growth** through providing green jobs in the transport sector;
- **SDG Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable** through providing green urban transport in the project area;
- **SDG 12: Ensure sustainable consumption and production patterns** through increasing the energy efficiency of urban transport consumption.
- **SDG 13: Take urgent action to combat climate change and its impacts by reducing greenhouse gas emissions** through the use of e-vehicles and increasing the share of renewable energy for powering e-vehicles.

It will also contribute to target 11.6, which requires the reduction of adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

Project Description

11-4 Project Implementing Partner: Ministry of Transport

11-5 Project components: *Component 1: Institutionalization of low carbon e-mobility and green urban development.* Outputs of this component include national and municipal strategies on electric vehicles (EVs) and GUTCs and on promoting increased adoption of EVs and improved urban environmental conditions, new codes and standards for EVs and development of GUTCs corridors, and national policy statement on EVs and GUTCs.

11-6 *Component 2: Short term barrier removal through low-carbon e-mobility demonstrations and green urban development in Tashkent.* This includes conducting a feasibility study on GUTCs in Tashkent with emphasis on e-buses for public transport, fast charging stations, NMV infrastructure to increase public transport ridership, and green belts. It also includes an operational GUTC demo project in Tashkent with measures to attract and increase ridership along corridor with e-buses and green belts for maintaining urban resilience to climate change. The demo will include the development of a 7.5 km operational Shota Rustaveli GUTC in Tashkent complete with the operation of a fleet of 10 electric buses and fast charging stations that is financed by the Government of Uzbekistan.

11-7 *Component 3: Preparing for scale-up and replication of low-carbon e-mobility and green urban development.* Outputs of this component include guidelines for EV fleet procurement, operation and maintenance, an environmental monitoring program under a cell setup within State Committee on

Ecology and Environmental Protection for key environmental indicators along the Shota Rustaveli GUTC, and GUTC codes and standards. This component also includes educational outputs that includes workshops and technical assistance for municipal personnel to sustain high levels of ridership on public transit e-buses along GUTCs and a curriculum for e-vehicles and green urban transport development in higher educational institutions in Uzbekistan. In addition, workshops and technical assistance will be provided to promote and increase adoption of EVs focusing on private investment from taxi fleets, delivery companies and private owners.

- 11-8 *Component 4: Long-term environmental sustainability of low-carbon e-mobility and green urban development.* Under this component, a feasibility study and business plans will be prepared for the scale-up of e-bus fleets and additional GUTCs in Tashkent and other cities in Uzbekistan such as Samarkand and Namangan. National workshops will be held with other Uzbek municipalities to share findings of monitoring program of key environmental indicators along Tashkent GUTC, and joint actions to improve and manage urban environmental quality. An international consultancy will also be provided to prepare guidelines for policymakers and other government personnel on strategies to manage downgraded EV batteries, and the concept of extended supplier or manufacturer responsibility. A Lessons Learned Study will be prepared as a compilation of the TAILEV Project experiences in planning, implementing and operating GUTCs with EVs that can be replicated by other cities and countries regionally
- 11-9 Project demonstration sites: Tashkent.
- 11-10 The duration of the project is six years (2021-2027).

Purpose and Scope of this ESMF

- 11-11 This ESMF is a management tool to assist in managing potential adverse social and environmental impacts associated with activities of the UNDP-supported project, in line with the requirements of UNDP's SES. The implementing partner of the project and the relevant members of the project management unit will follow this ESMF during the start of the project's implementation to ensure the environmental and social risks and impacts are fully assessed and management measures are in place prior to the implementation of the relevant project activities.
- 11-12 This ESMF identifies the steps for detailed screening and assessment of the project's potential social and environmental risks, and for preparing and approving the required management plans for avoiding, and where avoidance is not possible, reducing, mitigating, and managing these adverse impacts.

Potential Social and Environmental Impacts

- 11-13 During the Project Preparation phase, the UNDP Social and Environmental Screening Procedures (SESP) was used to identify potential social and environmental risks associated with this Project. The screening highlighted the project intentions as they related to mainstreaming human rights, gender equality and women's empowerment and environment sustainability.
- 11-14 The SESP identified a total of eight risks of which four have been assessed as moderate significance and four as low significance; hence overall SESP risk categorization rating is "**moderate**". The project document includes the SESP template that details the specific environmental and social risks identified. The risks mostly apply to project Component 2 only as no risks were identified for Components 1, 3 and 4.
- 11-15 **Moderate Risk:** defined by UNDP's SESP as "Projects that include activities with potential adverse social and environmental risks and impacts that are limited in scale, can be identified with a reasonable degree of certainty, and can be addressed through application of standard best practice, mitigation measures and stakeholder engagement during Project implementation."
- 11-16 **Error! Reference source not found.** presents a summary of the safeguards triggered by the project (marked by ticks) based on the screening conducted during the project's preparation. More detailed information on project-specific risks is contained in the completed SESP completed found in Annex **Error! Reference source not found.**

Table 11-1: Summary of safeguards triggered by the project

Principle / Standard	Risk Rating
Overarching Principle	
Principle 1: Human Rights	√ Low
Principle 2: Gender Equality and Women’s Empowerment	√ Low
Principle 3: Environmental Sustainability	
Project-level Standard	
-Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management	√ Low
-Standard 2: Climate Change Mitigation and Adaptation	N/A
-Standard 3: Community Health, Safety and Working Conditions	√ Moderate
-Standard 4: Cultural Heritage	N/A
-Standard 5: Displacement and Resettlement	√ Moderate
-Standard 6: Indigenous Peoples	N/A
-Standard 7: Pollution Prevention and Resource Efficiency	√ Moderate
Number of risks in each risk rating category	
High	0
Moderate	4
Low	4
Total number of project risks	8
Overall Project Risk Categorization	Moderate
Number of safeguard standards triggered	3

XI.2 Legislation and Institutional Frameworks for Environmental and Social Matters

National Legislation, Policies and Regulations

- 11-17 The primary environmental regulator of the Republic of Uzbekistan is the State Nature Protection Committee (SNPC), which reports directly to Parliament and is responsible at national, regional and local levels for the development and enforcement of the national environmental and conservation policy, overseeing environmental compliance, the integrated environmental management across various sectors, and securing healthy environment conditions across the country.
- 11-18 The Environmental Impact Assessment (EIA) procedure in Uzbekistan is regulated by the Law on Environmental Expertise of 2000 and the Regulation on State Environmental Expertise (SEE), which was approved by the Cabinet of Ministers Decree No.491 on 31 December 2001. The decree was amended in 2005 and 2009. The regulation defines the legal requirements for EIA in Uzbekistan. SEE is the review process that the SNPC Department for SEE conducts either at the national or regional level, based on the project category determined by SNPC. SEE approval is mandatory for project financing by banks and other lenders in Uzbekistan.
- 11-19 The concept of environmental safety is enshrined in the Constitution, national laws, and the National Security Concept of the Republic of Uzbekistan. The most prominent of the national laws include:
- **Law on Nature Protection of 1992:** The law sets the legal, economic, and organizational bases for the conservation of the environment and the rational use of natural resources. It states that SEE is a mandatory measure for environmental protection, and is a prerequisite for decision-making, prohibiting project implementation without SEE approval.
 - **Law on Atmospheric Air Protection of 1996 (amended in 2006):** This law specifies standards, quality and deleterious effect norms, requirements on fuels and lubricants, production and operation of vehicles and other transport means and equipment, ozone layer protection requirements, obligations of enterprises, institutions and organizations toward atmospheric protection, and compensations for damages from atmospheric pollutions.
 - **Law on Water and Water Use of 1993:** The law regulates the protection of waters from pollution and depletion, and prevention, and improvement of water bodies.
 - **Land Code of 1998:** The code regulates land relations and provides protection of individuals and legal entities' right for land.
 - **Law on Wastes of 2002 (amended in 2011):** The principal objective of this law is to prevent negative effects of solid wastes on people's lives and health, as well as on the environment, reduce waste generation, and encourage waste reduction. The law mandates the SNPC with inspections, coordination, ecological expertise and establishing certain parameters with regard to the locations where waste may be processed.

In addition, Uzbekistan also has set a limit of maximum allowable concentrations of pollutants in ambient air of communities, admissible noise levels inside and outside buildings, and vehicle safety requirements.

International Agreements and Treaties

- 11-20 Uzbekistan is a signatory to several multilateral agreements and conventions that are relevant to the project; including but not limited to the following:
- 1993, Convention Concerning the Protection of the World Cultural and Natural Heritage;

- 1993, United Nations Framework Convention on Climate Change;
- 1995, Convention on Biological Diversity;
- 1996, Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal;
- 1999, Kyoto Protocol;
- 2018, Paris Agreement;
- 2019, Stockholm Convention on Persistent Organic Pollutants.

UNDP's Social and Environmental Standards

11-21 The project covered by this ESMF will comply with UNDP's Social and Environmental Standards (SES), which came into effect 1 January 2015. These Standards underpin UNDP's commitment to mainstream social and environmental sustainability in its programs and projects to support sustainable development and are an integral component of UNDP's quality assurance and risk management approach to programming. Through the SES, UNDP meets the requirements of the GEF's Environmental and Social Safeguards Policy.

11-22 The objectives of the SES are to:

- Strengthen the social and environmental outcomes of Programs and Projects
- Avoid adverse impacts to people and the environment
- Minimize, mitigate, and manage adverse impacts where avoidance is not possible
- Strengthen UNDP and partner capacities for managing social and environmental risks
- Ensure full and effective stakeholder engagement, including through a mechanism to respond to complaints from project-affected people

11-23 In accordance with UNDP SES policy, the SESP has been applied to the project during the project development phase. In accordance with UNDP SES policy, a SES principle or standard is 'triggered' when a potential risk is identified and assessed as having either a 'moderate' or 'high' risk rating based on its probability of occurrence and extent of impact. Risks that are assessed as 'low' do not trigger the related principle or standard.

11-24 The screening conducted during project development indicate that three of the nine social and environmental principles and standards have been triggered by project due to 'moderate' risks:

- Standard 3: Community Health, Safety and Working Conditions (due to the potential health and safety risks mainly during construction of the GUTC, including noise and air pollution, traffic disruption and water pollution);
- Standard 5: Displacement and Resettlement (due to removal of parking lots near shops along the GUTC, economically affecting the owners);
- Standard 7: Pollution Prevention and Resources Efficiency (due to potential air emissions, wastewater discharge and improper waste disposal mainly during construction).

A summary of the risk significance under each SES principle and standard, and the safeguard standards triggered by the project (indicated with ticks) are shown in **Error! Reference source not found.** in the previous section.

Gaps in Policy Framework

11-25 Further analysis of the legal and policy frameworks that apply to the project will be completed during the implementation of this ESMF, i.e. during the completion of the Environmental and Social Management Plan (ESMP), which will be described in the next section. At this stage, no gaps have been identified.

XI.3 Procedures for Screening, Assessing and Managing Social and Environmental Impacts

11-26 This ESMF has been developed as part of UNDP's due diligence process in the project cycle, following the screening of the project with the SESP template. Based on the High-Risk categorization assigned to the project and its associated risks, the following procedures for screening, assessing and managing those risks must be undertaken during the inception phase, as follows.

- a) **Targeted assessments:** In accordance with UNDP's SES policy, Moderate Risk projects normally require targeted assessments for the identified risks. The targeted assessments will be carried out by independent experts in a participatory manner with stakeholders during the inception phase. They will elaborate on the identified environmental and social risks of the project and its area of influence and design appropriate avoidance, mitigation, management, and monitoring measures. It will address all relevant issues related to the SES Overarching Principles and Project-level Standards. A key output of these assessments is an ESMP, as described next.
- b) **Standalone Environmental and Social Management Plan:** Based on the findings of the targeted assessments, an ESMP will be prepared with the aim of providing a set of avoidance, mitigation, monitoring and institutional measures – as well as actions needed to implement these measures – to achieve the desired social and environmental sustainability outcomes. Complementing what has already been identified in the ProDoc, the ESMP will further identify project activities that cannot take place until the relevant mitigation measures are approved and put in place. The measures will be adopted and integrated into the project activities, monitoring and reporting framework and budget, and captured in a revised SESP for the project.

11-27 The SESP completed for the project during project development phase will be used as the basis of this detailed assessment. Initial analysis and screening with UNDP's SESP indicate that the targeted assessments for the project would address, among other issues, the following key points:

- Assess potential economic displacement impacts on shop owners along the pilot Shota Rustaveli GUTC;
- Assess national, regional and local policy and institutional framework applying to economic displacement against UNDP standards to identify any gaps;
- Ensure that livelihood support is provided to those economically displaced;
- Appropriate linkages with implementation of the Gender Action Plan and Stakeholder Engagement Plan for the project;
- Assess the risks associated with construction and operation of the Shota Rustaveli GUTC and associated facilities on workers, communities and physical environment;
- Appropriate consultation with affected communities on potential impacts and management measures and opportunities to participate in planning, implementation and monitoring of activities that could result in social and environmental impacts (e.g. economic displacement).

11-28 In order to address the risks identified in the SESP, the ESMP will, at minimum, include the following:

- Occupational Health and Safety Plan
- Traffic Management Plan
- Spill Prevention and Management Plan.

Further information on the standalone ESMP requirements can be found in Annex **Error! Reference source not found.** of this ESMF.

XI.4 Institutional Arrangements and Capacity Building Roles and Responsibilities for Implementing this ESMF

11-29 The roles and responsibilities of project staff and associated agencies in implementation of this ESMF is described in this section. This ESMF does not cover the roles and responsibilities associated with implementation of the subsequent standalone ESMP as those will be defined during development of the plan in the project inception phase and based on the selected mitigation and monitoring measures.

11-30 **Project Steering Committee/Project Board** (Ministry of Transport, UNDP and other members):

- Monitor implementation of this ESMF and compliance with national and international regulations, and UNDP social and environmental standards;
- Decision making for the adoption of necessary measures including full integration of management measures within project Outputs and annual work plans;
- Establish and support a Grievance Redress Mechanism (GRM) to address any grievances.

11-31 **UNDP:**

- Provide oversight on all matters related to safeguards;
- Inform all the stakeholders and right-holders involved in, or potentially impacted, positively or negatively, by the project, about the UNDP's corporate Accountability Mechanism (described below);
- Ensure that the Compliance Review and the Stakeholder Response Mechanisms are operational during the lifetime of the project;
- Ensure adherence to the SES for project activities implemented using funds channelled through UNDP's accounts, and undertake appropriate measures to address any shortcomings;
- Verify and document that all UNDP SES requirements have been addressed;
- Provide technical guidance on implementation of this ESMF and administrative assistance in recruiting and contracting expert safeguards services (as required), and monitor adherence of the project to the ESMF and UNDP policies and procedures.

11-32 **Project Management Unit (PMU):**

- Supervise and manage implementation of measures defined in this ESMF by the Project Safeguards Officer;
- Maintain relevant records associated with management of environmental and social risks, including updated SESP, ESMP, a log of grievances together with documentation of management measures implemented;
- Report to the Implementing Partner, the Project Board, and UNDP CO on the implementation of the ESMF;
- Ensure that all service providers are informed of their responsibilities for the day to day compliance with the ESMF.

11-33 **Gender Safeguards Officer:** Under the overall supervision and guidance of the Project Manager, the Gender (Environmental and Social) Safeguards Officer or GSO will have the responsibility for the implementation of the ESMF and ESMP. The GSO will work closely with the M&E Officer and Communications Officers on related aspects of project reporting, monitoring, evaluation and communication. Specific responsibilities will include:

- Monitor progress in development/implementation of the project ESMF/ESMP ensuring that UNDPs SES policy is fully met and the reporting requirements are fulfilled;
- Oversee/develop/coordinate implementation of all safeguard related plans;
- Ensure social and environmental grievances are managed effectively and transparently;
- Review the SESP annually, and update and revise corresponding risk register; mitigation/management plans as necessary;
- Ensure full disclosure with concerned stakeholders;
- Ensure environmental and social risks are identified, avoided, mitigated and managed throughout project implementation;
- Work with the M&E officer to ensure reporting, monitoring and evaluation fully address the safeguard issues of the project;

As noted above, TAILEV's ESMP will describe the roles and responsibilities in the implementation of defined measures and activities. Those new roles and responsibilities will be assessed and integrated, as appropriate, as part of the participatory decision making and implementation proceedings of the project.

Capacity Building

- 11-34 Specialists with relevant expertise in social and environmental safeguards will be engaged to support the completion of the targeted assessments and the subsequent development of the standalone ESMP. These experts will offer an induction session for PMU on safeguards responsibilities and approaches.
- 11-35 The UNDP-NCE Unit will provide advice to the TAILEV PMU as needed to support the implementation of this ESMF and the preparation, implementation and monitoring of the ESMP.
- 11-36 The Project Board will have the final responsibility for the integration of ESMP in the execution of the project. The integration of the plan will need to consider particular institutional needs within the implementation framework for application of the ESMP, including a review of the required budget allocations for each measure, as well as the authority and capability of institutions at different administrative levels (e.g. local, regional, and national), and their capacity to manage and monitor ESMP implementation. Where necessary, capacity building and technical assistance activities will be included to enable proper implementation of the ESMP.

XI.5 Stakeholder Engagement and Information Disclosure

- 11-37 Discussions with project stakeholders, including local communities at potential demonstration sites, will be required at the onset of project implementation. The project has a Stakeholder Engagement Plan and Gender Action Plan, which is annexed to the Project Document (Annex 4 and 12, respectively). These Plans will be followed to ensure that stakeholders are engaged in project implementation and particularly in the further assessment of social and environmental impacts and the development of appropriate management measures. The Project Stakeholder Engagement Plan will be updated during project implementation based on the targeted assessments and standalone ESMP prepared in line with this ESMF, as needed.
- 11-38 Potentially affected stakeholders will be engaged during the implementation of this ESMF. This will include FPIC consultations with ethnic minorities whenever they are found to be potentially affected by the project.
- 11-39 As part of the stakeholder engagement process, UNDP's SES require that project stakeholders have access to relevant information. Specifically, the SES (SES, Policy Delivery Process, Paras **Error! Reference source not**

found. to 11-24) stipulates that, among other disclosures specified by UNDP's policies and procedures, UNDP will ensure that the following information be made available:

- Stakeholder Engagement Plan and summary reports of stakeholder consultations;
- Social and Environmental Screening report with project documentation;
- Draft ESMP;
- Final ESMP.
- Any required social and environmental monitoring reports.

11-40 As outlined in the SES and UNDP's SESP, the type and timing of assessments and management plans vary depending of the level of social and environmental risk associated with a project as well as timing of the activities.

11-41 This ESMF (and project SESP) will be translated and disclosed via the UNDP Uzbekistan website in accordance with UNDP SES policy. The subsequent project ESMP will also be publicly disclosed via the UNDP Uzbekistan website once drafted. It will be finalized and adopted only after the required time period for disclosure has elapsed.

11-42 These requirements for stakeholder engagement and disclosure will be adhered to during the implementation of this ESMF, and the subsequent implementation of the resulting ESMP.

XI.6 Accountability and Grievance Redress Mechanisms

UNDP's Accountability Mechanisms

11-43 UNDP's SES recognize that even with strong planning and stakeholder engagement, unanticipated issues can still arise. Therefore, the SES are underpinned by an Accountability Mechanism with two key components:

- A Social and Environmental Compliance Review Unit (SECU) to respond to claims that UNDP is not in compliance with applicable environmental and social policies; and
- A Stakeholder Response Mechanism (SRM) that ensures individuals, peoples, and communities affected by projects have access to appropriate grievance resolution procedures for hearing and addressing project-related complaints and disputes.

11-44 UNDP's Accountability Mechanism is available to all of UNDP's project stakeholders. The SECU investigates concerns about non-compliance with UNDP's Social and Environmental Standards and Screening Procedure raised by project-affected stakeholders and recommends measures to address findings of non-compliance.

11-45 The Stakeholder Response Mechanism helps project-affected stakeholders, UNDP's partners (governments, NGOs, businesses) and others jointly address grievances or disputes related to the social and/or environmental impacts of UNDP-supported projects. Further information, including how to submit a request to SECU or SRM, is found on the UNDP website at:

<http://www.undp.org/content/undp/en/home/operations/accountability/secu-srm/>

Project-level Grievance Redress Mechanisms

11-46 As mentioned in Paras 58 and **Error! Reference source not found.**, the project will establish a Grievance Redress Mechanism (GRM) at the start of implementation. The full details of the GRM will be agreed upon during the ESMP preparation stage. Interested stakeholders may raise a grievance at any time to the Project Board, Project Management Unit, the Ministry of Transport, UNDP, or the GEF.

XI.7 Budget for ESMF Implementation

11-47 Funding for implementation of the ESMF is included in the project budget. The estimated costs are indicated in **Error! Reference source not found.** below. Costs associated with the time of Project Management Unit Staff coordinating the implementation of this ESMF are not shown. Further detail is found in the budget of the Project Document.

Table 11- 2: Breakdown of project level costs for ESMF implementation

Item	Budget Cost (USD)
International consultant, safeguards specialist	0
Gender safeguards officer	49,200
Total:	49,200

XI.8 Monitoring and Evaluation Arrangements

11-48 Reporting on progress and issues in the implementation of this ESMF will be documented in the project quarterly reports and annual project implementation reports (PIRs). Until the standalone ESMP is put in place, the PMU will be responsible for compiling reports on the implementation of this ESMF, for reporting to the Project Board (as required). Key issues will be presented to the respective Project Board during each meeting.

11-49 Implementation of the ESMP will be the responsibility for the PMU, and other partners as agreed upon and described in the future plan. The ESMF monitoring and evaluation plan is outlined below in **Error! Reference source not found.**

Table 11-3: ESMF M&E plan and estimated budget

Monitoring Activity	Description	Frequency / Timeframe	Expected Action	Roles and Responsibilities	Cost (if any, per project)
Track progress of ESMF implementation	Implementation of this ESMF and with results reported to the Project Board on an annual basis	Quarterly (until ESMP is in place)	Required ESMF steps are completed for the project in a timely manner.	Project Manager, with support from and Project M&E/Safeguards Officer	None
Targeted assessments and development of standalone ESMP	Carried out in a participatory manner, in-depth analysis about potential social and environmental impacts, as well as identification / validation of mitigation measures, drafted in participatory manner	Quarters 1 and 2 of project implementation	Risks and potential impacts are assessed with support of external consultant and participation of project team and stakeholders; management actions identified and incorporated into project implementation strategies.	External service provider (environmental and social) With guidance from UNDP, Project Manager, and Project M&E / Safeguards Officer	TBD
Implementation of mitigation measures and monitoring impacts as per the ESMP	Permanent and participatory implementation and monitoring of impacts and mitigation measures, in accordance with ESMP	Continuous, once ESMP is in place	Implementation of ESMP; participatory monitoring (i.e. identifying indicators, monitoring potential risks); integration of ESMP into project implementation strategies Monitoring of environmental and social impacts, and corresponding management plans as relevant (tendered to national institute, local consultant, CSO or service provider)	Project Manager, UNDP CO, M&E/Safeguards Officer	TBD
Learning	Knowledge, good practices and lessons learned regarding social and environmental risk management will be captured regularly, as well as actively sourced from other projects and partners and integrated back into the project.	At least annually	Relevant lessons are captured by the project team and used to inform management decisions.	Project Manager, UNDP CO, Safeguards Officer, Communications Officer	None
Annual project quality assurance	The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to inform management decision making to improve the project.	Annually	Areas of strength and weakness will be reviewed and used to inform decisions to improve project performance	Project M&E/Safeguards Officer	None
Review and make course corrections	Internal review of data and evidence from all monitoring actions to inform decision making	At least annually	Performance data, risks, lessons and quality will be discussed by the Project Board and used to make course corrections	Project Board (considering stakeholders' opinions)	None
Project report	As part of progress report to be presented to the Project Steering Committee and key stakeholders, analysis, updating and recommendations for risk management will be included.	Annually, and at the end of the project (final report)	Updates on progress of ESMF/ESMP will be reported in the project's annual GEF PIRs.	Project Manager	None
Project review	The projects' governance mechanism (i.e. Project Steering Committee) will hold	At least annually	Any risks and/ or impacts that are not adequately addressed by national mechanisms	Project Board, Project Manager	None

Monitoring Activity	Description	Frequency / Timeframe	Expected Action	Roles and Responsibilities	Cost (if any, per project)
	regular project reviews during which an updated analysis of risks and recommended risk mitigation measures will be discussed.		or project team will be discussed in project steering committee meetings. Recommendations will be made, discussed and agreed upon.		

XI.9 Indicative outline of Environmental and Social Management Plan (ESMP)

11-50 Please refer to the [UNDP SES Guidance Note on Assessment and Management](#) for additional information. An ESMP may be prepared as part of an Environmental and Social Impact Assessment (ESIA) or as a stand-alone document.⁸¹ The content of the ESMP should address the following sections:

- **Mitigation:** Identifies measures and actions in accordance with the mitigation hierarchy that avoid, or if avoidance not possible, reduce potentially significant adverse social and environmental impacts to acceptable levels. Specifically, the ESMP: (a) identifies and summarizes all anticipated significant adverse social and environmental impacts; (b) describes – with technical details – each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; (c) estimates any potential social and environmental impacts of these measures and any residual impacts following mitigation; and (d) takes into account, and is consistent with, other required mitigation plans (e.g. for displacement, indigenous peoples).
- **Monitoring:** Identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the environmental and social assessment and the mitigation measures described in the ESMP. Specifically, the monitoring section of the ESMP provides (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and (b) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.
- **Capacity development and training:** To support timely and effective implementation of social and environmental project components and mitigation measures, the ESMP draws on the environmental and social assessment of the existence, role, and capability of responsible parties on site or at the agency and ministry level. Specifically, the ESMP provides a description of institutional arrangements, identifying which party is responsible for carrying out the mitigation and monitoring measures (e.g. for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training). Where support for strengthening social and environmental management capability is identified, ESMP recommends the establishment or expansion of the parties responsible, the training of staff and any additional measures that may be necessary to support implementation of mitigation measures and any other recommendations of the environmental and social assessment.
- **Stakeholder Engagement:** Outlines plan to engage in meaningful, effective and informed consultations with affected stakeholders. Includes information on (a) means used to inform and involve affected people in the assessment process; (b) summary of stakeholder engagement plan for meaningful, effective consultations during project implementation, including identification of milestones for consultations, information disclosure, and periodic reporting on progress on project implementation; and (c) description of effective processes for receiving and addressing stakeholder concerns and grievances regarding the project's social and environmental performance.
- **Implementation action plan (schedule and cost estimates):** For all four above aspects (mitigation, monitoring, capacity development, and stakeholder engagement), ESMP provides (a) an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and (b) the capital and recurrent cost estimates and sources of funds for implementing the ESMP. These figures are also integrated into the total project cost tables. Each of the measures and actions to be implemented will be clearly specified and the costs of so doing will be integrated into the project's overall planning, design, budget, and implementation.

⁸¹ This may be particularly relevant where contractors are being engaged to carry out the project, or parts thereof, and the ESMP sets out the requirements to be followed by contractors. In this case the ESMP should be incorporated as part of the contract with the contractor, together with appropriate monitoring and enforcement provisions.

Annex 12: Gender Analysis and Gender Action Plan

XII.1 Mechanisms to Address Gender Inequality in Uzbekistan - Legal Framework and National Machinery

- 12-1. Over the past 20 years more than 80 legal instruments relating to the promotion and protection of the rights, freedoms and legitimate interests of women have been adopted in Uzbekistan.⁸² Ratifying the Convention on the Elimination of All Forms of **Discrimination against Women (CEDAW)**, the Beijing Platform and Plan of Action, as well as other international instruments on women's rights was the necessary international legal framework for the national level elaboration of specific measures for the implementation of international standards in law and practices.
- 12-2. The CEDAW requirements have been translated into a selection, family, labor, criminal, administrative and other branches of law. The President of the Republic of Uzbekistan adopted a special Decree “On additional measures to support the activities of the Women's Committee of Uzbekistan (May 24, 2004). The government practiced the adoption of the National Action Plans on implementation of the recommendations of the UN Committee following the consideration of the periodic reports of the Republic of Uzbekistan on CEDAW implementation.
- 12-3. The Republic of Uzbekistan reaffirmed the importance of the Beijing Platform for Action as a basis for further reforms, policy development and project implementation, especially in the context of setting the goals for achieving gender equality in the framework of the “Development Strategy of Uzbekistan in 2017-2021”, which includes the priority tasks of increasing the socio-political activity of women, strengthening their role in the government and society, active participation of women in peacebuilding processes, increasing economic independence and ensuring the employment of women and young people, especially those living in rural areas.
- 12-4. In the recent few years, Uzbekistan has made progress to improve the legal frameworks and mechanisms for supporting women's rights. To implement the BPA, new legislation has been adopted aimed at protecting the rights of women in family and marriage. A number of changes and additions have been made to the current legislation, which aims to strengthen the measures on prevention of violence against women and domestic violence; combating outdated patriarchal stereotypes, as well as customs and practices, including those concerning minors. A number of measures have been taken to further develop the institutions of civil society, as well as to strengthen the self-sufficiency and independence of media.
- 12-5. An institutional environment has been created in the Republic for the implementation of the constitutional principle of equality of women and men in public life: Institute of Parliamentary Ombudsman, the Commission for Observance of Constitutional Rights and Freedoms of citizens at the Oliy Majlis Commissioner for Human Rights (1995 r.) Ministry of Mahalla and Family (2020).
- 12-6. In 2017, the Commission on Family and Women Issues was established in the Legislative Chamber of the Oliy Majlis of the Republic of Uzbekistan. The purpose of the Commission is to support in strengthening the family, protecting motherhood, fatherhood and childhood, protecting the rights, freedoms and legitimate interests of women.⁸³ In 2019, the Commission on Gender Equality in the Senate of Oliy Majlis was established. It particularly aims at promoting gender equality on policy development and implementation levels.
- 12-7. On February 2, 2018 the President adopted the Decree "On measures to fundamentally improve activities in the field of supporting women and strengthening the institution of family"⁸⁴. The

⁸² Women of Independent Uzbekistan. Women’s Committee of the Republic of Uzbekistan. 2014. p.5

⁸³ <http://parliament.gov.uz/ru/structure/commission/23567/?el=23567>

⁸⁴ <http://www.uzavtoyul.uz/ru/post/xotinqizlarni-har-tomonlama-qollabquvvatlash-doimiy-etiborimiz-markazida-boladi.html>

document facilitated comprehensive reforms to the work of the Women's Committee, as well as a number of state bodies and public organizations. The structure of the women's committees at national, regional, districts and cities levels has been radically improved. In all gatherings of citizens of Mahalla, the position of a *specialist in working with women and strengthening spiritual and moral values in families* has been introduced.

- 12-8. As part of the objectives stipulated in this Decree and three other orders of the head of state, as well as six resolutions and one order of the Cabinet, ministries and other government bodies, over 20 comprehensive plans of activities were approved to facilitate reforms in this area. There are around 10 legislative acts aiming to strengthen the role of civil society institutions in supporting women's rights. These include the revised Law "On the bodies of self-government of citizens", the Law "On Social Partnership" and "On Public Control" among others.
- 12-9. The Scientific and Practical Research Center - "Oila" has been created under the Cabinet of Ministers along with its territorial divisions. The main tasks of the center include promotion and integration of the belief that "Healthy family is a healthy society", as well as the constitutional principle that 'the family is under the protection of the state and society'.
- 12-10. Coordination of the activities of the civil registration authorities is entrusted to the deputy hokims of the districts - the chairmen of the district committees of women. This will expand the opportunities and strengthen the influence of the deputy khokims on women's issues in the field and the Women's Committee of the Republic (and its local representatives).
- 12-11. In 2019, the Government adopted law on "Guarantees of Equal Rights and Opportunities for Women and Men" and "On Protection of Women from Violence and Harassment" providing key safeguards for protection of women from harassment and introducing important terminology in relation to gender equality.

XII.2 Political Participation

- 12-12. Women's participation in political and social life of the society is one of the most important instruments for achieving gender equality. In 2003 women's organizations lobbied for the issue of quotas for women in elections to legislative bodies of the country. This issue was supported by the government authorities and members of Parliament. As a result, at the regular session of the Oliy Majlis "The Law on elections to the Oliy Majlis" introduced changes. Part 4 of article 22 of the "Law on elections to the Oliy Majlis of the Republic of Uzbekistan" dated by August 29, 2003 foresees that women share should not be less than 30 percent of the total number of candidates nominated to the Oliy Majlis by the political parties.

Table 12.1: Composition of political parties of the Republic of Uzbekistan⁸⁵

	Distribution by sex, in percentage			
	2008		2012	
	women	men	women	Men
People's Democratic party of Uzbekistan	34.8	65.2	38.2	61.8
Liberal and Democratic party	34.8	65.2	38.2	61.8
Democratic Party of National Revival "Milliy Tiklanish"	43.0	57.0	47.5	52.5
Social Democratic Party of Uzbekistan "Adolat"	50.3	49.7	46.5	53.5

- 12-13. The number of women elected to the national Parliament, the Oliy Majlis, has increased to 16.7 percent as of 2018. The proportion of women in the local councils of people's representatives,

⁸⁵ Source: Women's Committee of Uzbekistan

headed by khokims, has reached 23 percent.⁸⁶ There are four major political parties and Ecological movement in Uzbekistan. All political parties created "women's wing" to increase active involvement of young women into political parties' membership, providing them information and legal support for the development of leadership skills for their further active participation in the political processes of the country. All political parties have women's divisions dedicated to preparing women to run in election. However, despite the fact that women comprise 35% to 47% of the members of political parties, they do not occupy leadership positions.

XII.3 Education

- 12-14. Uzbekistan inherited good education indicators and its education system outperforms those of the peer countries' in the lower middle-income group. The Government increased public expenditure on education from 5.6 percent of GDP in the mid-1990s to 10 percent of GDP in 2010, focusing mostly on primary and secondary education where the country has now achieved nearly universal enrollment.
- 12-15. Uzbekistan's educational system begins by preschool education, which is provided for children until they aged six-seven by state or private preschool educational establishments, and also within the family. Primary (grades 1-4) and secondary (grades 5-9) education provided free by the state.
- 12-16. **Preschool education.** Children from rich urban households are more likely to access preschool institutions than those from poor rural ones. Several factors affect low enrollment, including: the cost of enrolling children in pre-schools, the quality (and perceptions of quality) of the facilities on offer, the location and convenience of services, and the predominant model of offering pre-school on a full-day basis only (which accounts for 97 percent of all preschool enrolment).
- 12-17. Most of kindergartens are located in cities and large settlements. Families must cover high transportation costs. Besides, working hours generally range from 09:00 to 18:00 hours, however, de facto, kindergartens operate only until 17:00-17:30 hours and 5 days a week. These limited hours require parents (usually the mother) find a job with a flexible schedule, and preferable close to the household, which is not possible in most of cases. Under these circumstances, women prefer not to work, or to agree to informal work with the condition of shorter working day.

Table 12.2: Students of secondary specialized, vocational education institutions by specialty at the beginning of 2012/2013 academic year (Distribution by sex, %)⁸⁷

	Women	Men
Total	49.1	50.9
of which:		
Education	71.8	28.2
Public health, physical training and sports	75.8	24.2
Industry and construction	41.6	58.4
Agriculture	41.1	58.9
Transport and communication	30.9	69.1
Economics and law	47.6	52.4
Arts and cinematography	52.1	47.9
Services	50.2	49.8

⁸⁶ http://uza.uz/ru/society/s-lyubovyu-i-uvazheniem-k-zhenshchine-07-03-2018?sphrase_id=4816889

⁸⁷ <http://gender.stat.uz>

- 12-18. **Primary and secondary education.** Primary and secondary education is compulsory in Uzbekistan and the government reported that the complete gross coverage of children with school education demonstrates an absence of any regional or gender discrimination to education.⁸⁸ In professional colleges, the attendance ratio of young women and men is almost the same. However, the problem of professional education of girls is influenced by gender stereotypes that lead to occupational segregation of women at the stage of receiving professional education.
- 12-19. In Uzbekistan, women are almost totally absent from Management, Finance, and Information Technologies courses. The specific education programs preferred for women are not well linked to the existing demand of labour market. Besides, the system of professional education has until now been insufficiently effective and has not taken into account the particular needs of each region and their economic realities, which might require specific types of training to equip professionals with relevant skills.
- 12-20. It is important to note that the professional qualifications of the labour force do not meet requirements and demand of local employers. There is a shortage in highly skilled workers and technologists in the industrial sectors. The mentioned specialties are gender ‘neutral’, however, under the influence of gender stereotypes on women’s role dominating in society specifically in rural areas these professions do not attract women.⁸⁹
- 12-21. **Tertiary education.** During the 2011-2012 academic year, 65 institutions of higher education opened their classes for students.⁹⁰ Around 300 thousand students studying in these institutions of which 38.5 percent were female and 61.5 percent male. Approximately only 5 percent of women aged 19-25 are enrolled in universities, whereas this figure stands at almost 8 percent for men. Compared to the mid-2000s, the level of admissions to higher education institutions fell for both, men and women, however, the rate was faster for women.⁹¹

Table 12-3: Students of higher education institutions by specialties at the beginning of 2012/2013 academic year (Distribution by sex, %)⁹²

	Women	Men
Total	36.5	63.5
of which:		
Industry and construction	15.9	84.1
Transport and communication	10.5	89.5
Agriculture	21.6	78.4
Economics and law	19.9	80.1
Public health, physical training and sports	39.8	60.2
Education	55.7	44.3

⁸⁸ Welfare Improvement Strategy 2012-2015. Uzbekistan.

⁸⁹ ADB. 2013. Water Resource Management Project; ADB.2011. Uzbekenergo. Advanced Electricity Metering Project.; ADB. 2008. Monitoring and Implementation of Policy Reforms in Agriculture Project; UNDP. 2010. Enhancing Legislative and Institutional Environment for Equal Employment Opportunities for Men and Women in Uzbekistan Project. Findings of Social and Gender surveys conducted within the sectors under ADB projects

⁹⁰ Uzbekistan Modernizing Tertiary Education. The World Bank. 2014. Report No 886-0-UZ.

⁹¹ Effective Employment Policy: Achieving Women’s Labour Capacities in the Republic of Uzbekistan. Policy Paper. UNDP/CER. 2012. Uzbekistan

⁹² <http://gender.stat.uz>

Arts and cinematography	34.6	65.4
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- 12-22. The proportion of girls among students of engineering professions is very small (Table 3). The industrial and construction specialties are not popular among female students (15.9 percent). The lowest share of female students is in transportation and communication sector (10.5 percent). Gender disparities and women’s limited access to higher education linked to unwillingness of parents to send their daughters to study far from home for long periods of time.
- 12-23. Low enrolment and weak relationship between employers and industry and universities hamper the economy’s capacity for innovation, technology adoption and value creation. Clearly there is much that can be done to better prepare universities to respond to the needs of an evolving economy, and reduce the mismatch between the supply and demand of graduates.⁹³

XII.4 Public Transportation

- 12-24. **Limited sex-disaggregated data on transport.** There is very little concrete information available on the gender-related nature and patterns of travel, such as the number of male and female road users in Uzbekistan, public transport use disaggregated by sex, or accessibility of urban transport for women and men in terms of cost and timetables, and including such groups as single parents, the elderly, disabled people, and rural users. Also, sex-disaggregated data on the number of people employed in specific jobs within the transport sector is not available.
- 12-25. **Gender Differences in Public Transport.** As transport users, women have different destinations and reasons for travel than men. Women use both private and public transport to purchase raw materials from the wholesale market, visit administrative institutions, take children to and from preschool or school, or shop for daily needs. Thus, lack of access to safe and affordable transport significantly affects women as the main consumers of public transport.
- 12-26. Surveys conducted in Tashkent and Namangan regions reported that women and men use public transport equally, and when asked specifically about their use of public transport to travel to hospitals and clinics, a high percentage of both women and men affirmed that they use public transport rather than private cars. The majority of participants in household surveys in Karakalpakstan and the Bukhara region, however, stated that men use transport more often than women. When traveling to health care institutions, it appears that men were slightly more likely to use public transport and women were more likely to use private cars. It also was noted that men usually accompany children traveling by public transport.⁹⁴ In general, public transport is not well developed in Uzbekistan, and people are more likely to use private minibuses that operate regularly.
- 12-27. Finally, the limited availability of long-distance transport may have a specific effect on girls’ access to education. The Welfare Improvement Strategy, 2008–2010 notes that children from remote areas, especially girls, face difficulties attending secondary and vocational educational institutions, due to long travel times and the high cost of travel.⁹⁵ This is also true of higher educational institutions, most of which are located in regional centers or in Tashkent.

⁹³ Uzbekistan Modernizing Tertiary Education. The World Bank. 2014. Report No 886-0-UZ. P.10

⁹⁴ IKS. 2010. Uzbekistan: CAREC Corridor 2 Road Investment Program. Poverty and socio-economic assessment. Tashkent: ADB

⁹⁵ Government of the Republic of Uzbekistan. Welfare Improvement Strategy 2008–2010.

12-28. There is a significant gender asymmetry of employment in the transport sector, where women occupy 12% and men 88% respectively.⁹⁶

XII.5 Recommendations

12-29. Based on the review above, to enhance the gender impact of the project, the following specific recommendations are proposed:

- Maximize participation of female staff in bus operation and maintenance.
- Conduct needs assessment survey on the use of public transport by different groups of people. Update and adapt programme activities in accordance to the finding of the survey. This survey should place particular interest in ensuring the safety of vulnerable groups of people and women in public transport as a crucial impact affecting the decisions around the use of public transport. Thus, ultimately making impact to reducing carbon emission.
- Develop projects on public transport to ensure higher mobility of girls and women and thus contribute to women empowerment and gender equality.
- Ensure that introduction of the electric bus fleet in Tashkent maintains and improves gender-inclusive features.
- With strong participation of female employees, prepare and introduce into practice a long-term gender and development strategy that will define ways to make public transportation system in Tashkent more women-friendly and to make all stakeholder organizations/companies more attractive workplaces for women.
- Design disseminate information on the benefits of electric buses (health and economic benefits/of the benefits of electric transportation) with special focus on women and children, people with disabilities.;
- Project staff would work to ensure equal participation and engagement of women as well as men in the planning, implementation and monitoring of project interventions.

The Gender Action Plan is provided in Table 12-4.

⁹⁶ State Statistics Committee. 2015. *Women and men of Uzbekistan*. Tashkent.

Table 12-4: Gender Action Plan

Activity	Targets/Indicators	Responsibility	Timeframe
Stage 1: Electric buses commissioned			
Opportunities identified for the improved involvement of female locomotive drivers	<ul style="list-style-type: none"> Survey conducted on the perception of female employees, Turin Polytechnic Institute as well as the general public on technical positions by women such as bus drivers and technicians, to establish evidence on bottlenecks to female entry into this profession. Results of the survey analyzed and presented to project stakeholders including JSC “Toshshakhartranskhizmat” (TBC) management for use in the long-term development strategy. 	UNDP, assisted by Tashkent City Public Council and TBC	Year 1
Challenges of both genders, including vulnerable groups of people, identified in relation to making electric buses highly accessible to the general public	<ul style="list-style-type: none"> Survey conducted on the identification of challenges in accessing public transport faced by women, children and specifically for vulnerable groups of populations, including wheelchair users and people with hearing and vision disabilities. Results of the survey presented to the project stakeholders and widely used by all external parties in designing policies related to increasing accessibility of green public transport and reducing carbon emissions 	UNDP assisted by Tashkent City Public Council and TBC	Year 1
On the basis of the survey result, women’s and children’s public transport safety policy is developed.	<ul style="list-style-type: none"> Women and children face numerous risks using public transport. Mitigating these risks and ensuring safety of children and women using public transport is vital to increase the use of public transport and reduce carbon emissions. The safety policy is developed and introduced using examples of the similar policies in other countries and adopting to the context of Uzbekistan. 	UNDP assisted by Tashkent City Public Council and TBC	Year 1
Stage 2: Bus and terminus depots			
Separate sanitary facilities for females and males available for employees	<ul style="list-style-type: none"> Gender inclusive sanitary facilities, including toilets, shower room and changing rooms are kept available at all terminus depot facilities. 	UNDP, assisted by Tashkent City Public Council and TBC	Year 2

	<ul style="list-style-type: none"> • Flexible working arrangements to be included: flexible hours, part-time employment, breastfeeding breaks and etc., based on the result of the staff survey conducted in the Year 1 		
Conduct gender-sensitivity training for all employees at the depots	<ul style="list-style-type: none"> • All employees working at the depot receive the gender-sensitivity training. • All employees working on buses receive trainings to understand the challenges faced of different groups of people using public transport and learn how to deal with emergency situations. The trainings will be based on the result of the survey conducted in the year 1 	UNDP, assisted by Tashkent City Public Council and TBC	Year 2
Stage 3: Long-term gender and development strategy			
Long-term gender and development strategy designed and adopted	<ul style="list-style-type: none"> • At least 5 female employees from TBC review and provide inputs into the Long-term gender and development strategy designed and adopted. • Gender responsive human resource policies are made an integral part of the long-term strategy. 	TBC together with Tashkent City Public Council, with assistance from UNDP	Year 1 Year 2
As part of the long-term gender and development strategy designed and adopted, continue to roll-out gender-friendly and inclusive designs of the public bus system	<ul style="list-style-type: none"> • All bus stops will have features such as designated and/or priority areas/seats for parents with babies and children, physically challenged passengers, and senior citizens. • All buses will have gender-friendly features such as priority seating for pregnant ladies and parents of young children, as well as features to accommodate physically challenged passengers, and senior citizens. • Parents with strollers will have designated spaces on buses, accommodated in the same area as places for physically challenged passengers. 	Tashkent City Public Council assisted by UNDP and TBC	Years 2 and 3
	<ul style="list-style-type: none"> • Design disseminate information on the benefits of electric buses (health and economic benefits/of the benefits of electric transportation) with special focus on women and children health health addressed to residents; 	All stakeholder organizations/institutions, including educational institutions and general public	Years 2 and 3

Annex 13: Procurement Plan

- 13-1. Main procurement for TAILEV is within Output 2.3 consisting of partial payment for the electric buses that will operate along the pilot GUTC. Options for the utilization of the US\$1.4 million allocated for this purpose are as follows:
- The total investment cost provided by GEF will not exceed \$1,400,000. The project will task third-party experts to ensure the proposed e-bus and charging station costs are in line with the current market values. Moreover, the level of subsidy up to 20% will be analysed on a case-by-case basis, based on a financial analysis performed by a third-party expert: The experts will guide the project team on determining the level of subsidy/additionality based on comparison of life-time costs of the conventional buses versus electric buses.
 - As per the current default model defined by the project team, the Project can assist TBC with a project-set rule of no more than 20% of the capital purchase cost of an electric bus or charging station. The current range of prices for a 40-seat electric bus is between US\$300,000 and US\$550,000. Assuming 10 electric buses are required for the pilot GUTC, a total of US\$100,000 can be allocated towards each of the 10 buses assuming the price is higher than US\$500,000. If the less costly bus of US\$300,000 is chosen, TAILEV resources can support the buydown of more than 10 electric buses. Moreover, this modality is subject to change/revision depending on the analyses to be done under Activity 2.3.1 prior to tendering for e-bus and charging station procurement;
 - TAILEV resources can also assist TBC with the procurement and setup of fast charging infrastructure for electric buses. Assuming the pilot GUTC requires fast-charging station priced at US\$1 million, up to US\$200,000 can be used from TAILEV resources for each of these charging stations. If the preferred technology is a depot-based slow charging station (based on findings from the study of Output 2.1), more TAILEV funds would be available for buy-downs of additional equipment related to the pilot e-bus fleet;
 - The TBC tenders and payment schedules for the e-buses will be performance-based. The tender can specify partial payments by TBC for the initial deposit, and other performance milestones such as delivery and installation of equipment, initial operation of the equipment, and a final payment pending the achievement of specific performance parameters (such as charging times and range traveled on one charge);
 - The payment by the Project can be the last payment assuming the delivered e-buses and charging equipment comply with specific performance conditions of the tender.
- 13-2. Technical assistance is required for air quality and emissions monitoring in which two organizations are involved and responsible for: Goscomecology and Uzhydromet (in particular for GHG emissions). Both are doing monitoring based on the approved methodology and reporting but lack monitoring equipment stations. The current state and methods of monitoring the air environment, as well as the availability of automated control systems for determining the level of air pollution in Uzbekistan have been considered jointly by Goscomecology and Uzhydromet (as both are responsible and implement this activity). According to the data received, there are no automated control systems in the country. Air sampling in Tashkent is carried out at stationary observation posts 3 times a day using the instrumental method.
- 13-3. Along or nearby the route chosen for demonstration of GUTC with electric buses (from South Railway Station to North Railway Station) Uzhydromet does not have such observation posts. Currently, Uzhydromet is negotiating with several companies to equip the existing monitoring posts with modern automated control systems and they have provided contacts of those companies. In relation to TAILEV, cost of several automated stations for measuring air quality along the selected route have been selected and the most realistic in terms of measurement of GHG emissions could be: Automated hardware and software complex "PAK-8816" with the installation of gas analyzers for determining the level in the air along the selected route: pollutants (CO, NO_x, SO₂, hydrogen sulfide (H₂S) and solid particles - PM₁₀ and PM_{2.5}); greenhouse gas (CO₂). The cost of this complex is about US\$ 90,000 and will be funded by third party co-financing to be raised during the project implementation (that includes delivery, installation and training of staff).
- 13-4. Given the fact that the range / coverage of all stations for measuring air pollution ranges from 350 to 500 meters, it is proposed to purchase 3 sets (stations) of such systems for installation at major intersections of the chosen route (the intersection of the former Frunze Shopping Center, circle of the hotel " Grand Mir Hotel ", the intersection of the metro station " Oybek").

Table 13-1: Draft Procurement Plan for Year 1

Project Name	Project Number	Type of Supply	Description of goods, services or works	Available Budget (USD)*	Estimated Total Price (USD)*	Estimated Completion of Activity** (dd/mm/yyyy)	Responsible Staff	Requisition Docs*** Ready		Solicitation Process				Issue of TOR and PN				Evaluation of Offers (Single Stage, Two Stage or Two Stage with Combined Weights)	
								Date (dd/mm/yyyy)	By	Local or International	Issue Date (dd/mm/yyyy)	Deadline for Receipt (dd/mm/yyyy)	Duration (Days)	Date (dd/mm/yyyy)	UNDP Web	UNGM	Local Paper		Int.Paper /Media
TAILEV Project	6402	Individual Contractor	Formal and informal stakeholder consultations with affected residents in the area of the GUTC	10,000.00	10,000.00	2021-11-15	PM	2021-02-06	PM and Procurement Unit	Local	2021-03-06	2021-03-16	10	2021-03-06	Yes	No	No	No	Two stage with Combined Weights
TAILEV Project	6402	Individual Contractor	Preparation of public transit awareness campaign	15,000.00	15,000.00	2021-08-08	PM	2021-02-18	PM and Procurement Unit	Local	2021-03-18	2021-03-28	10	2021-03-18	Yes	Yes	Yes	Yes	Two stage with Combined Weights
TAILEV Project	6402	Goods	Partial buy-down of e-buses and charging equipment	1,400,000.00	1,400,000.00	2021-10-26	PM, IEBS, PTS	2021-03-16	PM and Procurement Unit	International	2021-04-26	2021-05-26	30	2021-04-26	Yes	Yes	Yes	Yes	Two stage with Combined Weights
TAILEV Project	6402	Individual Contractor	Comprehensive baseline survey as defined in Output 3.1	50,000.00	50,000.00	2021-09-01	PM	2021-03-26	PM and Procurement Unit	Local	2021-04-26	2021-05-06	10	2021-04-26	Yes	No	No	No	Two stage with Combined Weights
TAILEV Project	6402	Goods	For hardware (gas analyzers) and software complex "PAK-8816" under Output 3.2	90,000.00	90,000.00	2021-05-06	PM	2020-02-18	PM and Procurement Unit	Local	2021-03-18	2021-03-28	10	2021-03-18	No	No	Yes	No	Two stage with Combined Weights

Annex 14: Co-Financing Letters

As in separate document uploaded to GEF Portal

Annex 15: GEF Core indicators

Core Indicator 1		Terrestrial protected areas created or under improved management for conservation and sustainable use				<i>(Hectares)</i>			
		<i>Hectares (1.1+1.2)</i>							
		<i>Expected</i>			<i>Achieved</i>				
		PIF stage	Endorsement	MTR	TE				
Indicator 1.1		Terrestrial protected areas newly created							
Name of Protected Area	WDPA ID	IUCN category	Hectares						
			Expected			Achieved			
			PIF stage	Endorsement	MTR	TE			
			(select)						
		(select)							
		Sum							
Indicator 1.2		Terrestrial protected areas under improved management effectiveness							
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score					
				Baseline			Achieved		
				PIF stage	Endorsement	MTR	TE		
				(select)					
		(select)							
		Sum							
Core Indicator 2		Marine protected areas created or under improved management for conservation and sustainable use				<i>(Hectares)</i>			
		<i>Hectares (2.1+2.2)</i>							
		<i>Expected</i>			<i>Achieved</i>				
		PIF stage	Endorsement	MTR	<i>TE</i>				
Indicator 2.1		Marine protected areas newly created							
Name of Protected Area	WDPA ID	IUCN category	Hectares						
			Expected			Achieved			
			PIF stage	Endorsement	MTR	TE			
			(select)						
		(select)							
		Sum							
Indicator 2.2		Marine protected areas under improved management effectiveness							
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score					
				Baseline			Achieved		
				PIF stage	Endorsement	MTR	TE		
				(select)					
		(select)							
		Sum							
Core Indicator 3		Area of land restored				<i>(Hectares)</i>			
		<i>Hectares (3.1+3.2+3.3+3.4)</i>							
		<i>Expected</i>			<i>Achieved</i>				
		PIF stage	Endorsement	MTR	TE				
Indicator 3.1		Area of degraded agricultural land restored							
			Hectares						
			Expected			Achieved			
			PIF stage	Endorsement	MTR	TE			
Indicator 3.2		Area of forest and forest land restored							
			Hectares						
			Expected			Achieved			
			PIF stage	Endorsement	MTR	TE			
Indicator 3.3		Area of natural grass and shrublands restored							

			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 3.4	Area of wetlands (including estuaries, mangroves) restored					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 4	Area of landscapes under improved practices (hectares; excluding protected areas)					(Hectares)
			Hectares (4.1+4.2+4.3+4.4)			
			Expected		Expected	
			PIF stage	Endorsement	MTR	TE
Indicator 4.1	Area of landscapes under improved management to benefit biodiversity					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 4.2	Area of landscapes that meet national or international third-party certification that incorporates biodiversity considerations					
	Third party certification(s):		Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 4.3	Area of landscapes under sustainable land management in production systems					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 4.4	Area of High Conservation Value Forest (HCVF) loss avoided					
	Include documentation that justifies HCVF		Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 5	Area of marine habitat under improved practices to benefit biodiversity					(Hectares)
Indicator 5.1	Number of fisheries that meet national or international third-party certification that incorporates biodiversity considerations					
	Third party certification(s):		Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 5.2	Number of large marine ecosystems (LMEs) with reduced pollution and hypoxial					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 5.3	Amount of Marine Litter Avoided					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE

Core Indicator 6	Greenhouse gas emission mitigated					<i>(Metric tons of CO₂e)</i>
			Expected metric tons of CO ₂ e (6.1+6.2)			
			PIF stage	Endorsement	MTR	TE
	Expected CO ₂ e (direct) (direct post-project)		217,341	20,700		
	Expected CO ₂ e (indirect) (Top down) (Bottom up)	5,600,000		11,400,000 207,000		
Indicator 6.1	Carbon sequestered or emissions avoided in the AFOLU sector					
			Expected metric tons of CO ₂ e			
			PIF stage	Endorsement	MTR	TE
	Expected CO ₂ e (direct)					
	Expected CO ₂ e (consequential)					
	Anticipated start year of accounting					
	Duration of accounting					
Indicator 6.2	Emissions avoided Outside AFOLU					
			Expected metric tons of CO ₂ e			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
	Expected CO ₂ e (direct)		217,341	20,700		
	Expected CO ₂ e (indirect) (Top down) (Bottom up)	5,600,000		11,400,000 207,000		
	Anticipated start year of accounting		2021	2021		
	Duration of accounting		6 years	6 years		
Indicator 6.3	Energy saved					
			MJ			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
	Direct lifetime (diesel buses)		n/a	475,146,000		
	Direct lifetime (CNG buses)		n/a	0		
Indicator 6.4	Increase in installed renewable energy capacity per technology					
			Capacity (MW)			
		Technology	Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		(select)				
		(select)				
Core Indicator 7	Number of shared water ecosystems (fresh or marine) under new or improved cooperative management					<i>(Number)</i>
Indicator 7.1	Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.2	Level of Regional Legal Agreements and Regional Management Institutions to support its implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.3	Level of National/Local reforms and active participation of Inter-Ministerial Committees					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE

Indicator 7.4	Level of engagement in IWLEARN through participation and delivery of key products					
		Shared water ecosystem	Rating (scale 1-4)			
			Rating		Rating	
			PIF stage	Endorsement	MTR	TE
Core Indicator 8	Globally over-exploited fisheries Moved to more sustainable levels					<i>(Metric Tons)</i>
Fishery Details	Metric Tons					
			PIF stage	Endorsement	MTR	TE
Core Indicator 9	Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products					<i>(Metric Tons)</i>
	Metric Tons (9.1+9.2+9.3)					
	Expected			Achieved		
			PIF stage	PIF stage	MTR	TE
Indicator 9.1	Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)					
	Metric Tons					
	POPs type			Expected		
			PIF stage	Endorsement	MTR	TE
	(select)	(select)	(select)			
	(select)	(select)	(select)			
	(select)	(select)	(select)			
Indicator 9.2	Quantity of mercury reduced					
	Metric Tons					
	Expected			Achieved		
			PIF stage	Endorsement	MTR	TE
Indicator 9.3	Hydrochlorofluorocarbons (HCFC) Reduced/Phased out					
	Metric Tons					
	Expected			Achieved		
			PIF stage	Endorsement	MTR	TE
Indicator 9.4	Number of countries with legislation and policy implemented to control chemicals and waste					
	Number of Countries					
	Expected			Achieved		
			PIF stage	Endorsement	MTR	TE
Indicator 9.5	Number of low-chemical/non-chemical systems implemented particularly in food production, manufacturing and cities					
	Number					
		Technology	Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.6	Quantity of POPs/Mercury containing materials and products directly avoided					
	Metric Tons					
	Expected			Achieved		
			PIF stage	Endorsement	PIF stage	Endorsement
Core Indicator 10	Reduction, avoidance of emissions of POPs to air from point and non-point sources					<i>(grams of toxic equivalent gTEQ)</i>
Indicator 10.1	Number of countries with legislation and policy implemented to control emissions of POPs to air					

			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 10.2	Number of emission control technologies/practices implemented					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 11	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment					<i>(Number)</i>
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		Female		3,000		
		Male		3,000		
		<i>Total</i>		6,000		

Annex 16: GEF 7 Taxonomy

Level 1	Level 2	Level 3	Level 4
<input checked="" type="checkbox"/> Influencing models			
	<input type="checkbox"/> Transform policy and regulatory environments		
	<input type="checkbox"/> Strengthen institutional capacity and decision-making		
	<input type="checkbox"/> Convene multi-stakeholder alliances		
	<input checked="" type="checkbox"/> Demonstrate innovative approaches		
	<input type="checkbox"/> Deploy innovative financial instruments		
<input checked="" type="checkbox"/> Stakeholders			
	<input type="checkbox"/> Indigenous Peoples		
	<input type="checkbox"/> Private Sector		
		<input type="checkbox"/> Capital providers	
		<input type="checkbox"/> Financial intermediaries and market facilitators	
		<input type="checkbox"/> Large corporations	
		<input type="checkbox"/> SMEs	
		<input type="checkbox"/> Individuals/Entrepreneurs	
		<input type="checkbox"/> Non-Grant Pilot	
		<input type="checkbox"/> Project Reflow	
	<input checked="" type="checkbox"/> Beneficiaries		
	<input type="checkbox"/> Local Communities		
	<input type="checkbox"/> Civil Society		
		<input type="checkbox"/> Community Based Organization	
		<input type="checkbox"/> Non-Governmental Organization	
		<input type="checkbox"/> Academia	
		<input type="checkbox"/> Trade Unions and Workers Unions	
	<input checked="" type="checkbox"/> Type of Engagement		
		<input checked="" type="checkbox"/> Information Dissemination	
		<input checked="" type="checkbox"/> Partnership	
		<input checked="" type="checkbox"/> Consultation	
		<input checked="" type="checkbox"/> Participation	
	<input checked="" type="checkbox"/> Communications		
		<input checked="" type="checkbox"/> Awareness Raising	
		<input type="checkbox"/> Education	
		<input checked="" type="checkbox"/> Public Campaigns	
		<input type="checkbox"/> Behavior Change	
<input checked="" type="checkbox"/> Capacity, Knowledge and Research			
	<input type="checkbox"/> Enabling Activities		
	<input checked="" type="checkbox"/> Capacity Development		
	<input type="checkbox"/> Knowledge Generation and Exchange		
	<input type="checkbox"/> Targeted Research		
	<input type="checkbox"/> Learning		
		<input type="checkbox"/> Theory of Change	
		<input type="checkbox"/> Adaptive Management	
		<input type="checkbox"/> Indicators to Measure Change	
	<input checked="" type="checkbox"/> Innovation		
	<input checked="" type="checkbox"/> Knowledge and Learning		
		<input type="checkbox"/> Knowledge Management	
		<input type="checkbox"/> Innovation	
		<input type="checkbox"/> Capacity Development	
		<input type="checkbox"/> Learning	
	<input checked="" type="checkbox"/> Stakeholder Engagement Plan		
<input checked="" type="checkbox"/> Gender Equality			
	<input checked="" type="checkbox"/> Gender Mainstreaming		
		<input type="checkbox"/> Beneficiaries	
		<input checked="" type="checkbox"/> Women groups	
		<input checked="" type="checkbox"/> Sex-disaggregated indicators	

Level 1	Level 2	Level 3	Level 4
		<input checked="" type="checkbox"/> Gender-sensitive indicators	
	<input checked="" type="checkbox"/> Gender results areas		
		<input type="checkbox"/> Access and control over natural resources	
		<input type="checkbox"/> Participation and leadership	
		<input checked="" type="checkbox"/> Access to benefits and services	
		<input checked="" type="checkbox"/> Capacity development	
		<input checked="" type="checkbox"/> Awareness raising	
		<input checked="" type="checkbox"/> Knowledge generation	
<input checked="" type="checkbox"/> Focal Areas/Theme			
	<input type="checkbox"/> Integrated Programs		
		<input type="checkbox"/> Commodity Supply Chains (⁹⁷ Good Growth Partnership)	
			<input type="checkbox"/> Sustainable Commodities Production
			<input type="checkbox"/> Deforestation-free Sourcing
			<input type="checkbox"/> Financial Screening Tools
			<input type="checkbox"/> High Conservation Value Forests
			<input type="checkbox"/> High Carbon Stocks Forests
			<input type="checkbox"/> Soybean Supply Chain
			<input type="checkbox"/> Oil Palm Supply Chain
			<input type="checkbox"/> Beef Supply Chain
			<input type="checkbox"/> Smallholder Farmers
			<input type="checkbox"/> Adaptive Management
		<input type="checkbox"/> Food Security in Sub-Saharan Africa	
			<input type="checkbox"/> Resilience (climate and shocks)
			<input type="checkbox"/> Sustainable Production Systems
			<input type="checkbox"/> Agroecosystems
			<input type="checkbox"/> Land and Soil Health
			<input type="checkbox"/> Diversified Farming
			<input type="checkbox"/> Integrated Land and Water Management
			<input type="checkbox"/> Smallholder Farming
			<input type="checkbox"/> Small and Medium Enterprises
			<input type="checkbox"/> Crop Genetic Diversity
			<input type="checkbox"/> Food Value Chains
			<input type="checkbox"/> Gender Dimensions
			<input type="checkbox"/> Multi-stakeholder Platforms
		<input type="checkbox"/> Food Systems, Land Use and Restoration	
			<input type="checkbox"/> Sustainable Food Systems
			<input type="checkbox"/> Landscape Restoration
			<input type="checkbox"/> Sustainable Commodity Production
			<input type="checkbox"/> Comprehensive Land Use Planning
			<input type="checkbox"/> Integrated Landscapes
			<input type="checkbox"/> Food Value Chains
			<input type="checkbox"/> Deforestation-free Sourcing
			<input type="checkbox"/> Smallholder Farmers
		<input type="checkbox"/> Sustainable Cities	
			<input type="checkbox"/> Integrated urban planning
			<input type="checkbox"/> Urban sustainability framework
			<input type="checkbox"/> Transport and Mobility
			<input type="checkbox"/> Buildings
			<input type="checkbox"/> Municipal waste management
			<input type="checkbox"/> Green space
			<input type="checkbox"/> Urban Biodiversity
			<input type="checkbox"/> Urban Food Systems
			<input type="checkbox"/> Energy efficiency
			<input type="checkbox"/> Municipal Financing
			<input type="checkbox"/> Global Platform for Sustainable Cities

Level 1	Level 2	Level 3	Level 4
			<input type="checkbox"/> Urban Resilience
	<input type="checkbox"/> Biodiversity		
		<input type="checkbox"/> Protected Areas and Landscapes	
			<input type="checkbox"/> Terrestrial Protected Areas
			<input type="checkbox"/> Coastal and Marine Protected Areas
			<input type="checkbox"/> Productive Landscapes
			<input type="checkbox"/> Productive Seascapes
			<input type="checkbox"/> Community Based Natural Resource Management
		<input type="checkbox"/> Mainstreaming	
			<input type="checkbox"/> Extractive Industries (oil, gas, mining)
			<input type="checkbox"/> Forestry (Including HCVF and REDD+)
			<input type="checkbox"/> Tourism
			<input type="checkbox"/> Agriculture & agrobiodiversity
			<input type="checkbox"/> Fisheries
			<input type="checkbox"/> Infrastructure
			<input type="checkbox"/> Certification (National Standards)
			<input type="checkbox"/> Certification (International Standards)
		<input type="checkbox"/> Species	
			<input type="checkbox"/> Illegal Wildlife Trade
			<input type="checkbox"/> Threatened Species
			<input type="checkbox"/> Wildlife for Sustainable Development
			<input type="checkbox"/> Crop Wild Relatives
			<input type="checkbox"/> Plant Genetic Resources
			<input type="checkbox"/> Animal Genetic Resources
			<input type="checkbox"/> Livestock Wild Relatives
			<input type="checkbox"/> Invasive Alien Species (IAS)
		<input type="checkbox"/> Biomes	
			<input type="checkbox"/> Mangroves
			<input type="checkbox"/> Coral Reefs
			<input type="checkbox"/> Sea Grasses
			<input type="checkbox"/> Wetlands
			<input type="checkbox"/> Rivers
			<input type="checkbox"/> Lakes
			<input type="checkbox"/> Tropical Rain Forests
			<input type="checkbox"/> Temperate Forests
			<input type="checkbox"/> Grasslands
			<input type="checkbox"/> Paramo
			<input type="checkbox"/> Desert
		<input type="checkbox"/> Financial and Accounting	
			<input type="checkbox"/> Payment for Ecosystem Services
			<input type="checkbox"/> Natural Capital Assessment and Accounting
			<input type="checkbox"/> Conservation Trust Funds
			<input type="checkbox"/> Conservation Finance
		<input type="checkbox"/> Supplementary Protocol to the CBD	
			<input type="checkbox"/> Biosafety
			<input type="checkbox"/> Access to Genetic Resources Benefit Sharing
	<input type="checkbox"/> Forests		
		<input type="checkbox"/> Forest and Landscape Restoration	
			<input type="checkbox"/> REDD/REDD+
		<input type="checkbox"/> Forest	
			<input type="checkbox"/> Amazon
			<input type="checkbox"/> Congo
			<input type="checkbox"/> Drylands
	<input type="checkbox"/> Land Degradation		
		<input type="checkbox"/> Sustainable Land Management	
			<input type="checkbox"/> Restoration and Rehabilitation of Degraded Lands
			<input type="checkbox"/> Ecosystem Approach

Level 1	Level 2	Level 3	Level 4
			<input type="checkbox"/> Integrated and Cross-sectoral approach
			<input type="checkbox"/> Community-Based NRM
			<input type="checkbox"/> Sustainable Livelihoods
			<input type="checkbox"/> Income Generating Activities
			<input type="checkbox"/> Sustainable Agriculture
			<input type="checkbox"/> Sustainable Pasture Management
			<input type="checkbox"/> Sustainable Forest/Woodland Management
			<input type="checkbox"/> Improved Soil and Water Management Techniques
			<input type="checkbox"/> Drought Mitigation/Early Warning
		<input type="checkbox"/> Land Degradation Neutrality	
			<input type="checkbox"/> Land Productivity
			<input type="checkbox"/> Land Cover and Land cover change
			<input type="checkbox"/> Carbon stocks above or below ground
		<input type="checkbox"/> Food Security	
	<input type="checkbox"/> International Waters		
		<input type="checkbox"/> Ship	
		<input type="checkbox"/> Coastal	
		<input type="checkbox"/> Freshwater	
			<input type="checkbox"/> Aquifer
			<input type="checkbox"/> River Basin
			<input type="checkbox"/> Lake Basin
		<input type="checkbox"/> Learning	
		<input type="checkbox"/> Fisheries	
		<input type="checkbox"/> Persistent toxic substances	
		<input type="checkbox"/> SIDS : Small Island Dev States	
		<input type="checkbox"/> Targeted Research	
		<input type="checkbox"/> Pollution	
			<input type="checkbox"/> Persistent toxic substances
			<input type="checkbox"/> Plastics
			<input type="checkbox"/> Nutrient pollution from all sectors except wastewater
			<input type="checkbox"/> Nutrient pollution from Wastewater
		<input type="checkbox"/> Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		<input type="checkbox"/> Strategic Action Plan Implementation	
		<input type="checkbox"/> Areas Beyond National Jurisdiction	
		<input type="checkbox"/> Large Marine Ecosystems	
		<input type="checkbox"/> Private Sector	
		<input type="checkbox"/> Aquaculture	
		<input type="checkbox"/> Marine Protected Area	
		<input type="checkbox"/> Biomes	
			<input type="checkbox"/> Mangrove
			<input type="checkbox"/> Coral Reefs
			<input type="checkbox"/> Seagrasses
			<input type="checkbox"/> Polar Ecosystems
			<input type="checkbox"/> Constructed Wetlands
	<input type="checkbox"/> Chemicals and Waste		
		<input type="checkbox"/> Mercury	
		<input type="checkbox"/> Artisanal and Scale Gold Mining	
		<input type="checkbox"/> Coal Fired Power Plants	
		<input type="checkbox"/> Coal Fired Industrial Boilers	
		<input type="checkbox"/> Cement	
		<input type="checkbox"/> Non-Ferrous Metals Production	
		<input type="checkbox"/> Ozone	
		<input type="checkbox"/> Persistent Organic Pollutants	
		<input type="checkbox"/> Unintentional Persistent Organic Pollutants	
		<input type="checkbox"/> Sound Management of chemicals and Waste	
		<input type="checkbox"/> Waste Management	

Level 1	Level 2	Level 3	Level 4
			<input type="checkbox"/> Hazardous Waste Management
			<input type="checkbox"/> Industrial Waste
			<input type="checkbox"/> e-Waste
		<input type="checkbox"/> Emissions	
		<input type="checkbox"/> Disposal	
		<input type="checkbox"/> New Persistent Organic Pollutants	
		<input type="checkbox"/> Polychlorinated Biphenyls	
		<input type="checkbox"/> Plastics	
		<input type="checkbox"/> Eco-Efficiency	
		<input type="checkbox"/> Pesticides	
		<input type="checkbox"/> DDT - Vector Management	
		<input type="checkbox"/> DDT - Other	
		<input type="checkbox"/> Industrial Emissions	
		<input type="checkbox"/> Open Burning	
		<input type="checkbox"/> Best Available Technology / Best Environmental Practices	
		<input type="checkbox"/> Green Chemistry	
	<input checked="" type="checkbox"/> Climate Change		
		<input type="checkbox"/> Climate Change Adaptation	
			<input type="checkbox"/> Climate Finance
			<input type="checkbox"/> Least Developed Countries
			<input type="checkbox"/> Disaster Risk Management
			<input type="checkbox"/> Climate Resilience
			<input type="checkbox"/> Climate information
			<input type="checkbox"/> Ecosystem-based Adaptation
			<input type="checkbox"/> Adaptation Tech Transfer
			<input type="checkbox"/> National Adaptation Programme of Action
			<input type="checkbox"/> National Adaptation Plan
			<input type="checkbox"/> Mainstreaming Adaptation
			<input type="checkbox"/> Private Sector
			<input type="checkbox"/> Innovation
			<input type="checkbox"/> Complementarity
			<input type="checkbox"/> Community-based Adaptation
			<input type="checkbox"/> Livelihoods
		<input checked="" type="checkbox"/> Climate Change Mitigation	
			<input type="checkbox"/> Agriculture, Forestry, and other Land Use
			<input type="checkbox"/> Energy Efficiency
			<input checked="" type="checkbox"/> Sustainable Urban Systems and Transport
			<input type="checkbox"/> Technology Transfer
			<input type="checkbox"/> Renewable Energy
			<input type="checkbox"/> Financing
			<input type="checkbox"/> Enabling Activities
		<input type="checkbox"/> Technology Transfer	
			<input type="checkbox"/> Poznan Strategic Programme on Technology Transfer
			<input type="checkbox"/> Climate Technology Centre & Network (CTCN)
			<input type="checkbox"/> Endogenous technology
			<input type="checkbox"/> Technology Needs Assessment
			<input type="checkbox"/> Adaptation Tech Transfer
		<input type="checkbox"/> United Nations Framework on Climate Change	
			<input type="checkbox"/> Nationally Determined Contribution

MICRO ASSESSMENT REPORT - MINISTRY OF TRANSPORT, UZBEKISTAN

DATE: 13 May 2020

PARTNER: Mark Henderson (Mark.a.Henderson@bdo.co.uk)

COMMISSIONED BY: UNDP Uzbekistan

Micro Assessment Findings

1. Background, scope and methodology

Background

The micro assessment is part of the requirements under the Harmonized Approach to Cash Transfers (HACT) Framework. The HACT framework represents a common operational framework for UN agencies' transfer of cash to government and non-governmental implementing partners.

The micro assessment assesses the implementing partner's control framework. It results in a risk rating (low, moderate, significant or high). The overall risk rating is used by the UN agencies, along with other available information (e.g. history of engagement with the agency and previous assurance results), to determine the type and frequency of assurance activities as per each agency's guideline and can be taken into consideration when selecting the appropriate cash transfer modality for an implementing partner.

Scope

The micro assessment provides an overall assessment of the implementing partner's programme, financial and operations management policies, procedures, systems and internal controls. It includes:

- A review of the implementing partner legal status, governance structures and financial viability; programme management, organizational structure and staffing, accounting policies and procedures, fixed assets and inventory, financial reporting and monitoring, and procurement;
- A focus on compliance with policies, procedures, regulations and institutional arrangements that are issued both by the Government and the implementing partner.

It takes into account results of any previous micro assessments conducted of the implementing partner.

Methodology

We performed the micro assessment at the locations and on the dates set out in Annex I. Through discussion with management, observation and walk-through tests of transactions, we have assessed the implementing partner's internal control system with emphasis on:

- The effectiveness of the systems in providing the implementing partner's management with accurate and timely information for management of funds and assets in accordance with work plans and agreements with the United Nations agencies;
- The general effectiveness of the internal control system in protecting the assets and resources of the implementing partner.

We discussed the results of the micro assessment with applicable UN agency personnel and the implementing partner prior to finalization of the report. The list of persons met and interviewed during the micro assessment is set out in Annex III.

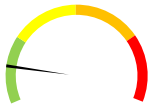

Results


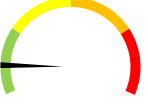
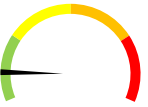

The results of our micro assessment are set out in section 1.2 below, and our detailed internal control findings and recommendations in section 1.3.

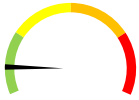

Mark Henderson
 Partner
 BDO LLP
 10 March 2020

2. Summary of risk assessment results

The table below summarizes the results and main internal control gaps found during application of the micro assessment questionnaire (in Appendix IV). Detailed findings and recommendations are set out in Section 3 below.

Tested subject area	Risk assessment*	Comments
1. Implementing partner	<p style="text-align: center;">Low</p> 	<p>The implementing partner is the Ministry of Transport. Finance and procurement procedures are in line with international practice. There is full segregation of duties, and adequate qualified and experienced staff, although the workload appears heavy.</p> <p>An issue may arise with culture and workload in terms of the availability of staff to engage with the UNDP-funded project. It is therefore possible that issues such as reporting will be problematic. However we note that the planned UNDP project will be implemented by three operating companies, which may help to mitigate such issues.</p>
2. Programme management	<p style="text-align: center;">Low</p> 	<p>The Ministry is currently undertaking several projects, but using its own (government-funded) resources, and following its own reporting procedures, monitoring and evaluation system. Although these procedures are adequate for internal projects, staff are not familiar with the requirements of working with a UN agency or other international donor.</p>

3. Organisational structure and staffing	<p style="text-align: center;">Low</p> 	<p>The Ministry has adequate staff and HR procedures. A full suite of policies is in place covering all aspects of day to day operations. Staff turnover is low, and training arrangements are in place. Finance and other relevant departments have sufficient staff levels, and staff are appropriately qualified for their roles.</p>
4. Accounting policies and procedures	<p style="text-align: center;">Low</p> 	<p>The partner uses a government-developed bespoke accounting system called Uzaspor. Segregation of duties is in place over the purchasing process, and all payments require authorization at Vice Minister level.</p> <p>Budgets are prepared at organizational level, formally approved, and monitored monthly. Relevant reconciliations also take place monthly, and are properly reviewed and approved.</p> <p>The Ministry produces a plethora of reports using varied accounting and other financial information. Audits are carried out by the government Supreme Audit body.</p>
5. Fixed assets and inventory	<p style="text-align: center;">Low</p> 	<p>Fixed assets held by the Ministry itself are limited to office equipment and furniture: transport assets are generally held on the balance sheets of subsidiary organisations. Assets are inventoried, logged, tagged and allocated to responsible persons. Inventory is recorded, stored and protected as required.</p>
6. Financial reporting and monitoring	<p style="text-align: center;">Low</p> 	<p>The Ministry has its own extensive system of financial reporting, as set out in various government instructions. Some external support may be required for the project team to prepare the financial reports necessary for UNDP purposes. These reports may require calibration of the government financial management system, and the finance team may benefit from training on UNDP reporting requirements.</p>

7. Procurement and contract administration	<p style="text-align: center;">Low</p> 	<p>The Government of Uzbekistan has an online portal, the "Birge", through which all procurement is carried out, irrespective of cost. However, we were not provided with examples of tenders that had taken place involving multiple tenderers. Although government procurement regulations are well set out, we were unable to see these operating in practice. We have raised recommendations in respect of procurement in the project context.</p>
Overall risk assessment	<p style="text-align: center;">Low</p> 	

** High, Significant, Moderate, Low*

3. Detailed internal control findings and recommendations

No	Description of finding	Recommendation	Partner comments
1	Programme management staff do not have relevant experience of donor projects		
	<p>The Ministry of Transport was only created in February 2019, and began functioning in March 2019. The new Ministry brings together a number of previously separate agencies operating rail, metro, air and road infrastructure. Although the Ministry has experience of implementing Uzbek Government-funded projects, they have not previously worked with UN agencies.</p>	<p>The partner should ensure its staff have the relevant qualifications and competencies for their roles. This may be achieved by providing additional training and/or study support, or, when recruiting externally, that candidates have the requisite skills and experience for the role they are to undertake. Support from UNDP may be required in helping the partner in understanding the management and reporting requirements of a UN-funded project.</p>	<p>No comments received.</p> <p>UNDP comments: UNDP will organize training seminars on the requirements of a UN funded project that also includes explanation of the GEF project cycle requirements (e.g. – PIF, MTR, Final Evaluation etc.)</p>
2	Inadequate oversight and monitoring over funds transferred to partner organisations		
	<p>The partner will delegate most aspects of project implementation to three operating companies and transfer funds to cover these activities. Whilst it does have documented policies and procedures in place for the operating companies, the operating companies operate as independent units with no strict requirement to submit reports and provide supporting documentation to the Ministry.</p>	<p>The partner is accountable for all funds received from UN agencies, including those it transfers to sub-partners or branches. It should therefore establish a formal structure for partner organizations to submit reports and supporting documentation to evidence how they have spent UN funds. Establishing a project working group at HQ level may be helpful in managing and monitoring this, as may a memorandum documenting all parties' responsibilities towards the project.</p> <p>The partner should review financial and narrative reports from its sub-partners before consolidating them into the financial reports submitted to the UN. We emphasise also that a transfer to a sub-partner or branch cannot be considered as expenditure until relevant supporting documents are provided to the main partner.</p>	<p>No comments received</p> <p>UNDP comments: UNDP will work with the Partner to define the reporting formats, so that at the end, the reporting is aligned with the UNDP reporting needs/system.</p>
3	Procurement and contract administration		

No.	Description of finding	Recommendation	Partner comments
	<p>Whilst the partner has written procurement policies, we were not presented with evidence that these policies were followed in practice. Specifically, items purchased should be subject to a tender process, but for the examples we reviewed, evidence of losing bids was not provided to us. Failure to follow established procurement procedures may mean that procurement is not effective, that staff are unaware of the correct procedures, and that the organisation does not obtain value for money.</p>	<p>The partner should follow its written procurement policies and procedures. The specific guidelines and thresholds should be followed to ensure that buying takes place using competitive procedures in a fair and transparent manner whilst enabling efficient usage of project funds.</p> <p>All procedures, including those which, set out, as a minimum, the different types of procurement, the thresholds at which these apply, and the approval / authorization procedure for purchases should be followed.</p> <p>For larger or more sophisticated procurement, the partner may benefit from support from UNDP, to ensure that purchases are made in line with the principles of economy and fairness, particularly at the early stages of project implementation.</p>	<p>No comments received</p>

Appendices

Appendix I: Implementing partner and programme information

Implementing partner name:	Ministry of Transport, Republic of Uzbekistan
Implementing partner code or ID in UNICEF, UNDP, UNFPA records (as applicable)	
Implementing partner contact details (contact name, email address and telephone number)	Myrod Abidov, Director of the Centre for studying problems and development in transport and logistics.
Main programmes implemented with the applicable UN agency/ies	None to date
Key official in charge of the UN agency/ies' programme(s)	Myrod Abidov, Director of the Centre for studying problems and development in transport and logistics.
Programme location(s)	Tashkent
Location of records related to the UN Agency/ies' programme(s)	Tashkent
Currency of records maintained	Uzbek Soms
Expenditures incurred/reported to UNICEF, UNDP and UNFPA (as applicable) during the most recent financial reporting period (in US\$)	N/A
Cash transfer modality/ies used by the UN agency/ies to the implementing partner	DCT
Intended start date of micro assessment	20-Feb-20
Number of days to be spent for visit to implementing partner	2
Any special requests to be considered during the micro assessment	

Appendix II: Implementing partner organisational chart



Appendix III: List of persons met for Ministry of Transport

Name	Unit / organisation	Position
Myrod Abidov	Centre for Studying Problems, Ministry of Transport	Director

Appendix IV: Micro-Assessment Questionnaire for Ministry of Transport

1. Implementing partner						
1.1 Is the IP legally registered? If so, is it in compliance with registration requirements? Please note the legal status and date of registration of the entity.	Yes			Low	1	The Ministry of Transport was registered in February 2019 and began functioning in March 2019. The Ministry was formed by combining several agencies such as the Tashkent metro, aviation, roads together.
1.2 If the IP received United Nations resources in the past, were significant issues reported in managing the resources, including from previous assurance activities.		No		High	8	No previous resources received from the UN. Refer to internal control finding 1.
1.3 Does the IP have statutory reporting requirements? If so, are they in compliance with such requirements in the prior three fiscal years?	Yes			Low	1	Monthly statements produced, annual statements to be produced. The Ministry has a reporting plan from the Ministry of Finance and "GosStat" which it follows.
1.4 Does the governing body meet on a regular basis and perform oversight functions?	Yes			Low	1	Monthly meetings of the Directors' Committee are held. They review the activities of the Ministry and oversee its management
1.5 If any other offices/ external entities participate in implementation, does the IP have policies and process to ensure appropriate oversight and monitoring of implementation?	Yes			Low	1	MinTransport will receive and distribute the funds to three independent operators. Each operates under similar procedures as the Ministry. However there is no specific reporting line.
1.6 Does the IP show basic financial stability in- country (core resources; funding trend) Provide the amount of total assets, total liabilities, income and expenditure for the current and prior three fiscal years.	Yes			Low	1	As noted above, the Ministry only came into being in March 2019 so past financial statements are not available. However, as a government body, going concern is not considered a risk.
1.7 Can the IP easily receive funds? Have there been any major problems in the past in the receipt of funds, particularly where the funds flow from government ministries?	Yes			Low	1	No restrictions or barriers on the receipt of funds.

1.8 Does the IP have any pending legal actions against it or outstanding material/significant disputes with vendors/contractors? <i>If so, provide details and actions taken by the IP to resolve the legal action.</i>		No		Low	1	None currently exist or are expected.
1.9 Does the IP have an anti-fraud and corruption policy?	Yes			Low	1	The Ministry automatically falls under government instructions which include regulation on anti corruption, fraud, whistle blowers etc.
1.10 Has the IP advised employees, beneficiaries and other recipients to whom they should report if they suspect fraud, waste or misuse of agency resources or property? If so, does the IP have a policy against retaliation relating to such reporting?	Yes			Low	1	They have an ethical policy document which includes anti fraud, anti corruption and whistle-blower sections
1.11 Does the IP have any key financial or operational risks that are not covered by this questionnaire? If so, please describe. <i>Examples: foreign exchange risk; cash receipts.</i>		No		Low	1	No additional risks were noted from our discussions.
Total number of questions in subject area:	11					
Total number of applicable questions in subject area:	11					
Total number of applicable key questions in subject area:	5					
Total number of risk points:	18					
Risk score	1.64					
Area risk rating	Low					

Subject area (<i>key questions in bold</i>)	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
2. Programme management						
2.1. Does the IP have and use sufficiently detailed written policies, procedures and other tools (e.g. project development checklist, work planning templates, work planning schedule) to develop programmes and plans?	Yes			Moderate	2	The forthcoming UNDP project will be the first donor- funded project. However, for government-funded projects, procedures exist. The Ministry has begun certain projects such as looking at improving transport between Samarkand and Tashkent. Due to the short period of time since formation limited progress has been seen. Refer to internal control finding 1.
2.2. Do work plans specify expected results and the activities to be carried out to achieve results, with a time frame and budget for the activities?	Yes			Moderate	4	This is their first donor funded project. A full budgeting system exists, including planning, monitoring, variance reporting, risk assessment and management.
2.3 Does the IP identify the potential risks for programme delivery and mechanisms to mitigate them?	Yes			Low	1	See 2.3 above.
2.4 Does the IP have and use sufficiently detailed policies, procedures, guidelines and other tools (checklists, templates) for monitoring and evaluation?	Yes			Significant	3	See above. Monitoring and evaluation tends to be weaker, with no formal checklists. The system in practice has not had sufficient time to run in this Ministry to any great extent. We understand that UNDP GEF rules will be followed for monitoring and evaluation. Refer to internal control finding 1.
2.5 Does the IP have M&E frameworks for its programmes, with indicators, baselines, and targets to monitor achievement of programme results?	Yes			Moderate	2	Baseline is zero generally. Targets and timelines exist. Several projects are currently in progress. Refer to internal control finding 1.
2.6 Does the IP carry out and document regular monitoring activities such as review meetings, on-site project visits, etc.	Yes			Moderate	4	Yes. Frequent meetings are held and progress is monitored. Refer to internal control finding 1.
2.7 Does the IP systematically collect, monitor and evaluate data on the achievement of project results?	Yes			Moderate	2	Yes. As a ministry the aims may not be the aims the UN would normally expect but data is gathered.

Subject area (key questions in bold)	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
2.8 Is it evident that the IP followed up on independent evaluation recommendations?	Yes			Low	1	Recommendations have been to ensure compliance with new laws. These are followed up.
Total number of questions in subject area:	8					
Total number of applicable questions in subject area:	8					
Total number of applicable key questions in subject area:	2					
Total number of risk points:	19					
Risk score	2.375					
Area risk rating	Moderate					

Subject (key questions in bold)	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
3. Organizational structure and staffing							
3.1 Are the IP's recruitment, employment and personnel practices clearly defined and followed, and do they embrace transparency and competition?		Yes			Low	1	<ul style="list-style-type: none"> - Report to the employment centre on vacant posts - Recruitment from universities - Takes part in labour fairs - Advertising to Recruitment agencies <p>Government rules exist governing the form of adverts, length of time a post is advertised, interview procedure, required documents.</p>
3.2 Does the IP have clearly defined job descriptions?		Yes			Low	1	Every position has a job description.
3.3 Is the organizational structure of the finance and programme management departments, and competency of staff, appropriate for the complexity of the IP and the scale of activities? Identify the key staff, including job titles, responsibilities, educational backgrounds and professional experience.		Yes			Low	1	All finance staff are recruited having an accounting degree, and other staff are appropriately qualified for their roles. There is a clear organisational structure, as set out in Annex III.
3.4 Is the IP's accounting/finance function staffed adequately to ensure sufficient controls are in place to manage agency funds?		Yes			Low	1	There are four members of staff in accounting plus one in procurement.
3.5 Does the IP have training policies for accounting/finance/programme management staff? Are necessary training activities undertaken?		Yes			Low	1	Staff are periodically sent to training centres for continuing education. This is monitored by the first deputy chairman of the board or deputy chairman of the board for financial matters
3.6 Does the IP perform background verification/checks on all new accounting/finance and management positions?		Yes			Low	1	CVs are checked, work books reviewed, references taken up.
3.7 Has there been significant turnover in key finance positions the past five years? If so, has the rate improved or worsened and appears to be a problem?			No		Low	1	The Ministry has only been in existence 1 year. As such, there has been no significant turnover.

Subject area (key questions in bold)	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
3.8 Does the IP have a documented internal control framework? Is this framework distributed and made available to staff and updated periodically? If so, please describe.	Yes			Low	1	Organisation charts exist showing reporting lines. Job descriptions exist for positions. The structure of all departments is designed to provide a control framework.
Total number of questions in subject area:	8					
Total number of applicable questions in subject area:	8					
Total number of applicable key questions in subject area:	3					
Total number of risk points:	8					
Risk score	1.00					
Area risk rating	Low					

Subject (key questions in bold)	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
4. Accounting policies and procedures							
4a. General							
4.1 Does the IP have an accounting system that allows for proper recording of financial transactions from United Nations agencies, including allocation of expenditures in accordance with the respective components, disbursement categories and sources of funds?		Yes			Moderate	4	Government developed system, Uzaspor. UN requirements may need to be communicated to the Ministry in advance so that these requirements are fulfilled. Refer to internal control finding 1.
4.2 Does the IP have an appropriate cost allocation methodology that ensures accurate cost allocations to the various funding sources in accordance with established agreements?		Yes			Low	1	Methodology is set out in government instructions (e.g. split of rent on the basis of square metres).
4.3 Are all accounting and supporting documents retained in an organized system that allows authorized users easy access?		Yes			Moderate	4	A paper system exists in parallel to computerised system. Certain documents were not provided during our review, such as confirmation of 3 tenders for procurement actions. Refer to internal control finding 3.
4.4 Are the general ledger and subsidiary ledgers reconciled at least monthly? Are explanations provided for significant reconciling items?		Yes			Low	1	The system does this automatically
4b. Segregation of duties							
4.5 Are the following functional responsibilities performed by different units or individuals: (a) authorization to execute a transaction; (b) recording of the transaction; and (c) custody of assets involved in the transaction?		Yes			Low	1	They have a standard system of procurement. Requisitions are prepared then approved. The transaction is recorded by the accountants, paid by the cashier. Assets are recorded in the accounting system
4.6 Are the functions of ordering, receiving, accounting for and paying for goods and services appropriately segregated?		Yes			Low	1	Purchasing undertakes ordering, accounting record, finance pay. Receipt will be by the requisitioner
4.7 Are bank reconciliations prepared by individuals other than those who make or approve payments?		Yes			Low	1	The accounts department reconciles bank transactions with the cash book monthly.

Subject (key questions in bold)	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
4c. Budgeting system							
4.8 Are budgets prepared for all activities in sufficient detail to provide a meaningful tool for monitoring subsequent performance?		Yes			Low	1	Detailed budgets are prepared, and compared to actuals. Variances are investigated.
4.9 Are actual expenditures compared to the budget with reasonable frequency? Are explanations required for significant variations from the budget?		Yes			Low	1	Monthly. Exceptions (variances) are investigated.
4.10 Is prior approval sought for budget amendments in a timely way?		Yes			Low	1	Budget amendments are made quarterly.
4.11 Are IP budgets approved formally at an appropriate level?		Yes			Low	1	The Minister approves all budgets and quarterly amendments.
4d. Payments							
4.12 Do invoice processing procedures provide for: <ul style="list-style-type: none"> • Copies of purchase orders and receiving reports to be obtained directly from issuing departments? • Comparison of invoice quantities, prices and terms with those indicated on the purchase order and with records of goods/services actually received? • Checking the accuracy of calculations? 		Yes			Low	1	The Ministry has an accounting, legal and purchasing department. Segregation of activities is full and all play a part in the purchasing process. Accounting and purchasing is one department. The key document is the receipt, this is matched to goods/services received and payment documents.
4.13 Are payments authorized at an appropriate level? Does the IP have a table of payment approval thresholds?		Yes			Low	1	Vice minister level usually required. A typical payment will require 4 signatures.
4.14 Are all invoices stamped 'PAID', approved, and marked with the project code and account code?		Yes			Low	1	A bank payment confirmation showing "paid" is on file with purchase documentation.
4.15 Do controls exist for preparation and approval of payroll expenditures? Are payroll changes properly authorized?		Yes			Low	1	Yes. Payroll is prepared in accounting, approved by HR.
4.16 Do controls exist to ensure that direct staff salary costs reflects the actual amount of staff time spent on a project?				N/A	N/A	-	Project work is considered, currently, to be part of their duties. Allocations of costs are made according to government regulations so staff with split duties will complete a time sheet.

Subject <i>(key questions in bold)</i>	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
4.17 Do controls exist for expense categories that do not originate from invoice payments, such as DSAs, travel, and internal cost allocations?		Yes			Low	1	Yes. Government standards exist for payments. Requests to travel are reviewed and authorised at an appropriate level.
4e. Policies and procedures							
4.18 Does the IP have a stated basis of accounting (i.e. cash or accrual) and does it allow for compliance with the agency's requirement?		Yes			Low	1	Accruals at least in part. Debtors, creditors and assets are recorded.
4.19 Does the IP have an adequate policies and procedures manual and is it distributed to relevant staff?		Yes			Low	1	The policies manual is available on line.
4f. Cash and bank							
4.20 Does the IP require dual signatories / authorization for bank transactions? Are new signatories approved at an appropriate level and timely updates made when signatories depart?		Yes			Low	1	Two signatories are required. Delegation of authority exists for travel, holiday. Tokens issued for payment codes.
4.21 Does the IP maintain an adequate, up-to-date cashbook, recording receipts and payments?		Yes			Low	1	The computer system incorporates a cash-book.
4.22 If the partner is participating in micro-finance advances, do controls exist for the collection, timely deposit and recording of receipts at each collection location?				N/A	N/A	-	No micro finance activities
4.23 Are bank balances and cash ledger reconciled monthly and properly approved? Are explanations provided for significant, unusual and aged reconciling items?		Yes			Low	1	Reconciliations take place through the computer system. These are signed off monthly.
4.24 Is substantial expenditure paid in cash? If so, does the IP have adequate controls over cash payments?				N/A	N/A	-	No cash is used.
4.25 Does the IP carry out a regular petty cash reconciliation?				N/A	N/A	-	N/a
4.26 Are cash and cheques maintained in a secure location with restricted access? Are bank accounts protected with appropriate remote access controls?				N/A	N/A	-	N/a

Subject area <i>(key questions in bold)</i>	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
4.27 Are there adequate controls over submission of electronic payment files that ensure no unauthorized amendments once payments are approved and files are transmitted over secure / encrypted networks?	Yes			Low	1	Standard, secured, internet banking system is used for payments.
4g. Other offices or entities						
4.28 Does the IP have a process to ensure expenditures of subsidiary offices/ external entities are in compliance with the work plan and/or contractual agreement?		No		High	8	The project funds will be transmitted to three operating companies. These operating companies are regulated by the Ministry of Transport but do not report directly. Refer to internal control finding 2.
4h. Internal audit						
4.29 Is the internal auditor sufficiently independent to make critical assessments? To whom does the internal auditor report?	Yes			Low	1	They use the Supreme Audit body for audits, this will include internal and external audit. To date no audits have been made, only in existence since March 2019.
4.30 Does the IP have stated qualifications and experience requirements for internal audit department staff?	Yes			Low	1	Qualified government auditors
4.31 Are the activities financed by the agencies included in the internal audit department's work programme?		No		Moderate	2	This is not yet known given that the Ministry has only been in existence for one year, and has not yet implemented donor projects.
4.32 Does the IP act on the internal auditor's recommendations?			N/A	N/A	-	See 4.31 above. No known recommendations.
Total number of questions in subject area:	32					
Total number of applicable questions in subject area:	26					
Total number of applicable key questions in subject area:	17					
Total number of risk points:	40					
Risk score	1.54					
Area risk rating	Low					

Subject <i>(key questions in bold)</i>	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
5. Fixed assets and inventory							
5a. Safeguards over assets							
5.1 Is there a system of adequate safeguards to protect assets from fraud, waste and abuse?		Yes			Low	1	The number of assets is very small and limited to office equipment. Operations are delegated to operating units so they have only office equipment. Asset policies cover safeguards.
5.2 Are subsidiary records of fixed assets and inventory kept up to date and reconciled with control accounts?		Yes			Low	1	A list of assets is kept, including primarily computers, printers, routers.
5.3 Are there periodic physical verification and/or count of fixed assets and inventory? If so, please describe?		Yes			Low	1	A fixed asset count takes place twice a year.
5.4 Are fixed assets and inventory adequately covered by insurance policies?		Yes			Moderate	2	There are no material assets other than buildings. These are not insured but underwritten by the government.
5b. Warehousing and inventory management							
5.5 Do warehouse facilities have adequate physical security?		Yes			Low	1	Guards where required but warehouses generally belong to the operating units. The Ministry acts as regulator over the operators.
5.6 Is inventory stored so that it is identifiable, protected from damage, and countable?		Yes			Low	1	Very limited inventory is kept in the Ministry - limited to office supplies.
5.7 Does the IP have an inventory management system that enables monitoring of supply distribution?		Yes			Low	1	What is received is logged
5.8 Is responsibility for receiving and issuing inventory segregated from that for updating the inventory records?		Yes			Low	1	Very little inventory, office goods, so no material risk.
5.9 Are regular physical counts of inventory carried out?		Yes			Low	1	Formal counts take place a minimum once a year.
Total number of questions in subject area:		9					
Total number of applicable questions in subject area:		9					
Total number of applicable key questions in subject area:		2					
Total number of risk points:		10					
Risk score		1.11					
Area risk rating		Low					

Subject (key questions in bold)	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
6. Financial reporting and monitoring							
6.1 Does the IP have established financial reporting procedures that specify what reports are to be prepared, the source system for key reports, the frequency of preparation, what they are to contain and how they are to be used?		Yes			Low	1	In Government instructions there is a list of reports, due dates, recipient organisations. The reports are derived from the computer system. They show the income and expenditure along with statistical information, number of men, women.
6.2 Does the IP prepare overall financial statements?		Yes			Moderate	2	None have been prepared yet, as the Ministry has only been in operation since March 2019. Financial statements will, however, be prepared in due course.
6.3 Are the IP's overall financial statements audited regularly by an independent auditor in accordance with appropriate national or international auditing standards? If so, please describe the auditor.				N/A	N/A	-	They will be, but none have been produced to date.
6.4 Were there any major issues related to ineligible expenditure involving donor funds reported in the audit reports of the IP over the past three years?				N/A	N/A	-	No donor funds in the past.
6.5 Have any significant recommendations made by auditors in the prior five audit reports and/or management letters over the past five years and have not yet been implemented?				N/A	N/A	-	No previous audits
6.6 Is the financial management system computerized?		Yes			Low	1	As noted above, bespoke system
6.7 Can the computerized financial management system produce the necessary financial reports?		Yes			Moderate	2	The system may need to be calibrated by the IT department to allow the relevant information to be produced. The ministry has not previously prepared donor reports. Refer to internal control finding 1.

Subject area <i>(key questions in bold)</i>	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
6.8 Does the IP have appropriate safeguards to ensure the confidentiality, integrity and availability of the financial data? <i>E.g. password access controls; regular data back-up.</i>	Yes			Low	1	Full security system with passwords exists
Total number of questions in subject area:	8					
Total number of applicable questions in subject area:	5					
Total number of applicable key questions in subject area:	1					
Total number of risk points:	7					
Risk score	1.40					
Area risk rating	Low					

Subject (key questions in bold)	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
7. Procurement and contract administration							
7a. Procurement							
7.1 Does the IP have written procurement policies and procedures?		Yes			Low	1	Law on procurement exists, this is used by the Ministry.
7.2 Are exceptions to procurement procedures approved by management and documented ?		Yes			Low	1	All tenders are made on line. If only 1 tender was received it would be seen in the system so no exception process is required. Purchases have to be signed off
7.3 Does the IP have a computerized procurement system with adequate access controls and segregation of duties between entering purchase orders, approval and receipting of goods? Provide a description of the procurement system.		Yes			High	4	A request is raised. Signed by line manager. A request for tender posted, irrespective of sum. 3 tenders received. A review is carried out and the 'best' chosen. Manager, lawyer and accountant approve. However, evidence of 3 tenders was not provided. The entire process is computerised. Refer to internal control finding 3.
7.4 Are procurement reports generated and reviewed regularly? Describe reports generated, frequency and review & approvers.		Yes			Low	1	Each purchase generates its own report which is reviewed by the approvers. Reports of purchases against budget are generated
7.5 Does the IP have a structured procurement unit with defined reporting lines that foster efficiency and accountability?		Yes			Low	1	There is a procurement specialist. Procurement of large items, buses, trains takes place in the operating units.
7.6 Is the IP's procurement unit resourced with qualified staff who are trained and certified and considered experts in procurement and conversant with UN / World Bank / European Union procurement requirements in addition to the a IP's procurement rules and regulations?		Yes			Moderate	2	Accountants and lawyers are all qualified. All other staff have 5 year degrees and experience with government requirements. However, they are not necessarily conversant with UN-specific rules.
7.7 Have any significant recommendations related to procurement made by auditors in the prior five audit reports and/or management letters over the past five years and have not yet been implemented?				N/A	N/A	-	The Ministry has been in existence for only 11 months

Subject <i>(key questions in bold)</i>	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
7.8 Does the IP require written or system authorizations for purchases? If so, evaluate if the authorization thresholds are appropriate?		Yes			Low	1	Minimum 4 signatures. All purchases are signed off at the Vice Minister level
7.9 Do the procurement procedures and templates of contracts integrate references to ethical procurement principles and exclusion and ineligibility criteria?		Yes			Low	1	Contracts include ethical clauses, fair purchasing practices
7.10 Does the IP obtain sufficient approvals before signing a contract?		Yes			Low	1	Minimum 4 signatures
7.11 Does the IP have and apply formal guidelines and procedures to assist in identifying, monitoring and dealing with potential conflicts of interest with potential suppliers/procurement agents? If so, how does the IP proceed in cases of conflict of interest?		Yes			Low	1	Legal procedures exist including breaking contract, not paying retentions
7.12 Does the IP follow a well-defined process for sourcing suppliers? Do formal procurement methods include wide broadcasting of procurement opportunities?		Yes			Low	1	The Government has a procurement portal called the birge. Calls for tender are announced, documents are upload and access to the system is free
7.13 Does the IP keep track of past performance of suppliers? E.g. database of trusted suppliers.		Yes			Low	1	The system includes a scoring system.
7.14 Does the IP follow a well-defined process to ensure a secure and transparent bid and evaluation process? If so, describe the process.		Yes			Low	1	As set out in Uzbek law. The "birge" is open to all citizens to view.
7.15 When a formal invitation to bid has been issued, does the IP award the contract on a pre-defined basis set out in the solicitation documentation taking into account technical responsiveness and price?		Yes			Low	1	Reliability is the key purchasing criterion, also price and quality.
7.16 If the IP is managing major contracts, does the IP have a policy on contracts management / administration?		Yes			Low	1	Government procurement policy exists

Subject (key questions in bold)	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
7b. Contract Management - To be completed only for the IPs managing contracts as part of programme implementation. Otherwise select N/A for risk assessment							
7.17 Are there personnel specifically designated to manage contracts or monitor contract expirations?		Yes			Low	1	Included in the functions of the Procurement Department
7.18 Are there staff designated to monitor expiration of performance securities, warranties, liquidated damages and other risk management instruments?		Yes			Low	1	Included in the functions of the Procurement Department
7.19 Does the IP have a policy on post-facto actions on contracts?		Yes			Low	1	Included in the functions of the Procurement Department
7.20 How frequent do post-facto contract actions occur?		Yes			Low	1	No cases have been raised against the Ministry
Total number of questions in subject area:		20					
Total number of applicable questions in subject area:		19					
Total number of applicable key questions in subject area:		5					
Total number of risk points:		23					
Risk score		1.21					
Area risk rating		Low					
Totals							
Total number of questions:			96				
Total number of applicable questions:			86				
Total number of applicable key questions:			35				
Total number of risk points:			125				
Total risk score			1.45				
Overall risk rating			Low				

MICRO ASSESSMENT REPORT - TOSHHAHARTRANSXIZMAT

DATE: 10 March 2020
PARTNER: Mark Henderson (Mark.a.Henderson@bdo.co.uk)
COMMISSIONED BY: UNDP Uzbekistan

Micro Assessment Findings

1. Background, scope and methodology

Background

The micro assessment is part of the requirements under the Harmonized Approach to Cash Transfers (HACT) Framework. The HACT framework represents a common operational framework for UN agencies' transfer of cash to government and non-governmental implementing partners.

The micro assessment assesses the implementing partner's control framework. It results in a risk rating (low, moderate, significant or high). The overall risk rating is used by the UN agencies, along with other available information (e.g. history of engagement with the agency and previous assurance results), to determine the type and frequency of assurance activities as per each agency's guideline and can be taken into consideration when selecting the appropriate cash transfer modality for an implementing partner.

Scope

The micro assessment provides an overall assessment of the implementing partner's programme, financial and operations management policies, procedures, systems and internal controls. It includes:

- A review of the implementing partner legal status, governance structures and financial viability; programme management, organizational structure and staffing, accounting policies and procedures, fixed assets and inventory, financial reporting and monitoring, and procurement;
- A focus on compliance with policies, procedures, regulations and institutional arrangements that are issued both by the Government and the implementing partner.

It takes into account results of any previous micro assessments conducted of the implementing partner.

Methodology

We performed the micro assessment at the locations and on the dates set out in Appendix VIII. Through discussion with management, observation and walk-through tests of transactions, we have assessed the implementing partner's internal control system with emphasis on:

- The effectiveness of the systems in providing the implementing partner's management with accurate and timely information for management of funds and assets in accordance with work plans and agreements with the United Nations agencies;
- The general effectiveness of the internal control system in protecting the assets and resources of the implementing partner.

We discussed the results of the micro assessment with applicable UN agency personnel and the implementing partner prior to finalization of the report. The list of persons met and interviewed during the micro assessment is set out in Appendix VII.




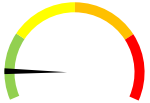
Results


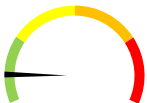
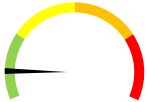
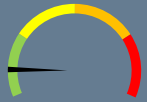
The results of our micro assessment are set out in Section 2 below, and our detailed internal control findings and recommendations in Section 3.

Mark Henderson
Partner
BDO LLP
10 March 2020

2. Summary of risk assessment results

The table below summarizes the results and main internal control gaps found during application of the micro assessment questionnaire (in Appendix VIII). Detailed findings and recommendations are set out in Section 3 below.

Tested subject area	Risk assessment*	Comments
1. Implementing partner	<p>Low</p> 	<p>The implementing partner is an organisation of some 500 staff. They are the operating company which operates the bus system in the city of Tashkent. They are fully owned by the Government of Uzbekistan and are regulated by the Ministry of Transport. The organisation has a full suite of procedures which meet UN standards; control over funds is tight and management effective.</p> <p>Toshshahartransxizmat has never operated a donor-funded project in the past so it will be important for UNDP to provide some initial training on the requirements of the project.</p>
2. Programme management	<p>Low</p> 	<p>As noted, Toshshahartransxizmat has no previous experience of donor funded project management and donor reporting. However, they have a project management system for Government-funded projects which will provide a robust base. The only area of concern noted was control over subsidiary branches (bus parks) of Toshshahartransxizmat.</p>
3. Organisational structure and staffing	<p>Low</p> 	<p>Staff are well qualified and motivated. In addition, they have significant experience of the procurement of buses. As noted above, UNDP will need to work with the organisation to ensure that reporting requirements are understood.</p>
4. Accounting policies and procedures	<p>Low</p> 	<p>The accounting system is 1C which is well proven in the region and has enough flexibility to produce reports in the required formats. With the exception of procedures over cash payments all procedures are well documented and meet international standards.</p>

5. Fixed assets and inventory	<p style="text-align: center;">Low</p> 	Toshshahartransxizmat has significant fixed assets including physical buses as well as spares. Assets are kept in a protected environment, looked after, and inventoried in a systematic way.
6. Financial reporting and monitoring	<p style="text-align: center;">Low</p> 	Financial reporting is heavily regulated. Monthly accounts are produced as well as annual accounts. The Oversight Committee orders an annual audit by an international firm. Recommendations are provided to the finance team and acted upon with a short period of time.
7. Procurement and contract administration	<p style="text-align: center;">Low</p> 	All procurement of is carried out through the 'birzhe'. This is a transparent, online window where all stages of the process are visible. Assets purchased are high value, capital items (buses) so the international procurement cycle is well documented and staff are experienced.
Overall risk assessment	<p style="text-align: center;">Low</p> 	

* High, Significant, Moderate, Low

3. Detailed internal control findings and recommendations

No.	Description of finding	Recommendation	Partner comments
1	Inadequate controls relating to payroll expenditure		
	The partner does not have sufficient controls for the preparation and approval of payroll expenditures. Up to 50% of an individual's salary may be paid in cash. These payments are made with little or no checks regarding the identity of the individual.	The partner should strengthen the controls over payroll. The physical payment of cash should only be made on presentation of valid identification such as passport or employee identification card and the number matched to the identification document. The cash distribution sheet should therefore include passport numbers.	From 1 March all payments will be made by bank transfer and the option to receive salary in cash will no longer exist.
2	Inadequate oversight and monitoring over funds transferred to subsidiary departments		

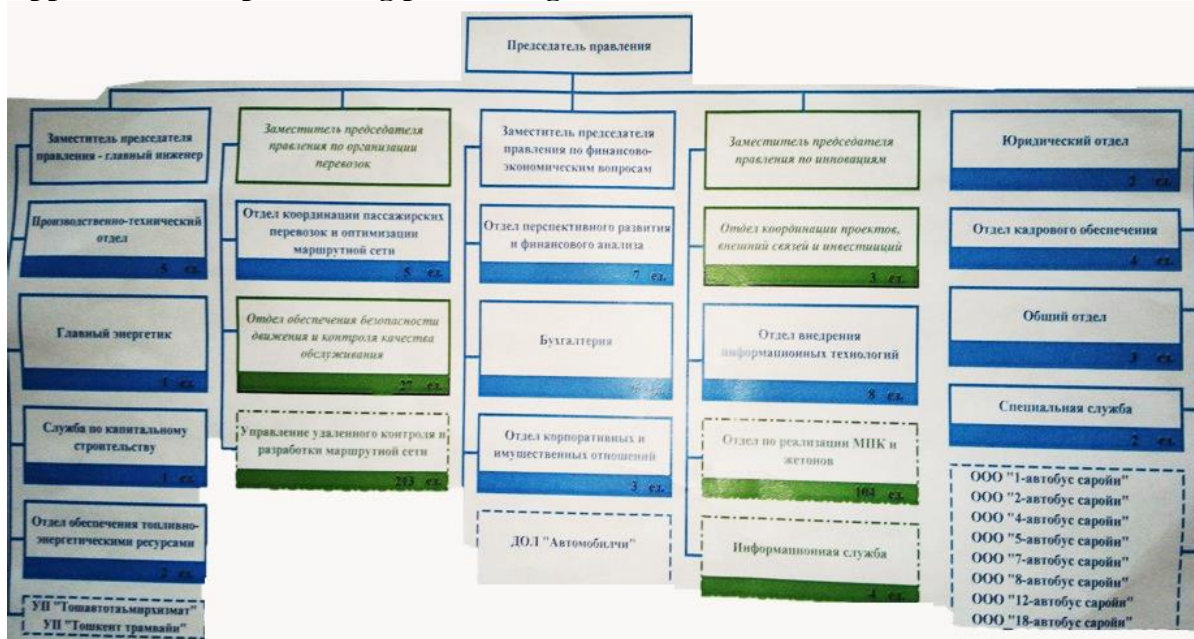
	<p>The partner will delegate some aspects of project implementation to branches (up to 8 bus parks) and transfer funds to cover these activities. While the partner does have documented policies and procedures in place for the branches, these branches operate as independent units with no strict requirement to submit reports or provide supporting documentation to head office.</p> <p>There is therefore an increased risk that funds transferred to branches are not properly monitored, may not be spent in line with the project’s objectives, or may not have sufficient documentation to support the costs.</p>	<p>The partner is accountable for all funds received from UN agencies, including those it transfers to sub-partners or branches. It should therefore establish a formal structure for the subsidiary bus parks to submit reports and supporting documentation to evidence how they have spent UN funds. The partner should review these reports and documentation before consolidating them into the financial reports submitted to the UN.</p> <p>If this is not possible within the current administrative framework, a working group to control expenditure should be established in head office.</p> <p>We emphasise also that a transfer to a sub-partner or branch cannot be considered as expenditure until relevant supporting documents are provided to the main partner.</p>	<p>In HQ we will form a working group who will be responsible for all aspects of the project. This group will take financial responsibility so the individual parks will not have access to the funds without our approval</p>
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Appendices

Appendix V: Implementing partner and programme information

Implementing partner name:	Toshshahartransxizmat
Implementing partner code or ID in UNICEF, UNDP, UNFPA records (as applicable)	
Implementing partner contact details (contact name, email address and telephone number)	Шехназа Таирбаева, Sheknaza Tairbaeva
Main programmes implemented with the applicable UN agency/ies	Purchase of green autobuses will be the first
Key official in charge of the UN agency/ies' programme(s)	Sheknaza Tairbaeva
Programme location(s)	Tashkent, Uzbekistan
Location of records related to the UN Agency/ies' programme(s)	Tashkent, Uzbekistan
Currency of records maintained	Uzbek Soms (UZS)
Expenditures incurred/reported to UNICEF, UNDP and UNFPA (as applicable) during the most recent financial reporting period (in US\$)	N/A
Cash transfer modality/ies used by the UN agency/ies to the implementing partner	DCT
Intended start date of micro assessment	17-Feb-20
Number of days to be spent for visit to implementing partner	2
Any special requests to be considered during the micro assessment	

Appendix VI: Implementing partner organisational chart



Appendix VII: List of persons met

Name	Unit / organisation	Position
Sheknaza Tairbaeva	Toshshahartransxizmat	Assistant to Director

Appendix VIII: Micro-Assessment Questionnaire

Subject <i>(key questions in bold)</i>	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
1. Responsible party							
1.1 Is the RP legally registered? If so, is it in compliance with registration requirements? Please note the legal status and date of registration of the entity.		Yes			Low	1	Certificate of state registration of the Ministry of Justice of the Republic of Uzbekistan dated March 25, 2016 No. 169.
1.2 If the RP received United Nations resources in the past, were significant issues reported in managing the resources, including from previous assurance activities.				N/A	N/A	-	The partner has not previously received UN funds.
1.3 Does the RP have statutory reporting requirements? If so, are they in compliance with such requirements in the prior three fiscal years?		Yes			Low	1	Reports are published on the official portal of Uzbek Government information, www.openinfo.uz. The requirement is contained in the instructions Information for Publication on the Securities Market, regulation 2883, July 2012
1.4 Does the governing body meet on a regular basis and perform oversight functions?		Yes			Low	1	There is a 'watching committee' which looks after the interest of the Government. In addition there is steering (management) committee which oversees the day to day running of the organisation. There is also a union committee which oversees workers' rights. The management committee meets every week. The oversight committee meets every quarter by articles; in addition, they meet if the need arises. In 2019 they met six times.
1.5 If any other offices/ external entities participate in implementation, does the RP have policies and process to ensure appropriate oversight and monitoring of implementation?		Yes			Moderate	4	The structure of the company includes eight bus fleets and a service centre. Bus fleets will directly participate in the implementation of this project.
1.6 Does the RP show basic financial stability in-country (core resources; funding trend) Provide the amount of total assets, total liabilities, income and expenditure for the current and prior three fiscal years.		Yes			Low	1	The organisation is funded by the government. The government is unlikely to cease funding bus services in the capital so financial stability is strong.

Subject <i>(key questions in bold)</i>	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
1.7 Can the RP easily receive funds? Have there been any major problems in the past in the receipt of funds, particularly where the funds flow from government ministries?		Yes			Low	1	Funds are transferred from government. No previous issues noted
1.8 Does the RP have any pending legal actions against it or outstanding material/significant disputes with vendors/contractors? <i>If so, provide details and actions taken by the RP to resolve the legal action.</i>			No		Low	1	No legal actions are currently in progress or expected.
1.9 Does the RP have an anti-fraud and corruption policy?		Yes			Low	1	A code of conduct exists. Every year, a program of measures to prevent and minimize corruption in the subordinate enterprises of Toshshahartransxizmat JSC is approved.
1.10 Has the RP advised employees, beneficiaries and other recipients to whom they should report if they suspect fraud, waste or misuse of agency resources or property? If so, does the RP have a policy against retaliation relating to such reporting?		Yes			Low	1	They have an ethical policy document which includes anti fraud, anti corruption and whistle-blower sections.
1.11 Does the RP have any key financial or operational risks that are not covered by this questionnaire? If so, please describe. <i>Examples: foreign exchange risk; cash receipts.</i>			No		Low	1	Income comes from bus tickets plus small amounts from rent, sale of scrap metal. There are no significant risks not covered in the questionnaire.
Total number of questions in subject area:		11					
Total number of applicable questions in subject area:		10					
Total number of applicable key questions in subject area:		4					
Total number of risk points:		13					
Risk score		1.30					
Area risk rating		Low					

Subject area (<i>key questions in bold</i>)	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
2. Programme management						
2.1. Does the RP have and use sufficiently detailed written policies, procedures and other tools (e.g. project development checklist, work planning templates, work planning schedule) to develop programmes and plans?	Yes			Moderate	2	This will be the first donor-funded project. However, for government-funded projects detailed policies and procedures exist.
2.2. Do work plans specify expected results and the activities to be carried out to achieve results, with a time frame and budget for the activities?	Yes			Moderate	4	This is their first donor funded project. However, the organisation carries out regular projects. A full budgeting system exists, including planning, monitoring, variance reporting, risk assessment and results.
2.3 Does the RP identify the potential risks for programme delivery and mechanisms to mitigate them?	Yes			Low	1	See 2.2 above.
2.4 Does the RP have and use sufficiently detailed policies, procedures, guidelines and other tools (checklists, templates) for monitoring and evaluation?	Yes			Moderate	2	See above. Monitoring and evaluation tends to be weaker, no checklists, because of the historical nature of projects. However, no significant risks are identified.
2.5 Does the RP have M&E frameworks for its programmes, with indicators, baselines, and targets to monitor achievement of programme results?	Yes			Low	1	Baseline is zero generally. Targets and timelines exist.
2.6 Does the RP carry out and document regular monitoring activities such as review meetings, on-site project visits, etc.	Yes			Low	1	Frequent meetings are held. Site visits are carried out such as trips to China and Belarus to production plants to see bus manufacturing facilities. Construction sites for bus shelters are visited and evaluated.
2.7 Does the RP systematically collect, monitor and evaluate data on the achievement of project results?	Yes			Low	1	Results tend to be tangible such as bus shelters erected, buses running, construction of bus station.

Subject area (key questions in bold)	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
2.8 Is it evident that the RP followed up on independent evaluation recommendations?	Yes			Low	1	Recommendations have been improved compliance with new laws. These are followed up on and reported to the Ministry.
Total number of questions in subject area:	8					
Total number of applicable questions in subject area:	8					
Total number of applicable key questions in subject area:	2					
Total number of risk points:	13					
Risk score	1.63					
Area risk rating	Low					

Subject (key questions in bold)	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
3. Organizational structure and staffing							
3.1 Are the IP's recruitment, employment and personnel practices clearly defined and followed, and do they embrace transparency and competition?		Yes			Low	1	<ul style="list-style-type: none"> - Report to the employment centre on vacant posts - Recruitment from universities - Takes part in labour fairs - Advertising to Recruitment agencies <p>A full suite of government recruitment policies exists including form of adverts, length of time a post is advertised, interview procedure, required documents.</p>
3.2 Does the RP have clearly defined job descriptions?		Yes			Low	1	Yes, for all posts. These are reviewed and updated annually.
3.3 Is the organizational structure of the finance and programme management departments, and competency of staff, appropriate for the complexity of the RP and the scale of activities? Identify the key staff, including job titles, responsibilities, educational backgrounds and professional experience.		Yes			Low	1	All finance staff are recruited having an accounting degree, minimum of 5 years finance experience. The same is applied to the legal advisor (law degree) and the procurement specialist (law degree).
3.4 Is the IP's accounting/finance function staffed adequately to ensure sufficient controls are in place to manage agency funds?		Yes			Low	1	All positions have a job description; all departments have an organisational chart. The matrix of job descriptions is designed in such a way that adequate controls exist for all positions, functions and transactions.
3.5 Does the RP have training policies for accounting/finance/ programme management staff? Are necessary training activities undertaken?		Yes			Low	1	Staff are periodically sent to training centres for continuing education. This is monitored directly by the first deputy chairman of the board or deputy chairman of the board for financial matters.
3.6 Does the RP perform background verification/checks on all new accounting/finance and management positions?		Yes			Low	1	CVs are checked and references taken up
3.7 Has there been significant turnover in key finance positions the past five years? If so, has the rate improved or worsened and appears to be a problem?			No		Low	1	In an organisation of this size, staff turnover takes place, but there is nothing to suggest this is beyond normal levels

Subject area <i>(key questions in bold)</i>	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
3.8 Does the RP have a documented internal control framework? Is this framework distributed and made available to staff and updated periodically? If so, please describe.	Yes			Low	1	All positions have a job description, all departments have an organisational chart. The matrix of job descriptions is designed in such a way that adequate controls exist for all positions, functions and transactions.
Total number of questions in subject area:	8					
Total number of applicable questions in subject area:	8					
Total number of applicable key questions in subject area:	3					
Total number of risk points:	8					
Risk score	1.00					
Area risk rating	Low					

Subject (key questions in bold)	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
4. Accounting policies and procedures							
4a. General							
4.1 Does the RP have an accounting system that allows for proper recording of financial transactions from United Nations agencies, including allocation of expenditures in accordance with the respective components, disbursement categories and sources of funds?		Yes			Low	1	1C, which is the predominant accounting software for Russian speaking countries.
4.2 Does the RP have an appropriate cost allocation methodology that ensures accurate cost allocations to the various funding sources in accordance with established agreements?		Yes			Low	1	Methodology is set out in government instructions (e.g. split of rent on the basis of square metres).
4.3 Are all accounting and supporting documents retained in an organized system that allows authorized users easy access?		Yes			Low	1	Everything is visible. A paper system exists in parallel to computerised system
4.4 Are the general ledger and subsidiary ledgers reconciled at least monthly? Are explanations provided for significant reconciling items?		Yes			Low	1	1C automatically reconciles subsidiary ledgers.
4b. Segregation of duties							
4.5 Are the following functional responsibilities performed by different units or individuals: (a) authorization to execute a transaction; (b) recording of the transaction; and (c) custody of assets involved in the transaction?		Yes			Low	1	For the purchase of a bus, director authorises purchase, accounting department pay, bus is delivered to 1 of the 8 depots where it is stored. Therefore separation exists between paying, recording and receiving.
4.6 Are the functions of ordering, receiving, accounting for and paying for goods and services appropriately segregated?		Yes			Low	1	Yes - please see 4.5 above.
4.7 Are bank reconciliations prepared by individuals other than those who make or approve payments?		Yes			Low	1	Every day the chief accountant and her assistant compare the bank balance to the cash book in 1C.

Subject (key questions in bold)	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
4c. Budgeting system							
4.8 Are budgets prepared for all activities in sufficient detail to provide a meaningful tool for monitoring subsequent performance?		Yes			Low	1	Every year until June 1, in accordance with Article 90 of the Budget Code of the Republic of Uzbekistan, a budget is drawn up for compensation of losses to carriers associated with the use of marginal tariffs for urban passenger transportation and compensation for shortfalls in the income of carriers associated with free and reduced-fare transportation of certain categories of citizens.
4.9 Are actual expenditures compared to the budget with reasonable frequency? Are explanations required for significant variations from the budget?		Yes			Low	1	Monthly expenses approved in the budget are recalculated according to the actual prevailing expenses. If expenses are less than approved, then actual expenses are taken into account. Variances are calculated and investigated.
4.10 Is prior approval sought for budget amendments in a timely way?		Yes			Low	1	Budget amendments are agreed with the Ministry of Transport
4.11 Are RP budgets approved formally at an appropriate level?		Yes			Low	1	Overall budget is approved by the Minister of Transport
4d. Payments							
4.12 Do invoice processing procedures provide for: <ul style="list-style-type: none"> • Copies of purchase orders and receiving reports to be obtained directly from issuing departments? • Comparison of invoice quantities, prices and terms with those indicated on the purchase order and with records of goods/services actually received? • Checking the accuracy of calculations? 		Yes			Low	1	This all exists. The receiver checks to order, approves act of received work/goods. A volume, quality check is included in the process, and calculations are also checked.
4.13 Are payments authorized at an appropriate level? Does the RP have a table of payment approval thresholds?		Yes			Low	1	Director signs everything along with 3 other signatories.
4.14 Are all invoices stamped 'PAID', approved, and marked with the project code and account code?		Yes			Low	1	This was seen on several invoices. Documents are kept together so the contract, act of receipt and bank payment are together.
4.15 Do controls exist for preparation and approval of payroll expenditures? Are payroll changes properly authorized?		Yes			Low	1	HR, accounting, lawyer and director all sign for expenditure and changes.

Subject (key questions in bold)	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
4.16 Do controls exist to ensure that direct staff salary costs reflects the actual amount of staff time spent on a project?		Yes			Low	1	The system records what people do when they come to work and when they leave. But not what they do when they are in the office.
4.17 Do controls exist for expense categories that do not originate from invoice payments, such as DSAs, travel, and internal cost allocations?		Yes			Low	1	Very small. Toshshahartransxizmat is responsible for Tashkent only so travel is minimal.
4e. Policies and procedures							
4.18 Does the RP have a stated basis of accounting (i.e. cash or accrual) and does it allow for compliance with the agency's requirement?		Yes			Low	1	Accruals is used. This allows for UNDP reporting.
4.19 Does the RP have an adequate policies and procedures manual and is it distributed to relevant staff?		Yes			Low	1	A full accounting manual exists which covers all transactions and period end procedures.
4f. Cash and bank							
4.20 Does the RP require dual signatories / authorization for bank transactions? Are new signatories approved at an appropriate level and timely updates made when signatories depart?		Yes			Low	1	Director and chief accountant. A procedure exists to annul the old token and obtain a new one in the bank.
4.21 Does the RP maintain an adequate, up-to-date cashbook, recording receipts and payments?		Yes			Low	1	1C includes a cash-book.
4.22 If the partner is participating in micro-finance advances, do controls exist for the collection, timely deposit and recording of receipts at each collection location?				N/A	N/A	-	No microfinance activities
4.23 Are bank balances and cash ledger reconciled monthly and properly approved? Are explanations provided for significant, unusual and aged reconciling items?		Yes			Low	1	Operation 311 in 1C. This doubles as a bank reconciliation. The bank statement is uploaded and compared to the cashbook in the General Ledger.
4.24 Is substantial expenditure paid in cash? If so, does the RP have adequate controls over cash payments?		Yes			High	8	Employees can choose to have up to half of their salary paid in cash. Staff go to the cash office to receive their (cash proportion of) salary. When receiving cash employee and cashier sign. Refer to internal control finding 1.

Subject <i>(key questions in bold)</i>	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
4.25 Does the RP carry out a regular petty cash reconciliation?		Yes			Low	1	There is only a cash balance for 3 days a month, salary days as mentioned above. Chief accountant checks who received money and reconciles this.
4.26 Are cash and cheques maintained in a secure location with restricted access? Are bank accounts protected with appropriate remote access controls?		Yes			Low	1	They have a safe for cash. Bank accounts are password protected, payments are made with token generated passwords.
4.27 Are there adequate controls over submission of electronic payment files that ensure no unauthorized amendments once payments are approved and files are transmitted over secure / encrypted networks?		Yes			Low	1	Paid through internet bank, no opportunities exist for changes once processed.
4g. Other offices or entities							
4.28 Does the RP have a process to ensure expenditures of subsidiary offices/ external entities are in compliance with the work plan and/or contractual agreement?			No		High	8	The individual bus parks operate autonomously. Refer to internal control finding 2.
4h. Internal audit							
4.29 Is the internal auditor sufficiently independent to make critical assessments? To whom does the internal auditor report?			No		Moderate	2	When needed they hire an auditor, but no permanent department exists. The auditor reports to Toshshahartransxizmat.
4.30 Does the RP have stated qualifications and experience requirements for internal audit department staff?				N/A	N/A	-	No activities to date.
4.31 Are the activities financed by the agencies included in the internal audit department's work programme?				N/A	N/A	-	No activities to date.
4.32 Does the RP act on the internal auditor's recommendations?				N/A	N/A	-	N/A
Total number of questions in subject area:		32					
Total number of applicable questions in subject area:		28					
Total number of applicable key questions in subject area:		19					
Total number of risk points:		43					
Risk score		1.54					
Area risk rating		Low					

Subject <i>(key questions in bold)</i>	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
5. Fixed assets and inventory							
5a. Safeguards over assets							
5.1 Is there a system of adequate safeguards to protect assets from fraud, waste and abuse?		Yes			Low	1	Stock and asset instructions exist. These include instructions for safekeeping of assets. Autoparks have guards for physical protection.
5.2 Are subsidiary records of fixed assets and inventory kept up to date and reconciled with control accounts?		Yes			Low	1	They have two stock systems in parallel. One in the warehouse and one in the accounting department. These are reconciled monthly. Fixed assets are kept in a register with details of the assets including the responsible person. These are checked every 6 months for accuracy.
5.3 Are there periodic physical verification and/or count of fixed assets and inventory? If so, please describe?		Yes			Low	1	Every month, the inventory and assets are reconciled to the computer system
5.4 Are fixed assets and inventory adequately covered by insurance policies?		Yes			Moderate	2	Insurance exists for certain items i.e. buses having crashes. Most items are not insured, but are underwritten by the state.
5b. Warehousing and inventory management							
5.5 Do warehouse facilities have adequate physical security?		Yes			Low	1	There are guards.
5.6 Is inventory stored so that it is identifiable, protected from damage, and countable?		Yes			Low	1	Full warehousing system. Stock in/out cards are maintained in the warehouse and in 1c. There is no perishability or waste, auto spares, buses.
5.7 Does the RP have an inventory management system that enables monitoring of supply distribution?		Yes			Low	1	Warehouse and accounting records maintained. A comparison is carried out monthly.
5.8 Is responsibility for receiving and issuing inventory segregated from that for updating the inventory records?		Yes			Low	1	Each warehouse has its own accountants who follow the movement of spare parts. Warehouse staff distribute spare parts.

Subject area <i>(key questions in bold)</i>	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
5.9 Are regular physical counts of inventory carried out?	Yes			Low	1	Every month they count the spares and report this centrally.
Total number of questions in subject area:	9					
Total number of applicable questions in subject area:	9					
Total number of applicable key questions in subject area:	2					
Total number of risk points:	10					
Risk score	1.11					
Area risk rating	Low					

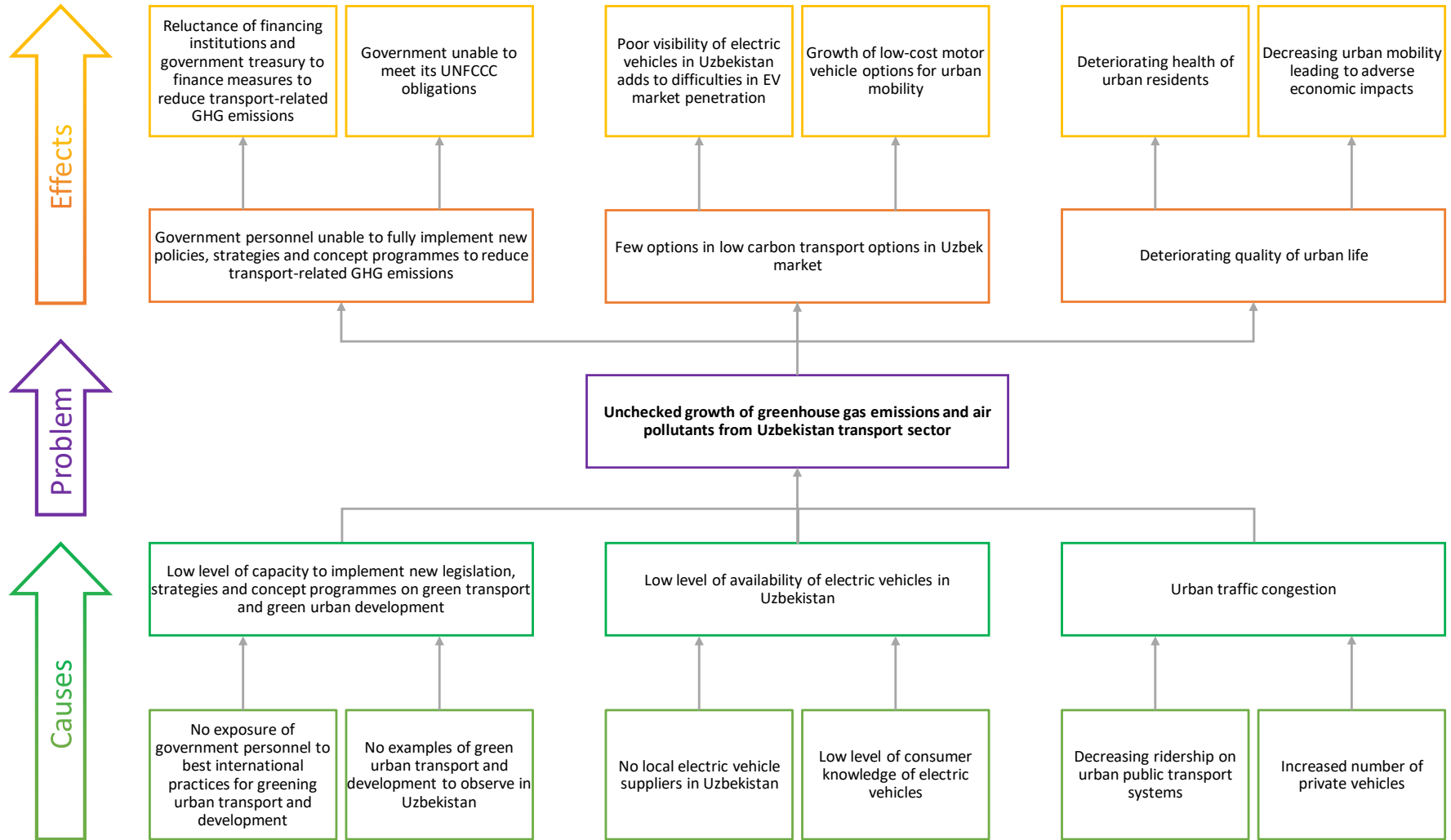
Subject (key questions in bold)	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
6. Financial reporting and monitoring							
6.1 Does the RP have established financial reporting procedures that specify what reports are to be prepared, the source system for key reports, the frequency of preparation, what they are to contain and how they are to be used?		Yes			Low	1	Details of income and expenditure are produced. In addition a balance sheet showing assets, receivables and payables.
6.2 Does the RP prepare overall financial statements?		Yes			Low	1	Monthly and annual reports are prepared
6.3 Are the IP's overall financial statements audited regularly by an independent auditor in accordance with appropriate national or international auditing standards? If so, please describe the auditor.		Yes			Low	1	At the end of the year, an external auditor checks for compliance of accounting with current legislation. The report of the external auditor is reviewed by the shareholder at the annual general meeting.
6.4 Were there any major issues related to ineligible expenditure involving donor funds reported in the audit reports of the RP over the past three years?				N/A	N/A	-	No donor funds
6.5 Have any significant recommendations made by auditors in the prior five audit reports and/or management letters over the past five years and have not yet been implemented?			No		Low	1	No major issues. Where issues were identified remedial action was taken in good time.
6.6 Is the financial management system computerized?		Yes			Low	1	1C.
6.7 Can the computerized financial management system produce the necessary financial reports?		Yes			Low	1	1C can produce all the necessary reports, in the necessary format. Training is also available in many locations should that be required
6.8 Does the RP have appropriate safeguards to ensure the confidentiality, integrity and availability of the financial data? <i>E.g. password access controls; regular data back-up.</i>		Yes			Low	1	A full system of passwords and other IT security exists.
Total number of questions in subject area:		8					
Total number of applicable questions in subject area:		7					
Total number of applicable key questions in subject area:		2					
Total number of risk points:		7					
Risk score		1.00					
Area risk rating		Low					

Subject (key questions in bold)	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
7. Procurement and contract administration							
7a. Procurement							
7.1 Does the RP have written procurement policies and procedures?		Yes			Low	1	Law on procurement exists which governs government organisations.
7.2 Are exceptions to procurement procedures approved by management and documented ?		Yes			Low	1	All tenders are made on line using the government portal. If only 1 tender was received it would be seen in the system so no exception is required.
7.3 Does the RP have a computerized procurement system with adequate access controls and segregation of duties between entering purchase orders, approval and receipting of goods? Provide a description of the procurement system.		Yes			Low	1	A request is raised. Signed by line manager. A request for tender posted, irrespective of sum. 3 tenders received. A review is carried out and the 'best' chosen. Manager, lawyer and accountant approve.
7.4 Are procurement reports generated and reviewed regularly? Describe reports generated, frequency and review & approvers.		Yes			Low	1	The process requires 4 or more signatures. Each signatory gets a full packet of documents per purchase activity so they can see the request for tenders, tenders received etc. The birge is open so any citizen can also open and see the process, they could if they wished also lodge a complaint
7.5 Does the RP have a structured procurement unit with defined reporting lines that foster efficiency and accountability?		Yes			Low	1	1 Procurement specialist but all decisions signed off by him plus 3 others
7.6 Is the IP's procurement unit resourced with qualified staff who are trained and certified and considered experts in procurement and conversant with UN / World Bank / European Union procurement requirements in addition to the a IP's procurement rules and regulations?		Yes			Moderate	2	Accountants and lawyers are all qualified. All other staff have 5 year degrees and experience with government requirements. However, they are not necessarily conversant with UN-specific rules.
7.7 Have any significant recommendations related to procurement made by auditors in the prior five audit reports and/or management letters over the past five years and have not yet been implemented?			No		Low	1	Recommendations have been received but none for procurement. All recommendations came from independent auditors, all have been cleared.
7.8 Does the RP require written or system authorizations for purchases? If so, evaluate if the authorization thresholds are appropriate?		Yes			Low	1	Minimum 4 signatures. The same people all sign all purchases so there are no delegated authorities required.

Subject <i>(key questions in bold)</i>	area	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
7.9 Do the procurement procedures and templates of contracts integrate references to ethical procurement principles and exclusion and ineligibility criteria?		Yes			Low	1	Contracts include ethical consideration and fair treatment of suppliers.
7.10 Does the RP obtain sufficient approvals before signing a contract?		Yes			Low	1	Minimum 4 signatures
7.11 Does the RP have and apply formal guidelines and procedures to assist in identifying, monitoring and dealing with potential conflicts of interest with potential suppliers/procurement agents? If so, how does the RP proceed in cases of conflict of interest?		Yes			Low	1	Legal procedures exist including breaking contract, not paying retentions.
7.12 Does the RP follow a well-defined process for sourcing suppliers? Do formal procurement methods include wide broadcasting of procurement opportunities?		Yes			Low	1	The Government has a procurement portal called the birge. This includes a section where advertisements are placed for suppliers to tender
7.13 Does the RP keep track of past performance of suppliers? E.g. database of trusted suppliers.		Yes			Low	1	The system includes scoring system where suppliers are rated
7.14 Does the RP follow a well-defined process to ensure a secure and transparent bid and evaluation process? If so, describe the process.		Yes			Low	1	As set out in Uzbek law
7.15 When a formal invitation to bid has been issued, does the RP award the contract on a pre-defined basis set out in the solicitation documentation taking into account technical responsiveness and price?		Yes			Low	1	Reliability is the key purchasing criteria, also price and quality.
7.16 If the RP is managing major contracts, does the RP have a policy on contracts management / administration?		Yes			Low	1	Government procurement policy exists which covers all major foreseen circumstances. Government regulations include contract management.
7b. Contract Management - To be completed only for the IPs managing contracts as part of programme implementation. Otherwise select N/A for risk assessment							
7.17 Are there personnel specifically designated to manage contracts or monitor contract expirations?		Yes			Low	1	Part of contract management for accountants

Subject area <i>(key questions in bold)</i>	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
7.18 Are there staff designated to monitor expiration of performance securities, warranties, liquidated damages and other risk management instruments?	Yes			Low	1	All contract management falls under the control of the purchasing group and the legal advisor
7.19 Does the RP have a policy on post-facto actions on contracts?	Yes			Low	1	Yes, again included in the Government instructions
7.20 How frequent do post-facto contract actions occur?	Yes			Low	1	The organisation is effectively the Government so few disputes arise. They use contract breaches as force majeure so when contract breaches occur the contract frequently is voided
Total number of questions in subject area:	20					
Total number of applicable questions in subject area:	20					
Total number of applicable key questions in subject area:	5					
Total number of risk points:	21					
Risk score	1.05					
Area risk rating	Low					
Totals						
Total number of questions:		96				
Total number of applicable questions:		90				
Total number of applicable key questions:		37				
Total number of risk points:		115				
Total risk score		1.28				
Overall risk rating		Low				

Annex 18: Problem Tree



Annex 19: TAILEV Theory of Change

