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DRAFT Environmental and Social Management Framework (ESMF)

Project title: Promoting Low-carbon Electric Public Bus Transport in Mauritius		
Country: Mauritius	Implementing Partner (GEF Executing Entity): Ministry of Land Transport and Light Rail (MLTLR)	Execution Modality: National Implementation Modality
Contributing Outcome (UNDAF/CPD, RPD, GPD): Promote capital investments into developing sustainable transport infrastructure to reduce transport-related GHG emissions in Mauritius to mitigate climate change; engage and build technical capacities of transport-related policymakers, regulatory and other government agencies, financial institutions and the private sector		
UNDP Social and Environmental Screening Category: Substantial	UNDP Gender Marker: GEN 2	
Atlas Project ID (formerly Award ID): 00129770	Atlas Output ID (formerly Project ID): 00123343	
UNDP-GEF PIMS ID number: 6486	GEF ID number: 10372	

DRAFT FOR FEEDBACK

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Executive Summary

This Environment and Social Management Framework (ESMF) covers the *“Promoting Low-carbon Public Bus Transport in Mauritius”* project prepared by the UNDP as the GEF Agency in close collaboration with the Government of Mauritius through the Ministry of Land Transport and Light Rail (MLTLR).

This ESMF has been prepared based on the social and environment screening procedure (UNDP’s SESP based on latest revised SES policy effective from 1st January 2021) that has been completed as part of the project preparation phase that included consultations with implementing partners, key stakeholders, private sector and civil society entities. This screening resulted in the identification of 10 risks of which 6 risks were assessed as “Moderate” risks while 3 other risks were assessed as “Substantial” and 1 risk was assessed as “Low”. Overall SESP risk categorization rating of this project is “Substantial”.

This ESMF has been developed on the basis of the project risk categorization and to outline the processes that will be undertaken during the project inception/implementation phases for additional assessment of potential impacts and identification and development of appropriate risk management measures, consistent with UNDP’s Social and Environmental Standards (SES, latest revised effective from 1st January 2021).

This ESMF identifies the steps that will be followed during the inception/implementation phases of the project for the completion of Targeted Assessments, Environmental and Social Impact Assessment (ESIA) and an Environmental and Social Management Plan (ESMP) as justified based on the results of the SESP for the risks identified.

This ESMF also details the roles and responsibilities for its implementation and includes estimated budget and monitoring and evaluation plan.

Abbreviations and Acronyms

CCTV	Closed Circuit Television
CO2	Carbon Dioxide Emissions
CEB	Central Electricity Board
EPA	Environmental Protection Act
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FPIC	Free, prior and informed consent
GCF	Green Climate Fund
GEF	Global Environment Facility
GRM	Grievance Redress Mechanism
LGA	Local Government Act
MARENA	Mauritius Renewable Energy Agency
M&E	Monitoring and Evaluation
MEPU	Ministry of Energy and Public Utilities
MESWMCC	Ministry of Environment Solid Waste Management and Climate Change
MLTLR	Ministry of Land Transport and Light Rail
MUR	Mauritian Rupee
MWh	Megawatt-hour (unit of electricity)
NLTA	National Land Transport Authority
PIF	Project Identification Form (GEF)
PIR	GEF Project Implementation Report
POPP	Programme and Operations Policies and Procedures (UNDP)
PPG	Project Preparation Grant (GEF)
PMU	Project Management Unit
SECU	Social and Environmental Compliance Review Unit (UNDP)
SES	Social and Environmental Standards (UNDP)
SESP	Social and Environmental Screening Procedure (UNDP)
SRM	Stakeholder Response Mechanism (UNDP)
UNDP	United Nations Development Programme
UNDP-GEF	UNDP Global Environmental Finance Unit
UNFCCC	United Nations Framework Convention on Climate Change

1 Introduction

This Environmental and Social Management Framework (ESMF) has been prepared for the UNDP-supported project within the GEF-financed Promoting Low-carbon Electric Public Bus Transport in Mauritius, developed together with the Government of Mauritius.

UNDP is the GEF Agency for the project to which this ESMF applies.

1.1 Project description

Mauritius is heavily reliant on fossil fuels to power its economy. The country's main fossil fuel energy sources, coal and fuel oil, are imported fuel sources, thereby affecting the country's energy security. Hence, switching to renewable sources of energy and low emission transport in a significant way could enhance the country's energy security, while also reducing its carbon emissions and lower transport-related air pollution. An estimated 43% of Mauritius' population lives in urban areas, and much of these urban areas are located in the North West of the main Mauritius island. Urban locations on the island have higher population density than national average and are already quite congested in terms of vehicular traffic, accounting for a large portion of vehicular population and transport-related CO₂ emissions and ambient air pollution in the country. The Government of Mauritius has recognized the importance of incorporating low-carbon energy and transport sector development strategies in its national development planning, to enhance energy security, reduce carbon emissions and mitigate the impacts of climate change. The Second National Communication to the UNFCCC (2010) notes that Mauritius's overall greenhouse gas (GHG) emissions are growing at a rate of 3% per annum. But GHG emissions from the country's energy and transport sectors were growing at a higher rate, at 5.4% and 3.3% per annum respectively. Together, the energy and transport sectors account for 86% of Mauritius's total GHG emissions. As identified by the country's UNFCCC Technology Needs Assessment (2012), clean energy, specifically solar energy, and low-carbon transport systems offer significant GHG emission reduction potential in Mauritius.

This proposed GEF project will address investment barriers including risk aversion and lack of capacity by clarifying policies, regulations and procedures, demonstrating the financial viability of electric bus investments, supporting access to finance, reducing risk aversion by financial institutions, and overall, creating an environment for mobilizing resources from bus operators, government, and banks/financial institutions. The GEF project will contribute to meeting the objectives of the government's transport sector goals and National Transport Consensus wherein electric bus transport can play an important role in the development of smart, future-ready, low-carbon bus transport options in the country, thereby making them more attractive and affordable to commuters, who would otherwise use fossil fuel based personal transport or public transport options.

The GEF project will also create synergies to the work being undertaken by the Ministry of Land Transport and Light Rail (MLTLR), National Land Transport Authority (NLTA), Ministry of Energy and Public Utilities (MEPU), Central Electricity Board (CEB), Ministry of Environment, Solid Waste Management and Climate Change (MESWMCC), public transport bus operators, and other agencies involved in transport and energy sector in the country, in addition to development partners, NGOs, private sector and others to ensure cost-effectiveness and efficiency.

This proposed GEF-funded, UNDP-supported project proposes to develop necessary policy/regulatory framework and deploy a small electric bus fleet for regular long routes and/or last mile/feeder connectivity to MetroExpress stations – based on establishment of technical and financial feasibility - from nearby high population density urban and rural locations in Mauritius. Both self-ownership and bus leasing models will be explored and deployed based on feasibility and interest among stakeholders in either or both of these models. This model would still require government subsidies, which could be financed from incremental resources from the Global Environment Facility (GEF) with support from UNDP. Solar energy based electric bus fast-charging infrastructure and their maintenance would be the responsibility of bus leasing companies, although bus operators could collaborate with charging infrastructure providers and/or bus manufacturers in this aspect. The program implementation and investment timeline would be 2021-25. The GEF project will deliver its outcomes and outputs through the following five components:

- Component 1: Policy and regulatory framework for electric public (bus) transport in Mauritius
- Component 2: Financial Incentive Package electric buses

- Component 3: Technical Feasibility and Capacity Building
- Component 4: Awareness Raising
- Component 5: Knowledge Management, Monitoring and Evaluation

The project’s “areas of influence” would be existing public transport bus routes on which diesel buses owned and operated by licensed bus operators (public and private companies) ply, ferrying commuters between various destinations. Bus depots – where buses are parked at night and repaired at workshops within these depots – are also considered to be within the project’s “areas of influence” as well as “associated facilities”.

However, it is important to note that the project does not propose to offer any new bus routes, nor does it propose to construct any new roads – it will only replace 60 diesel buses already plying on existing routes with 60 new, modern and low-carbon electric buses. Electric bus charging stations (total 15 in number) will be installed within existing bus depots of bus operators. Each solar powered charging station will be of 50 kWp capacity and will be installed on roofs with space of 5000 sq ft of bus operator-owned buildings within their bus depots – so no additional land acquisition will be required or planned. None of these solar powered charging stations will be located in protected areas, and no new land acquisition or forest clearance will be done. Bus operators already have existing bus depots across Mauritius and solar powered charging stations will be installed on the roofs of these existing buildings. Nevertheless, locations of solar powered electric bus charging stations have been broadly identified (buildings within the premises of bus depots owned and operated by public transport bus operators) but their precise locations have not yet been identified and could therefore result in risk of negative impacts on habitats if not selected appropriately. Hence, a low level of risk of negative impact of habitats/protected areas/biodiversity or impact on cultural heritage exists under this project’s proposed activities within the project’s areas of influence, which have been identified under SESP and a screening procedure has been defined in this ESMF wherein an initial screening that may necessitate either targeted assessment or scoped Environmental and Social Impact Assessment (ESIA), depending on the risk of each site.

1.2 Purpose and scope of this ESMF

This ESMF is a management tool to assist in managing potential adverse social and environmental impacts associated with activities of the UNDP supported GEF funded Project, in line with the requirements of the UNDP Social and Environmental Standards (SES). The implementing partners of the Project and the Project Management Unit will follow this ESMF 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.

This ESMF identifies the steps for detailed screening and assessment for 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 potential adverse impacts.

The scope of this document is to form the basis upon which the implementing partners will develop their specific Environmental and Social Management Plans to ensure that significant adverse environmental and social impact mitigation and management measures are implemented and monitored as required. It identifies the steps for detailed 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 the identified adverse impacts of this project.

This ESMF’s scope also covers the following components, outputs and activities of this GEF project:

Component	Output	Activities
	Output 1.1: Designing and developing a long-term comprehensive ‘Sustainable Low-carbon Transport Planning’ document that provides with policy and regulatory framework for electric bus transport.	1.1.1 1.1.2
	Output 1.2: Developing a comprehensive policy, regulatory	1.2.1 1.2.2

Component 1: Policy and regulatory framework for electric public (bus) transport in Mauritius	and guidelines framework to enable e-bus deployment in Mauritius for public transport	1.2.3
	Output 1.3: Feasibility studies and analysis that could lead to the preparation of a GCF concept note to scale up low-carbon transport in Mauritius.	1.3.1 1.3.2
Component 2: Financial Incentive Package for electric buses and charging infrastructure	Output 2.1: Capital Subsidy scheme for electric buses (60 buses with upto 40% estimated capital subsidies) for both regular long routes and/or short loop feeder buses to provide last mile connectivity to and from MetroExpress stations	2.1.1 2.1.2 2.1.3
	Output 2.2: Capital Subsidy scheme for solar powered charging stations (15 solar powered charging stations with upto 28% estimated capital subsidies) to be setup by bus operators or other private entities for charging their electric buses	2.2.1 2.2.2 2.2.3
Component 3: Technical Feasibility and Capacity Building	Output 3.1: Technical, operational, financial, economic and regulatory analysis of several aspects of electric bus mobility opportunity in Mauritius are completed, including analysis for gender-specific and elderly/children/special needs commuter aspects, in order to increase knowledge and clarify market opportunity to various stakeholders, so that policy, regulatory and financial incentives offered are more targeted and create strong enabling environment	3.1.1 3.1.2 3.1.3 3.1.4
	Output 3.3: Improved knowledge and capacity among local stakeholders (MLTLR, NLTA, TMRSU, public and private bus operators) on suitable routes, risks, technical standards, and operational issues of deployment of electric buses at scale.	3.3.1 3.3.2 3.3.3 3.3.4
Component 4: Awareness Raising to address barriers related to lack of awareness on benefits of low-carbon electric public transport.	Output 4.1: Increased awareness and sensitization among local population regarding the benefits of using public transport in general, and low-carbon electric mobility in particular	4.1.1 4.1.2 4.1.3 4.1.4

It also sets out the additional safeguards measures that apply to the project during the inception phase, including but not limited to:

- conducting Environmental and Social Impact Assessments (ESIAs), to assess impacts of on-the-ground activities identified in the SESP, paying particular attention to impacts on poor and marginalized individuals, groups and communities.
- Developing Environmental and Social Management Plans (ESMPs) which may include range of targeted plans for the project involving planning support, policy advice and reform, and/or capacity building.
- screening of project activities and specific interventions/outputs not yet fully specified, using the SESP, to ensure that associated impacts are adequately managed.

This ESMF will be publicly disclosed in line with UNDP's Information Disclosure Policy and SES. Although most Environmental and Social risks associated with the project have been identified at this stage, and most on-the-ground activities and specific locations have been fully and clearly defined and specified, there may be certain potential social and environmental risks and impacts that may not have been identified and assessed in the SESP at this stage. As such, this ESMF has been prepared to set out the principles, rules, guidelines and procedures for screening, assessing, and managing the potential social and environmental impacts of the project as they are developed and designed.

1.3 Potential Social and Environmental Impacts

UNDP uses its Social and Environmental Screening Procedure (SESP) to identify potential social and environmental risks and opportunities associated with proposed projects. Each project is scrutinized as to its type, location, scale, sensitivity and the magnitude of its potential social and environmental impacts. All project components are screened, including planning support, policy advice, and capacity-building, as well as site-specific, physical interventions. Activities that will be completed under project co-financing are also included in the scope of the assessment.

The proposed project will directly support scale up of proven methods and technologies for electric mobility. The project is also consistent with the government's national development priorities, which include deployment of electric vehicles at scale over the next 10 years.

The project's financial and economic benefits are derived from savings in fossil fuel costs due to deployment of electric buses, thereby reducing import requirements of fossil fuel and also reduced GHG emissions and pollution, which result in environmental benefits to the economy. Given that this project is proposing to subsidize capital costs of electric buses with GEF support, financial payback to bus operators is expected to be attractive and financially feasible, as per the results of financial feasibility analysis conducted as part of this PPG phase. In the absence of capital grants with GEF support, existing financial support and incentives are insufficient to encourage bus operators to deploy electric buses and solar powered charging stations in Mauritius, thereby ensuring catalytic nature and additionality of GEF resources proposed to be deployed under this project. Several project partners and stakeholders, including MLTLR, Bus Operators including govt-owned NTC, Metro Express Limited and Ministry of Finance and Economic Development will also provide significant co-finance to this project, thereby increasing cost effectiveness and efficiency of this project.

The project also creates environmental benefit of avoided externality of CO₂ emissions. Assuming a combination of solar powered and grid electricity powered charging is used for charging the 60 feeder or long-route e-buses to be used in Mauritius, which, when deployed, are estimated to operate for about 150 km per day, each e-bus is estimated to reduce 36.6 tons of CO_{2e} per annum when combined with 15 solar powered charging stations of capacity 50 kWp each. So 60 buses would achieve direct GHG benefits of 15,184 tCO_{2e} by 2030. Consequential GHG benefits are calculated based on a conservative assumption that after the completion of this project's implementation, it would be scaled-up to 100 additional e-buses for public transport in Mauritius over 5 years between 2026 and 2030. At the same conservative assumptions of 1 kg of CO_{2e} per km of e-bus operation and average of 150 km per day of e-bus operation for the additional 100 buses between 2026 and 2030 (combined with 25 solar powered charging stations), consequential GHG emission reductions from this project are estimated to be 18,311 tCO_{2e} by 2030. Given the GEF grant sum of US \$5,600,000, the GEF cost per tonne of avoided CO_{2eq} emissions is about \$167.2.

In terms of number of passenger-trips impacted, based on conservative estimates of 35 passengers carried by each full-length e-bus (typical full capacity of 50 passengers) or midi e-bus (typical full capacity of 40 passengers) per long route or last-mile trip from Metro Express stations to neighborhoods, and assuming each trip to cover 15 km distance; and based on an estimation of 150 km covered by each bus per day, each e-bus is estimated to offer ~350 passenger-trips every day. So 60 full-length and midi e-buses are conservatively estimated to offer

~21,000 passenger trips per day (which is 12.5% of the estimated 80,000 passenger trips per day likely to be offered by MetroExpress once it is fully operational). This works out to ~6.93 Million passenger-trips per annum (assuming 330 days of operations of buses per annum) to be provided by electric bus services that will be deployed with support from this GEF project, when all 60 buses are fully deployed and operational.

Other co-benefits that the project will generate, in terms of passenger comfort, safety and satisfaction, as well as increased usage of public transport, are difficult to quantify in advance of the project, but it is clear that they too magnify the value of the project.

This project's SESP's analysis identified a range of potential social and environmental impacts associated with the project activities. The SESP template (**Annex 6**) details the specific environmental and social risks that apply. The significance of each risk, based on its probability of occurrence and extent of impact, has been estimated as being either low, moderate, substantial or high, as per UNDP's latest SES Policy 2021 that has become effective on 1st January 2021.¹ The SESP identified a total of 10 risks of which 6 have been assessed as "Moderate" significance, 3 as "Substantial" significance and 1 as "Low" significance. Overall SESP risk categorization rating of this project is "Substantial".

Substantial Risk: is defined by UNDP's SES² as "*Projects that include activities with: (i) potential adverse E/S risks more varied or complex than those of Moderate Risk projects; (ii) limited in scale; (iii) of lesser magnitude than those of High Risk projects; Ex: reversible, predictable, smaller footprint, less risk of cumulative impacts*"

."

The overall "Substantial" risk categorization of the project is due to the following risks assessed as "Moderate" and "Substantial" risks and their proposed mitigating measures, identified described in the SESP (**Annex 6**):

- Risk 1: (Moderate Risk) Potential limited participation of women in public transportation sector (both as commuters and as electric bus drivers, conductors, workshop technicians). This risk pertains to UNDP SES Programming Principle 2 (Gender Equality and Women's Empowerment), wherein a key risk-related question to be assessed is to understand if the Project could potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits? A significant proportion of urban women in Mauritius rely on public transportation, namely buses and other pooled transport options. Women's demand for transport and mobility in Mauritius is significant, since women's participation in labour force is over 45% in 2020 (as per World Development Indicators). The Ministry of Gender Equality, Child Development and Family Welfare of the Government of Mauritius launched a booklet entitled "Breaking the Silence on Sexual Harassment in Public Transport" (2017), which explains that women are most often victims of sexual harassment in public buses, and the booklet served to educate them on precautionary measures. Sexual harassment and safety concerns are a key deterrent for women in Mauritius to use public transport system more extensively, and also considering being employed in this sector as drivers, conductors and workshop technicians. Since the public transport sector in Mauritius has been predominantly male dominated both as users and employees, there is a risk that this trend might continue even after the project is implemented.
- Risk 2: (Substantial Risk) Potential environmental hazards associated with waste generated during manufacture of electric vehicle batteries as well as handling batteries that have reached their end-of-life; potential risk of release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local impacts. This risk pertains to UNDP SES Project-level Standard 3 (Community Health, Safety and Security), wherein a key risk-related question to be assessed is to understand if the Project could pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (ex. explosives, fuel and other chemicals during construction and operation)? Electric vehicle batteries are produced from rare earth metals some of which are not environmentally friendly. Therefore, the disposal of unrecyclable material from battery manufacturers must be handled properly. In addition, when batteries have reached their end-of-life, they also need proper disposal to minimize environmental impact and exposure to the society.

¹ https://info.undp.org/sites/bpps/SES_Toolkit/Pages/Homepage.aspx

² UNDP SES Revision July 2019, page 18.

- Risk 3: (Moderate Risk) Potential occupational health and safety risks associated with electric vehicle repair and decommissioning of battery banks and/or vehicle. This risk pertains to UNDP SES Project-level Standard 3 (Community Health, Safety and Security), wherein a key risk-related question to be assessed is if the Project poses potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning? Battery Electric Vehicles (BEVs) operate at 3-phase high voltage. Consequently, they must be maintained by properly trained technicians. As expected, most of the existing crop of vehicle repair technicians were trained at a time when electric vehicles were unheard of. Therefore, retraining will be required for the technicians involved in electric vehicle repair or decommissioning.
- Risk 4: (Substantial Risk) Potential outcomes of the Project could be sensitive or vulnerable to potential impacts of climate change. This risk pertains to UNDP SES Project-level Standard 2 (Climate Change and Disaster Risks), wherein a key risk-related question to be assessed is if the project's outputs are vulnerable to the impact of climate change, due to adverse disaster events such as tropical cyclones, floods and coastal erosion. As a SIDS country, Mauritius is vulnerable to increased adverse climate change-induced disasters such as tropical cyclones and floods and hence, this project's activities need to consider this risk in the design of its outputs and activities.
- Risk 5: (Substantial Risk) Potential risk of Gender Based Violence (GBV) against women on public transport buses deployed under this project in Mauritius. This risk pertains to UNDP SES Programming Principle 2 (Gender Equality and Women's Empowerment), wherein a key risk-related question to be assessed is if the project's outputs would potentially reproduce discriminations and possibly Gender Based Violence against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits? The target of the proposed project is the public transportation sector which is predominantly male dominated. There is a risk that this trend might continue even after the project is implemented. Risk of Gender Based Violence is a key consideration for woman using/working in public transportation in Mauritius. However, likelihood of GBV on public transport in Mauritius is low since there have been no incidents of GBV reported on public transport buses or MetroExpress in Mauritius over the last 15 years. Nevertheless, the impact of a GBV risk materializing on public transport buses in Mauritius can be high and hence this risk is overall rated as Substantial.
- Risk 6: (Moderate Risk) Potential risk of grievances or objections from affected stakeholders. This risk pertains to UNDP SES Programming Principle 5 (Accountability). Some risk of grievances or objections can be anticipated from some public transport passengers, since some passengers may find that the low-carbon, modern electric buses with better accessibility features (to be deployed under this project) may not be deployed immediately across all bus routes in Mauritius, since only 60 buses will be deployed (Mauritius has over 1900 public transport buses and replacing all of them will take time)
- Risk 7: (Moderate Risk) Potential occupational health and safety risks to drivers and passengers of electric buses due to physical, chemical, biological and psychosocial hazards throughout the project lifecycle. This risk pertains to UNDP SES Project-level Standard 3 (Community Health, Safety and Security), wherein the key risk-related question to be assessed is if 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? Battery Electric Vehicles (BEVs) operate at 3-phase high voltage. Consequently, they must be maintained by properly trained technicians. As expected, most of the existing crop of vehicle repair technicians were trained at a time when electric vehicles were unheard of. Therefore, retraining will be required for the technicians involved in electric vehicle repair or decommissioning.
- Risk 8: (Moderate Risk) Project upstream activities focused on "Sustainable Low Carbon Transport Planning" (Component 1, Output 1.1) and "Policy and Regulatory Framework for E-bus deployment" (Component 1, Output 1.2) may result in "downstream" interventions which may pose potentially some adverse social and environmental risks. This risk pertains to UNDP SES Programming Principle 2 (Gender Equality and Women's Empowerment) or UNDP SES Project-level Standard 3 (Community Health, Safety and Security) or UNDP SES Programming Principle 5 (Accountability). Proposed activities under Output 1.1 and 1.2, which are focused on transport planning and promulgation of electric bus policy and regulatory mechanism, may fail to consider certain SES risks, such as risks that could reduce equal access to public

transport to women or those that may pose health and safety risks to transport sector workers or passengers or certain accountability risks for equitable access to all passengers including marginalized/elderly/disabled passengers.

Risk 9: (Moderate Risk) Locations of solar powered electric bus charging stations have been broadly identified (buildings within the premises of bus depots owned and operated by public transport bus operators) but their precise locations have not been identified yet and could therefore have negative impacts on habitats if not selected appropriately. This risk pertains to UNDP SES Project-level Standard 1 (Biodiversity Conservation and Sustainable Natural Resource Management), UNDP SES Project-level Standard 3 (Community Health, Safety and Security) or UNDP SES Project-level Standard 4 (Cultural Heritage) and UNDP SES Project-level Standard 5 (Displacement and Resettlement).

Risk 10: (Low Risk) The Project may directly or indirectly increase national social, environmental and economic vulnerability to climate change due to increased electricity consumption of grid electricity in Mauritius if ongoing/planned investments in renewable electricity generation may slow down or not materialize. This risk pertains to UNDP SES Project-level Standard 8 (Standard 8: Pollution Prevention and Resource Efficiency).

2 Legislation and Institutional Frameworks for environmental and social matters

2.1 National Legislation, Policies and Regulations

The following legislation is relevant to the implementation of the projects.

The Sex Discrimination Act 2002

The Sex Discrimination Act came into force on 8 March 2003. Its aim is “to provide for the elimination of all forms of gender discrimination and sexual harassment in certain areas of public activity”. A Sex Discrimination Division was set up within the NHRC in 2003 to enquire into complaints of sex discrimination and sexual harassment. The Act lists out the fields where sex discrimination is likely to arise, such as employment, or in relation to professions, trades or occupations, education, in the provision of goods, services or facilities, in accommodation, with respect to the disposal of property, in companies, partnerships or associations and clubs. The Act further provides in section 6 for a reasonableness test to assess whether it is reasonable to impose a condition, requirement or practice which causes a disadvantage to a person of the opposite sex.

The Training and Employment of Disabled Persons Act provides for a Board which shall prevent discrimination against disabled persons resulting from or arising out of their disability, among others.

The Protection of Elderly Persons Act was passed in 2005; the object of the Act is to set up a legal and administrative framework to ensure that adequate protection and assistance are made available to elderly persons in Mauritius and Rodrigues.

The **Occupational Safety and Health Act 2005**, proclaimed on 1 September 2007, makes provision for the safety, health and welfare of workers. This piece of legislation is being enforced by the Occupational, Safety and Health Division of the Ministry of Labour, Industrial Relations & Employment through inspection at workplaces, investigations into complaints, accident investigation and prosecution.

Environment Protection Act (EPA) 2002

The EPA 2002 is the main environmental legislation. The underlying principles of this legislation are the protection of the environment and human health. It provides for:

- The protection and management of the environmental assets of Mauritius so that their capacity to sustain the society and its development remains unimpaired.
- Ensuring harmony between quality of life, environmental protection and sustainable development for the present and future generations
- The legal framework and the mechanism to protect the natural environment.
- Planning for environmental management and coordination of the inter-relations of environmental issues.

Mauritius' current environmental protection legal framework for solid and hazardous waste management comprises the Environment Protection Act (EPA) of 2002, as amended in 2008, and the Local Government Act (LGA) of 2011 as amended in 2018. The following relevant Regulations have been made under the EPA and the LGA:

- Environment Protection (Standards for hazardous wastes) Regulations 2001
- Local Government Act (Dumping and Waste Carriers) Regulations 2003
- Local Government Act (Registration of Recycler and Exporter) Regulations 2013

Environment Protection (Standards for Air) Regulations 1998

In Mauritius, air pollution control is regulated under the Environment Protection (Standards for Air) Regulations 1998. These Regulations prescribe national environmental standards for the emission of pollutants in the atmosphere in the First Schedule. Every factory, in the sense of section 2 of the Labour Act, shall comply with the emission standards set out in the First Schedule. The national environmental standards for ambient air shall be those set out in the Second Schedule. The enforcing agency, Environment Protection Agency (EPA), as defined by the Environment Protection act of 1991 prescribes measures of chimneys of factories, vehicles and other polluting entities so as to enhance measurement of the composition, characteristics and quantities of emissions. In exercising its powers under these regulations, the enforcing agency may take account of the national environmental standards set out in the Second Schedule. Ambient Air Quality standards and measurement procedures (set out in the Second Schedule of these Regulations) – as applicable to vehicular pollution – have been set out for the following types of pollutants - Particulate Matter 10 (PM10), total suspended particles, Sulphur Dioxide (SO_x), Nitrogen Dioxide (NO_x), Carbon Monoxide (CO), Lead and Ozone.

Climate Change Law 2020

In November 2020, the Parliament of Mauritius approved Climate Change Law whose objective is to make of Mauritius a greener economy while responding to the adverse effects of climate change. The main objective of this Law is to implement, with a view to addressing the adverse effects of climate change and developing Mauritius into a greener economy, the obligations of Mauritius under the United Nations Framework Convention on Climate Change, the Kyoto Protocol, the Paris Agreement and any other related instrument on climate change.

Accordingly, the Bill establishes a legal framework towards making Mauritius a climate-change resilient and low emission country by providing, inter alia, for –

- the setting up of an Inter-Ministerial Council on Climate Change which shall, on the recommendation of the Minister to whom responsibility for the subject of climate change is assigned, make climate change policies and set priorities for climate change adaptation and mitigation, and monitor and review the progress made by Government departments on climate change projects and programmes.
- a Department of Climate Change, which shall, inter alia, develop policies, programmes and action plans relating to climate change and coordinate research relating to climate change.
- the setting up of a Climate Change Committee which shall coordinate the preparation of reports relating to climate change and the implementation of activities related to greenhouse gas inventories, greenhouse gas emission reduction, climate change vulnerability assessments and adaptation to climate change.
- the conduct of an annual inventory of greenhouse emission by sources and removal by sinks
- the monitoring and reporting with respect to greenhouse gas emissions, including the implementation of sectoral climate change adaptation and mitigation measures.
- the Ministry responsible for the subject of climate change to be compliant to the fiduciary standards set by the Adaptation Fund Board, the Green Climate Fund and such other international climate-related funds and to act as a National Implementing Entity with a view to seeking direct access to climate funding.

In addition, the Bill provides, as far as Rodrigues is concerned, that –

- the Commissioner for Environment in Rodrigues shall be responsible for the formulation of climate change strategies and ensure that climate change measures are effectively and efficiently implemented and maintained in Rodrigues; and
- there shall be a Rodrigues Climate Change Committee which shall, inter alia, collaborate and coordinate with the Climate Change Committee for the preparation of reports related to climate change.

2.2 International Agreements and Treaties

Mauritius is a signatory to several multilateral agreements and conventions that are relevant to the program; including but not limited to the following:

- The African Charter on Human and Peoples' Rights
- Conventions under the aegis of the International Labour Organization (ILO)
- 1984, Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)
- 1992, United Nations Framework Convention on Climate Change (UNFCCC)
- 1992, Basel Convention on the Control of Trans-boundary Movement of Hazardous Wastes and their Disposal
- 1992, Bamako convention on the ban of the import into Africa and the control of trans-boundary movement and management of hazardous wastes within Africa
- 2001, Kyoto Protocol under UNFCCC
- 2004, Stockholm Convention on Persistent Organic Pollutants (POPs)
- 2007, Convention on the Rights of Persons with Disabilities (CRPD)
- 2009, Statute of the International Renewable Energy Agency (IRENA)
- 2013, Minamata Convention on Mercury
- 2016, Paris Agreement on Climate Change under UNFCCC

2.3 UNDP's Social and Environmental Standards

UNDP's Strategic Plan³ and policy framework articulate the organization's strategic commitment to promoting the 2030 Agenda for Sustainable Development.⁴ The SES underpin this commitment by ensuring social and environmental sustainability is mainstreamed across all programming. The SES are UNDP policy and require that all UNDP programming maximizes social and environmental⁵ opportunities and benefits as well as ensures that adverse social and environmental risks and impacts are avoided, minimized, mitigated and managed. The SES do not define the substantive development outcomes and results orientation of UNDP's programming, as this is elaborated in UNDP's Strategic Plan and programming instruments.

Through application of the SES, UNDP enhances the consistency, transparency and accountability of its decision-making and actions, improves performance, and strengthens achievement of sustainable development outcomes. The SES assist UNDP staff, implementing partners and responsible parties to manage social and environmental risks and impacts of UNDP programmes and projects.⁶

The SES objectives are to: (i) strengthen the quality of programming by ensuring a principled approach; (ii) maximize social and environmental opportunities and benefits; (iii) avoid adverse impacts to people and the environment; (iv) minimize, mitigate, and manage adverse impacts where avoidance is not possible; (v)

³ UNDP Strategic Plan, 2018-2021, available at <http://strategicplan.undp.org/>.

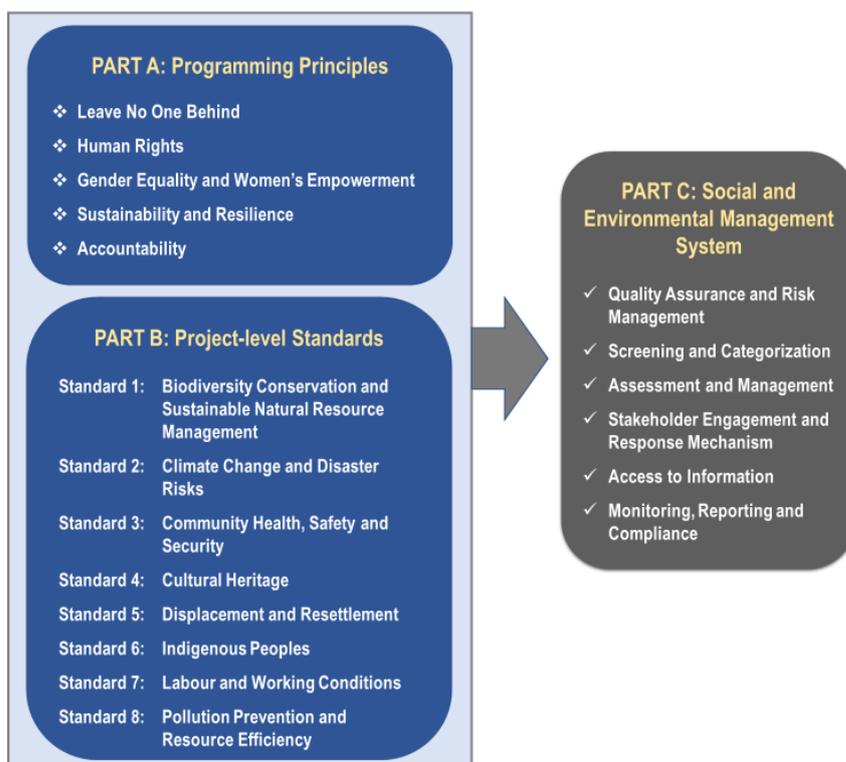
⁴ See [Transforming Our World: the 2030 Agenda for Sustainable Development](#), UN Doc. A/RES/70/1.

⁵ The term 'social and environmental' should be understood to include the breadth of issues in the Programming Principles and Project-level Standards.

⁶ UNDP "programming" comprises the planning, implementation, reporting and evaluation of development results achieved with partners through UNDP support. A UNDP "programme" is a plan for effectively contributing to outcome-level development results through UNDP's "project modalities:" development projects, the engagement facility and development services.

strengthen UNDP and partner capacities for managing social and environmental risks; and (vi) ensure full and effective stakeholder engagement, including through a mechanism to respond to complaints from project-affected people.

Key Elements of UNDP’s Social and Environmental Standards (SES)



The Social and Environmental Screening Procedure (SESP) has been applied to the project during the PPG phase, as required by the UNDP SES, and is included as **Annex 6**. In accordance with the latest revised UNDP SES policy (effective from 1st January 2021), the Social and Environmental Screening Procedure (SESP) has been applied to the project during the project development phase. Under this policy, a SES principle or standard is ‘triggered’ when a potential risk is identified and assessed as having either a ‘moderate’ or ‘substantial’ or ‘high’ risk rating based on its likelihood of occurrence and extent of impact. Risks that are assessed as ‘low’ do not trigger the related principle or standard. The SESP identified 10 risks for this project that could have potential negative impacts in the absence of safeguards. Five of these risks were rated as Moderate risks, and four as Substantial risks.

The screenings conducted during this project preparation indicate that up to four of the nine social and environmental principles and standards have been triggered due to ‘moderate’ and ‘substantial’ risks:

- Principle 3: Gender Equality and Women’s Empowerment (due to the sexual harassment and women’s safety issues on public transport in Mauritius that pose a risk to women’s access to public transport)
- Principle 4: Sustainability and Resilience (due to the risk that project outcomes will be vulnerable to impacts of climate change)
- Principle 5: Accountability (due to risk of grievances or objections can be anticipated from some public transport passengers, since some passengers may find that the low-carbon, modern electric buses with better accessibility features (to be deployed under this project) may not be deployed immediately across all bus routes in Mauritius, since only 60 buses will be deployed).
- Standard 2: Climate Change Mitigation and Adaptation (due to the risk that project outcomes will be vulnerable to impacts of climate change)
- Standard 3: Community Health, Safety and Security (due to potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials associated with electric vehicle batteries and risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project operation, or decommissioning)

- Standard 7: Labour and Working Conditions (due to potential occupational health and safety risks associated with electric vehicle repair and decommissioning of battery banks and/or vehicle)
- Standard 8: Pollution Prevention and Resource Efficiency (due to potential environmental hazards associated with waste generated during manufacture of electric vehicle batteries as well as handling batteries that have reached their end-of-life).

Further details on the risks and categorizations are contained in the SESP report, which is attached as Annex 6. A summary of the risk significance under each SES principle and standard, and the project-level safeguard standards triggered by each project is shown in Table 1 below.

Table 1: Summary of safeguards triggered based on screening conducted during project preparation

Overarching Principle / Project-level Standard	Rating
Principle 1: Leave No One Behind	Not Triggered
Principle 2: Human Rights	Substantial
Principle 3: Gender Equality and Women’s Empowerment	Substantial
Principle 4: Sustainability and Resilience	Substantial
Principle 5: Accountability	Moderate
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management	Moderate
Standard 2: Climate Change and Disaster Risks	Substantial
Standard 3: Community Health, Safety and Security	Substantial
Standard 4: Cultural Heritage	Moderate
Standard 5: Displacement and Resettlement	Moderate
Standard 6: Indigenous Peoples	Not Triggered
Standard 7: Labour and Working Conditions	Moderate
Standard 8: Pollution Prevention and Resource Efficiency	Substantial

Table 2: Overall SES Safeguard Risk Assessment of the Project

Number of Risks in Each Category	Number
High	0
Substantial	3
Moderate	6
Low	1
Total number of project risks	10
Overall Project Risk Categorization	Substantial

2.4 Gaps in policy framework

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 further studies / targeted assessment) to determine which standard (national, international or UNDP’s SES) must be followed for each risk area.

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

This ESMF has been developed as part of UNDP’s project preparation activities, following the screening of the UNDP-supported GEF-financed *Promoting Low-carbon Public Bus Transport in Mauritius* Project with the SESP template (based on latest revised UNDP SES framework effective from 1st January 2021). Based on the project risk categorization and the specific risks, the following procedures for screening, assessing and managing those risks must be undertaken during project implementation:

3.1 Screening

The SESP has been conducted on the basis of the broad scope of project activities currently envisaged. This has identified the project as being potentially of Substantial risk, and as such it requires scoped Environmental and Social Impact Assessment (ESIA). The potential impacts and management strategies are therefore designed to manage the identified impacts in their broadest sense, and the allocated significance rating of Low, Moderate, Substantial or High is based on a precautionary approach.

During implementation, this Project overall will be re-screened with the UNDP SESP as needed in the course of required targeted assessments and development of ESMP when determined necessary by the Project Manager, PMU's Social and Environment Safeguards Officer, the Project Steering Committee, or UNDP.

The project's implementation locations will be existing public transport bus routes on which diesel buses owned and operated by licensed bus operators (public and private companies) ply, ferrying commuters between various destinations. Bus depots – where buses are parked at night and repaired at workshops within these depots. Hence, project's implementation locations have been broadly identified, but precise locations have not been identified at this stage.

Also, even though the project does not propose to offer any new bus routes, nor does it propose to construct any new roads – it will only replace 60 diesel buses already plying on existing routes with 60 new, modern and low-carbon electric buses – it is important to note that the project's broad scope of activities - mainly "upstream" activities such as transport planning, defining policy and regulatory framework, feasibility studies and training and capacity building activities - that might result in "downstream" activities with currently undefined SES risks. The SESP screening has identified risks that are currently undefined - Risk 8: Project activities focused on "Sustainable Low Carbon Transport Planning" (Component 1, Output 1.1), "Policy and Regulatory Framework for E-bus deployment" (Component 1, Output 1.2) and "Technical, operational, financial, economic and regulatory analysis" (Component 3, Output 3.1) may result in "downstream" interventions which may pose potentially some adverse social and environmental risks. Once proposed project activities under these Components are initiated, a screening procedure applying scoped Strategic Environmental and Social Assessment (SESA) will be initiated, and this procedure has been defined in the Prodoc (as part of relevant activities under relevant outputs) for these "upstream" risks.

3.1.1 Currently Unspecified Project Locations – Component 2 (Output 2.1 and Output 2.2)

It is proposed under the Project's Activity 2.2.3 (under Component 2, Output 2.2), electric bus charging stations (total 15 in number) will be installed within existing bus depots of bus operators, on roofs of their existing buildings. At this stage, it is very likely that no additional land acquisition will be required or planned and none of these solar powered charging stations will be located in protected areas, and no new land acquisition or forest clearance will be done. It is also very likely that the project's associated facilities do not require any new construction or infrastructure development activities. Nevertheless, locations of solar powered electric bus charging stations have only been broadly identified at this stage (buildings within the premises of bus depots owned and operated by public transport bus operators) but their precise locations have not yet been identified and could therefore result in risk of negative impacts on habitats if not selected appropriately. Hence, a low level risk of negative impact of habitats/protected areas/biodiversity or impact on cultural heritage exists under this project's proposed activities within the project's areas of influence. Hence, a screening procedure has been defined in this ESMF for this Activity 2.2.3 under Output 2.2 of Component 2 of this project wherein an initial screening using SESP template will be conducted, and that may necessitate either targeted assessment or scoped Environmental and Social Impact Assessment (ESIA), depending on the risk of each site.

In addition, during the course of project implementation, if additional locations (routes, bus depot locations not already existing) will be proposed and developed under the Project's Activity 2.1.3 (Component 2, Output 2.1) and Activity 2.2.3 (Component 2, Output 2.2), then such proposed activities will, as they arise, require screening, assessment and management, wherein an initial screening will be conducted, and that may necessitate either targeted assessment or scoped Environmental and Social Impact Assessment (ESIA), depending on the risk of each site.

The ESMF will ensure that additional screening with the SESP template on a site-specific basis is conducted. This is required as soon as any locations (routes, bus depot locations not already existing) and on-the-ground activities are proposed, before the activity starts, and must take place during the first year of project implementation. The site-level screenings with the SESP will be used as part of the site-selection process. A list of exclusion criteria will be used to eliminate high risk sites. These will include sites with high cultural heritage value, inhabited sites, sites with high biodiversity values (such as protected areas) or sites used by indigenous peoples. Results of this screening activity may necessitate additional either targeted assessment or scoped ESIA for each site depending on the risk of each site.

It is clarified this screening procedure are applicable only to the Project's Activity 2.1.3 (Component 2, Output 2.1) and Activity 2.2.3 (Component 2, Output 2.2).

3.1.2 Ongoing Screening Requirements

The Project will incorporate an ongoing SES screening activity as part of the annual Project Implementation Report (PIR) exercise to evaluate any SES risks that may arise due to implementation of project activities and to track risk assessment and management as defined in this ESMF. All project components will be included in the scope of this ongoing screening activity. Responsibility for this ongoing screening activity will be with the Project Management Unit (PMU) on behalf of the Implementing Partner. New and updated risks shall be presented to the Project Steering Committee (PSC) for consideration and definition of mitigation measures. Depending on the findings of this annual screening activity, environmental and social risks identified during these screening processes will be incorporated into the overall project SESP and ESMP.

3.2 Assessment

The SESP has identified the project as being Substantial risk. As such, comprehensive environmental and social impact assessment is required in order to identify and assess impacts and develop management mechanisms to mitigate identified risks.

Following screening in line with 3.1 above, further targeted assessments, ESIA or SESA may be required for project impacts classified as Moderate or Substantial or High, to assess and where possible quantify the magnitude and severity on the individuals, communities and/or businesses affected. Assessment of specific adverse impacts is required at a level commensurate with the significance of the identified risk and may range from a full ESIA to a limited or focused study of a particular aspect, to establish the level and type of mitigation or management measures required.

Further guidance on this is on UNDP website at: https://info.undp.org/sites/bpps/SES_Toolkit/Pages/Guidance-and-Templates.aspx

Potential impacts from "upstream" project activities, such as those identified under Risk 8 of SESP: Project "upstream" activities focused on "Sustainable Low Carbon Transport Planning" (Component 1, Output 1.1), "Policy and Regulatory Framework for E-bus deployment" (Component 1, Output 1.2) and "Technical, operational, financial, economic and regulatory analysis" (Component 3, Output 3.1) may result in "downstream" interventions which may pose potentially some adverse social and environmental risks, will be assessed through appropriately scoped Strategic Environmental and Social Assessments (SESA). The Project will apply SESA to manage risks for activities under these Outputs/Components (Output 1.1 and Output 1.2 under Component 1 and Output 3.1 under Component 3) and the SESA's human rights, inclusiveness, gender equality and climate impact oriented approach and exclusionary criteria have been defined in the Prodoc under those respective activities.

Both assessments will develop strategies for avoiding, reducing and managing adverse impacts and enhancing positive impacts, and the outputs of both assessments will inform development of Environmental and Social Management Plans (ESMPs). For "downstream" risks primarily under Component 2 of this project (financial and technical support for deployment of electric buses, charging stations and associated rooftop solar installations), site-specific Environmental and Social Management Plans (ESMPs) may be required. ESMPs for sites with similar identified risks and assessments can be combined into a single ESMP as well.

3.2.1 Targeted Assessments and Environmental and Social Impact Assessment (ESIA) – Component 2 (Downstream Activities)

The project's proposed activities under Component 2 (Output 2.1 and Output 2.2) involve providing financial and technical support to bus operators for deployment of electric buses (on existing routes – no new routes or road construction is envisaged) and their charging stations including rooftop solar power installations. Electric bus charging stations (total 15 in number) will be installed within existing bus depots of bus operators, on roofs of their existing buildings. Locations of solar powered electric bus charging stations have only been broadly identified at this stage, but their precise locations have not yet been identified and could therefore result in risk of negative impacts on habitats if not selected appropriately. Hence, a screening procedure has been defined in this ESMF wherein an initial screening using SESP template that may necessitate either targeted assessment or scoped Environmental and Social Impact Assessment (ESIA), depending on the risk of each site. Similar targeted

assessments or scoped ESIA will be required if any additional locations (routes, bus depot locations not already existing) will be proposed and developed during project implementation.

The project needs to assess site-specific SES risks of each precise location of charging stations and if any additional locations (routes, bus depot locations not already existing) and on-the-ground activities are proposed during project implementation. Following an SESP template-based screening activity, site-specific risks will be assessed, and sites screened as 'Moderate' risk will be required to be assessed using targeted assessments and sites screened as 'Substantial' or 'High' risk will be required to be assessed under an ESIA.

Targeted Assessments will include appropriate and meaningful consultations with affected communities, such as local communities near proposed sites, passengers, drivers, conductors and workshop technicians of public transport buses in Mauritius. These consultations will be necessary to ensure no negative impact on habitats or land use or to local communities are adversely impacted due to the proposed installation of solar powered charging station at that particular site.

The scoped ESIA will commence in the first year following project inception and should commence as soon as a precise location for a solar powered charging station installation has been identified or any additional locations (routes, bus depot locations not already existing) are selected for implementation under this project, and following a screening based on SESP template the SES risk of that location/site has been assessed as 'Substantial' or 'High'. ESIA will focus on, but not be restricted to the potential impacts identified during the SESP screening process, which are a result of proposed on-the-ground project activities in their location-specific contexts.

The scoped ESIA will be developed and carried out by independent experts in a participatory manner with stakeholders as part of the workplan preparatory activities. This will involve stakeholder consultations and engagement, as well as research, fieldwork, and management planning. See also Section 5 below on Stakeholder Engagement and Information Disclosure.

UNDP PMU will commission the ESIA, and the assessment(s) will be conducted in a manner consistent with national regulations and the UNDP SES and lead to the development of appropriately scaled management measures and plans to address the identified risks and impacts. The ESIA will:

- Screen social and environmental issues and impacts specific to the local context.
- Further clarify the applicable social and environmental standards (including UNDP SES) triggered by the project activities.
- Take steps necessary in the context of the ESIA to fulfil those requirements and make recommendations on how such compliance is to be carried out through the life of the project.

The UNDP SES and SESP require that in all cases required social and environmental assessments and adoption of appropriate mitigation and management measures must be completed, disclosed and discussed with stakeholders prior to implementation of any activities that may cause adverse social and environmental impacts.

Assessment of further activities will be commensurate with the magnitude of the envisaged risk, and targeted specifically at the associated risks, especially considering risks to poor, vulnerable or marginalized communities and individuals. Full stakeholder consultation will be required at all stages.

Table 3: Summary of Assessment Requirements

Focus	Assessment	Schedule	Responsibility
Upstream Activities	SESA	To commence within 6 months of project inception	PMU and external consultants
Downstream Activities	Scoped ESIA or targeted assessment (per site-specific screenings in SESP template and UNDP SES requirements)	To commence after site-specific screening	PMU and external consultants
Any additional activities that may be rated as	Targeted Assessments or ESIA as appropriate	As required by	PMU and external consultants

Moderate or Substantial Risk		additional or updated SESP	
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3.3 Management

Risk management for “upstream” activities assessed with SESA have been described in the Prodoc under relevant activities.

For risks under “downstream” activities assessed via targeted assessments or ESIA, during implementation, the Project will create several Environmental and Social Management Plans (ESMPs) as required based on screening and assessment procedures for various risks, which will be informed by the SESP, targeted assessment reports, ESIA and other plans (including the Gender Analysis and Action Plan and Stakeholder Engagement Plan) as described in sections 3.1 and 3.2 above.

3.3.1 Environmental and Social Management Plans (ESMPs) – Component 2 (Downstream Activities)

For “downstream” risks primarily under Component 2 of this project (financial and technical support for deployment of electric buses, charging stations and associated rooftop solar installations), site-specific Environmental and Social Management Plans (ESMPs) may be required. ESMPs for sites with similar identified risks and assessments can be combined into a single ESMP as well. Identification of time-bound measures to avoid, reduce, mitigate and manage potential impacts will be captured in targeted assessment reports and/or ESIA and revised SESP during project implementation, together with an updated Gender Analysis and Action Plan. ESMPs must be developed based on SESP, this ESMF and Gender Analysis and Action Plan during the targeted assessments and ESIA and only for those “downstream” activities for which Targeted Assessments and ESIA would have been triggered and necessitated as defined in Sections 3.2.1 above. It is envisaged that separate ESMPs are developed for each “downstream” activity based on targeted assessments/ESIA as defined in this ESMF.

Component 2 activities concerns downstream risks (Risks 9). Site-specific ESMPs (or single ESMP for a group of sites assessed under targeted assessments/ESIA) will be developed and approved within 12 months of project start. ESMPs will consider management of SES risks of the site(s), concerns of local communities, their habitats, occupational health and safety issues and other issues as relevant and identified by the ESIA. Other sections will be included, if necessary, based on the ESIA.

The findings and actions stipulated in the ESIA, Gender Action Plan, Stakeholder Engagement Plan, shall be integrated into the ESMP(s), where relevant. All plans shall be prepared (under leadership of PMU), consulted (with relevant stakeholders), and formally adopted (by the PSC) prior to initiating field activities such as civil works, installation of equipment, and operations.

The PMU shall require that all parties, including installation companies and operators, and any contractors and sub-contractors will, at all times during their implementation, comply with the following:

- Application of all requirements as per Mauritian law concerning environmental, social, health and safety, and labour regulation.
- Approved environmental, social, health and safety, and labour related permits, authorisations, or licenses that may apply.
- Abidance to the principles and standards of UNDP SES.
- Abidance to the requirements in the ESMP(s) and its annexes to address UNDP safeguards.

Each ESMP, revised SESP and Gender Analysis and Action Plan at a minimum, the output of the targeted assessment/ESIA must:

- Provide a summary of identified adverse social and environmental risks and impacts that could not be avoided or remain after impact minimization efforts.
- Provide time-bound specific recommendations for avoiding adverse impacts, and where avoidance is not possible, for reducing, mitigating, and managing those impacts for all project activities.
- Further identify project activities that cannot take place until certain standards, requirements and mitigation measures are in place and carried out (complimenting and updating what has already been identified in this draft ESMF).

- Develop site-specific management plans (separate ESMPs for each installation site of charging stations or for each new route or project site identified during project implementation may be required), as necessary and as required by the applicable UNDP SES. These will outline the management objectives, potential impacts, control activities and the environmental performance criteria against which projects will be evaluated (ex. audited).
- Provide recommendations that will be adopted and integrated into the project activities, monitoring and reporting framework and budget.
- Collect and present baseline data collection and studies for social and environmental impact
- Review the Gender Analysis and Action Plan and outline additional specific actions and/or updates.
- Ensure stakeholder engagement, with key affected stakeholders (such as local communities, passengers, workers in electric vehicle and waste disposal/management industry), and plan for stakeholder engagement during implementation of management measures.
- Assess and present a plan on resource capacity requirements for the PMU.
- Plan actions to implement mitigation measures for each identified risk and impact.
- Develop a monitoring and reporting plan.
- Develop an implementation schedule, cost estimates and funding sources.

The above required management plans must be prepared and mitigation measures in place as per those plans, prior to the initiation of any project activity that may cause adverse impacts. Where appropriate, appendices to the over-arching ESMP will be created for each site, outlining the specific impacts and mitigation and management methods required for each site. Each of these is dynamic and will require amending as new project activities are identified, screened, and assessed in accordance with the procedures described. Additional required mitigation and impact management measures must be integrated into management plans, and in some cases may require, or benefit from, input from the Project Gender Specialist.

Project-affected stakeholders will be consulted on the scope and parameters of the assessment processes and their findings, including proposed mitigation and management measures. It may be necessary to undertake targeted consultations to ensure that marginalized or disadvantaged groups and individuals affected by the project have the opportunity to participate.

Assessment reports and adoption of appropriate mitigation plans/measures will be completed, disclosed, and discussed with stakeholders prior to initiation of any project activities that may cause adverse social and environmental impacts.

All procedures/templates will be applied throughout the process of developing the ESMP and other management plans, to ensure that required procedures are followed throughout implementation of the entire project, as required by UNDP SES. Further information on UNDP SES guidance procedures and templates can be found on UNDP website at: https://info.undp.org/sites/bpps/SES_Toolkit/Pages/Guidance-and-Templates.aspx

Responsibility for the ESIA/ESMP rests with the Project Management Unit (PMU) on behalf of the Implementing Partner. The PMU will draw on the Project Chief Technical Advisor (CTA) for technical inputs and work with the National SES Expert and National Gender Expert to develop the ESIA/ESMP and supporting plans, which will remain effective for the entire project implementation period. Periodic review and updating exercise shall be carried out as part of the annual ESMF screening or as determined necessary by the ESIA/ESMP.

3.3.2 Initial Battery Waste Management Plan

Electric vehicle batteries are produced from rare earth metals some of which are not environmentally friendly. Therefore, the disposal of unrecyclable material from battery manufacturers must be handled properly. In addition, when batteries have reached their end-of-life, they also need proper disposal to minimize environmental impact and exposure to the society. This risk has been identified in the SESP (Risk 2) and the project design incorporates activities (under Component 1, Activity 1.2.3) to reduce the risk of hazardous waste from used batteries entering local ecosystems by supporting the government to setup policy and regulatory framework for safe recycling and disposal of battery components in the country.

The project will work closely with another UNDP-GEF project titled “Indian Ocean Regional Project - Mauritius - Implementing Sustainable Low and non-Chemical Development in SIDS (ISLANDS)” (PIMS ID 6400 , Ministry of Environment, Solid Waste Management and Climate Change as this project’s key implementing partner) to

design and implement policies, regulations and enforcement mechanisms for scientific recycling and disposal of solid waste and chemicals generated from batteries used in electric vehicles in general and electric buses in particular. Both UNDP-GEF projects will train key government counterparts to deal correctly with the disposal of electric vehicles batteries. This mitigation measure is at the core of project activities and is intended to generate and enforce the framework and procedures to track possible hazardous waste generated in the medium and long term by the project.

It is important to note that this proposed activity under this project (PIMS 6486) to design and develop policies and regulatory frameworks and guidelines for management of hazardous waste from electric bus batteries will closely work with developed via the other GEF-funded "ISLANDS" project (PIMS 6400) to develop electric bus battery-specific waste management policies, guidelines and regulations in accordance with this electric bus project's (PIMS 6486) SES. Essentially, the necessary hazardous waste management policies, guidelines and regulations to mitigate this risk under this project (PIMS 6486) will be developed by the "ISLANDS" project (PIMS 6400), but in accordance with UNDP SES and SES risk screening and management procedures of this project (PIMS 6486) set out in ESMF. Also, in order to ensure sufficient communication between the 2 projects and to ensure the policies and guidelines are developed in accordance with the UNDP SES, this project's IP, MLTLR, will be part of project steering committee of ISLANDS project (PIMS 6400). A TA + coordination budget of US\$ 24,000 has been allocated under this electric bus project (please refer Prodoc Annex 8) for consultants to work with the "ISLANDS" project to ensure electric bus battery specific policies, guidelines and regulations are developed in accordance to this project's SES.

Each site-specific targeted assessment/ESIA and ESMP (as described under Sections 3.1, 3.2 and 3.3.1 above) will ensure battery/hazardous waste-specific risks are included in site-specific screening, assessment and management plans, and electric vehicle/battery hazardous waste management policies, regulations and guidelines developed under ISLANDS" project (PIMS 6400) are adhered to under all relevant downstream activities (primarily Component 2).

4 Implementation and Institutional arrangements and capacity building

4.1 Implementation of ESMF and Management Plans

The PMU, on behalf of the project Implementation Partner, will be responsible for all screening, assessment and development and implementation of SES risk management plans as described in this ESMF and other relevant screening/assessment/management plans developed during project implementation. The Project will recruit an external National SES Safeguards Expert for periodic reviews and screening of critical project activities (both "downstream and "upstream") as well as periodic/annual screening. The expert is funded through budgetary allocation under GEF budget. A National Gender Expert will also be recruited for screening/assessment/management and implementation of gender-related risks and Gender Action Plan.

4.2 Roles and responsibilities for implementing this ESMF

The roles and responsibilities of project staff and associated agency or group in implementation of this ESMF is as follows. This ESMF does not cover the roles and responsibilities associated with implementation of the subsequent management plans (ESMP, Gender Analysis and Action Plan, other management plans), as those will be defined in the subsequent plans developed during the project start-up phase, as required in this ESMF.

Implementing Partner:

The Implementing Partner for this Project is the Ministry of Land Transport and Light Rail (MLTLR), Government of Mauritius. Other key project partners include the National Land Transport Authority (NLTA), Ministry of Environment, Solid Waste Management and Climate Change (MESWMCC), Ministry of Energy and Public Utilities (MEPU) and Central Electricity Board (CEB). As the main implementing partner of this project, the MLTLR will be primarily responsible for the following activities:

- Ensure that the required assessments (targeted assessments/ESIA/SESA, as above) and assessment report and the required management plan(s) (ESMP and other management plans as required) are developed, disclosed for public consultation and approved, and management measures are adopted and integrated during project implementation.

- Report, fairly and accurately, on project progress against agreed work plans in accordance with the reporting schedule and required formats.
- Maintain documentation and evidence that describes the proper and prudent use of project resources in conformity to the signed Project Document and in accordance with applicable regulations and procedures (such as UNDP SES procedures).
- Ensure all requirements of UNDP’s SES and national regulatory/policy frameworks and relevant international standards have been addressed.
- Hold responsibility and accountability to UNDP for overall management of the project, including compliance with UNDP SES.

Project Steering Committee

The Project Steering Committee would be comprised of the following key stakeholders:

Table 4: Project Steering Committee

Main Implementing Partner	Ministry of Land Transport and Light Rail (MLTLR)
Key Government Stakeholders	National Land Transport Authority (NLTA) – under MLTLR Ministry of Energy and Public Utilities (MEPU) Central Electricity Board (CEB) – under MEPU Ministry of Environment, Solid Waste Management and Climate Change (MESWMCC)
Other Key Stakeholders	Public Transport Bus Operators Commercial Banks Development Partners (AFD)

The Project Steering Committee’s will be responsible for the following activities:

- Monitor implementation of this ESMF and compliance with national and international regulations, and UNDP SES guidance and procedures.
- Decision making for the adoption of necessary measures including full integration of management measures within project outputs, outcomes, activities and annual work plans.
- Establish and support Grievance Redressal Mechanism (GRM) to address any grievances.
- Provide strategic guidance to implementation of the project including oversight for safeguards and the implementation of this ESMF.

UNDP:

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 also responsible for the Project Assurance role of the Project Steering Committee. UNDP’s role includes the following:

- 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 GEF-financed projects, 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 projects;
- 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 each project to the ESMF and UNDP policies and procedures.

Project Management Unit (PMU):

- Supervise and manage screening, assessment (targeted assessments, ESIA, SESAs), development of management plans and implementation of these measures defined in this ESMF, Prodoc and ESIA/ESMP developed during project implementation

- Assign specific responsibilities for implementation of this ESMF, including monitoring, and community consultations on the draft management plans to a staff member(s) of the PMU;
- Maintain relevant records associated with management of environmental and social risks, including updated SESPs, impact assessments, a log of grievances together with documentation of management measures implemented;
- Report to the Implementing Partner, the Project Steering Committee, 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.

As noted above, the projects' subsequent ESMP and other management plans as required, will describe the roles and responsibilities in the implementation of those plans. 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.

4.3 Capacity Building

Specialists with relevant expertise in social and environmental safeguards will be engaged to support the completion of the targeted assessments of identified risks, and the subsequent development of ESMP and any other management plans. These experts will offer an induction session for Project Management Units (and implementing partners, as needed) on safeguards responsibilities and approaches.

The UNDP-GEF Unit will provide advice to project teams as needed to support the implementation of this ESMF and the preparation, implementation and monitoring of social and environmental management plans/measures.

The Project Steering Committee will have the final responsibility for the integration of ESMP/stand-alone management plan(s) in the execution of the project. The integration of those plans 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 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.

5 Stakeholder engagement and information disclosure

Discussions with project stakeholders, including local communities at project sites, commenced during the project development phase. A list of the stakeholders engaged in these consultations has been Annexed to the Project Documents. The project also has an individual Stakeholder Engagement Plan and Gender Action Plan, which is annexed to the Project Documents. 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. Project Stakeholder Engagement Plans will be updated during project implementation based on the assessments and management plans conducted in line with this ESMF, as needed.

Potentially affected stakeholders will be engaged during the implementation of this ESMF.

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, para. 21) stipulates that, among other disclosures specified by UNDP's policies and procedures, UNDP will ensure that the following information be made available:

- Stakeholder engagement plans and summary reports of stakeholder consultations.
- Social and environmental screening reports with project documentation
- Draft social and environmental assessments, including any draft management plans.
- Final social and environmental assessments and associated management plans
- Any required social and environmental monitoring reports.

As outlined in the SES and UNDP’s Social and Environmental Screening Procedure (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 social and environmental assessment.

This ESMF (and the project SESP) will be disclosed via the UNDP Mauritius website in accordance with UNDP SES policy (latest revised SES Policy effective from 1st January 2021). The subsequent project ESMPs or stand-alone management plan(s) will also be publicly disclosed via the UNDP Mauritius website once drafted and finalized and adopted only after the required time period for disclosure has elapsed.

These requirements for stakeholder engagement and disclosure will be adhered to during the implementation of this ESMF, and the subsequent implementation of the resulting ESMPs and any other management plans.

6 Accountability and Grievance Redress Mechanisms

6.1 UNDP’s Accountability Mechanisms

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:

1. 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
2. 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.

UNDP’s Accountability Mechanism is available to all of UNDP’s project stakeholders.

The Social and Environmental Compliance Unit (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.

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/>

6.2 Project-level Grievance Redress Mechanisms

The Project will establish a project-level Grievance Redress Mechanism (GRM) during the first year of implementation. The full details of these GRMs will be agreed upon during the Inception Phase, a process that will be overseen by the Project Manager with the Project Safeguards Officer (SESO).

Interested stakeholders may raise a grievance at any time to the Project Management Unit, the Executing Agency (UNDP), Implementing Agency (MLTLR), or the GEF. Complete details of the GRM will be agreed upon during project inception.

7 Budget for ESMF Implementation

Funding for implementation of the ESMF is included in the Project budget. The estimated costs are indicated in Table 5 below. Costs associated with the time of Project Management Unit Staff coordinating the implementation of this ESMF or UNDP support are not shown.

Table 5: Breakdown of project level costs for ESMF implementation

International and national consultants (safeguards and ESIA experts, costs in addition to SESO)	\$80,000
Local consultant (gender specialist - part time)	\$25,000
Travel expenses for consultations	\$10,000
Audio-visual & print production expenses	\$1,000
Total	\$100,000

8 Monitoring and evaluation arrangements

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 ESMPs and stand-alone management plans are put in place, UNDP CO will be responsible for compiling reports on the implementation of this ESMF, for reporting to the Project Steering Committee. Key issues will be presented to the Project Steering Committee during each committee meeting.

Implementation of the subsequent ESMPs and other management plans (all projects, as required) will be the responsibility for the individual project management teams, and other partners as agreed upon and described in those future plans.

The ESMF monitoring and evaluation plan is outlined below in **Table 6**.

Table 6: ESMF M&E plan and estimated budget

Monitoring Activity & Relevant Projects	Description	Frequency / Timeframe	Expected Action	Roles and Responsibilities	Cost (per project, excl. staff time)
Track progress of ESMF implementation	Implementation of this ESMF coordinated for each project, and with results reported to each Project Steering Committee on an annual basis	Quarterly (until ESMPs and management plans are in place)	Required ESMF steps are completed in a timely manner.	Project Manager, with support from and Project M&E/Safeguards Officers	None
Development of targeted impact assessments, ESIA and report, ESMP and other management plans	Carried out in a participatory manner, in-depth analysis of potential social and environmental impacts, as well as identification / validation of mitigation measures, drafted in participatory manner (as described in Section 3.2 and 3.3)	In the 6 months following the Inception workshop	Risks and potential impacts are assessed with support of external consultants and participation of project team and stakeholders; management actions identified and incorporated into project implementation strategies.	International and national consultants (environmental and social) Project Manager, gender expert, and SESO with guidance from UNDP	\$80,000
Implementation of mitigation measures and monitoring of potential impacts identified in targeted assessment(s), ESIA and per the subsequent ESMP and other management plans	Permanent and participatory implementation and monitoring of management measures, in accordance with findings of targeted assessments.	Continuous, once targeted assessment is completed and ESMP is in place	Implementation of stand-alone management plans; participatory monitoring; integration of management plans into project implementation strategies	Project Manager, Social and Environment Safeguards, Gender experts, oversight by UNDP CO	TBD, based on targeted assessments and ESIA.
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 teams and used to inform management decisions.	Project Manager and SESO	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	At least annually	Areas of strength and weakness will be reviewed and used to inform decisions to improve project performance	UNDP CO, UNDP-GEF RTA, Project Manager and Project SESO	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 steering committee and used to make course corrections	Project Steering Committee	None

Monitoring Activity & Relevant Projects	Description	Frequency / Timeframe	Expected Action	Roles and Responsibilities	Cost (per project, excl. staff time)
Annual project implementation reports	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	Updates on progress of ESMF/ESMP will be reported in the project's annual PIRs. A summary of the avoidance and mitigation of potential social and environmental impacts will be included in the program annual report, sharing best practices and lessons learned across the program.	UNDP CO, UNDP-GEF RTA, Project Manager	None
Project review	The Project Steering Committee will consider updated analysis of risks and recommended risk mitigation measures at all meetings	At least annually	Any risks and/ or impacts that are not adequately addressed by national mechanisms or project team will be discussed in project steering committee. Recommendations will be made, discussed and agreed upon.	Project Steering Committee, UNDP-GEF RTA, Project Manager, SESO	None

9 Annexes

9.1 SESP Template

Annexed Separately

9.2 Indicative Outline of Targeted Environmental and Social Impact Assessment (ESIA)/ Report

UNDP Social and Environmental Standards:
ESIA Report – Indicative Outline

Please refer to the <https://www.undp.org/content/undp/en/home/accountability/social-and-environmental-responsibility/social-and-environmental-standards.html> for additional information.

9.3 Indicative outline of Environmental and Social Management Plan (ESMP)

UNDP Social and Environmental Standards:
ESMP – Indicative Outline

Please refer to the <https://www.undp.org/content/undp/en/home/accountability/social-and-environmental-responsibility/social-and-environmental-standards.html> for additional information.