Project title: Strengthening the national greenhouse gas inventory of the Republic of Mauritius to improve climate reporting and transparency		
Country(ies): Mauritius	**Implementing Partner (GEF Executing Entity):** Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC)	**Execution Modality***:* National Implementation Modality (NIM)
Contributing Outcome (UNDAF/CPD, RPD, GPD)*:* *UNSPF* Outcome 6: Resilience to climate change. By 2023, integrated policy frameworks and enhanced community action shall promote climate and disaster resilience and biodiversity protection, and create incentives for the transition to renewable energy UNDP CPD Outcome 2: Design and implementation of a portfolio of activities and solutions developed at national and subnational levels for sustainable management of natural resources, integration of ecosystem services approaches, sound management of chemicals and waste, while ensuring that climate change challenges in terms of adaptation and mitigation are fully addressed		
UNDP Social and Environmental Screening Category: Exempt	**UNDP Gender Marker:** GEN2	
Atlas Award ID: 00128404	**Atlas Project/Output ID:** 00122417	
UNDP-GEF PIMS ID number: 6433	**GEF Project ID number:** 10260	
LPAC meeting date: 4 Aug 2021		
Latest possible date to submit to GEF: 04 December 2020		
Latest possible CEO endorsement date: 04 April 2021		
Planned start date: 3 December 2021	**Planned end date:** 2 December 2025	
Expected date of Mid-Term Review: Not applicable	**Expected date of Terminal evaluation:** 3 September 2025	
Brief project description: The objective of the CBIT project is to assist Mauritius on improving the quality of the national GHG inventory and the data collection, storage and dissemination processes associated, thereby improving reporting and transparency and providing a firmer basis for evidence-based-policy-making. Without this project and GEF intervention, Mauritius will not be able to improve the national GHG inventory and strengthen the underlying inventory processes, which have immediate benefits for national reporting (the National Communications and		

Biennial Update Reports), for the tracking of emissions progress against the NDC targets and for future revisions to the NDC target. Further, the country will not be able to increase broader institutional engagement in GHG transparency from the private sector and from civil society, resulting in improved evidence-led policy-making and better integration of the inventory in national development policies and programmes. To achieve its objective, the project is organized around three main components: i) Improve the accuracy and localisation of the national greenhouse gas inventory, ii) strengthen the national greenhouse gas inventory process and iii) mainstream the national greenhouse gas inventory to enhance transparency and support policy-making. Altogether these three components will enhance capacities to meet the provisions stipulated in Article 13 of the Paris Agreement.	
(1) FINANCING PLAN	
GEF Trust Fund	USD 1,269,850
(1) Total Budget administered by UNDP	**USD** 1,269,850
(2) CONFIRMED CO-FINANCING) (*all other co-financing that is not cash co-financing administered by UNDP)*[1]	
Agence Francaise de Development	USD 30,000
Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC)	USD 240,000
University of Mauritius	USD 5,000
Central Electricity board	USD 100,000
Food and Agricultural Research and Extension Institute (FAREI)	USD 80,500[2]
Forestry service, Ministry of Agro-Industry and food security	USD 50,000
Mauritius Renewable Energy Agency (MARENA)	USD 75,000
Ministry of Energy and Public Utilities	USD 68,000
National and Land Transport Authority (NTL)	USD 100,000
Independent Power Producer (Omnicane)	USD 30,000
UNDP	USD 20,000
(3) Total confirmed co-financing	**USD 798,500**
(4) Grand-Total Project Financing (1)+(2)	**USD 2,068,350**
SIGNATURES	

[1] As stated by the Secretary General of the Ministry of Industry (MoI) and Ministry of Energy and Mineral Resources (MEMR) co-financing statement letter, MoI & MEMR will support the project implementation by being actively involved in the programme. The ministry will allocate the budget later.

[2] *Food and Agricultural Research and Extension Institute's co-financing letter includes contribution to related projects (NAMA, Switch Africa Green, NC4 and BUR) in the amount of USD 27,000 which is deducted from the total amount of USD 107,500.*

Signature: Mr D D Manraj, GOSK Financial Secretary, GEF OFP **Ministry of Finance, Economic Planning and Development**	**Agreed by Government Development Coordination Authority**	**Date/Month/Year:**
Signature: Ms M Nathoo Permanent Secretary **Ministry of Environment, Solid Waste Management and Climate Change**	**Agreed by Implementing Partner**	**Date/Month/Year:**
Signature: Ms Amanda K Serumaga Resident Representative **UNDP**	**Agreed by UNDP**	**Date/Month/Year:** 6 May 2022

Key GEF Project Cycle Milestones:

Project document signature: within 6 months after CEO Approval
First disbursement date: within 8 months after CEO Approval
Inception workshop date: within 60 days from the date of First Disbursement
Operational closure: within 3 months of posting of TE to UNDP ERC
Financial closure: within 6 months of operational closure

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List of acronyms and abbreviations

AFOLU	Agriculture, Forestry and Other Land Use
BUR-1	First Biennial Update Report
CBIT	Capacity-building Initiative for Transparency
CCD	Climate Change Division
CCIC	Climate Change Information Centre
CEB	Central Electricity Board
DBH	Diameter at breast height
DRR	Disaster Risk Reduction Strategic Framework and Action Plan
EEMO	Energy Efficiency Management Office
ETF	Enhanced transparency framework
FAREI	Food and Agricultural Research and Extension Institute
FNC	Fourth National Communication
FSP	Full Sized Project
GEF	Global Environment Facility
GEFSEC	Global Environment Facility Secretariat
GHG	Greenhouse gas
GIS	Geographic Information Systems
GOC	Government Online Centre (GOC)
IPCC	Intergovernmental Panel on Climate Change
IPPS	Independent Power Producers
IRIS	Indicator Reporting Information System
LRT	Light Rail Transport
LTES	Long-term Energy Strategy 2009-2025
LULUCF	Land use, land-use change, and forestry
MARENA	Mauritius Renewable Energy Agency
MCA	Mauritius Chamber of Agriculture (MCA)
MCIA	Mauritius Cane Industry Authority
MoESWMCC	Ministry of Environment, Solid Waste Management and Climate Change
MSP	Medium Sized Project
NAMA	Nationally Appropriate Mitigation Action
NCB	National Computer Board (NCB)
NDC	Nationally Determined Contribution
NDC-2	Updated Nationally Determined Contribution
OCEMs	Online Continuous Emission Monitoring Systems
PAN	Protected Area Network
PIF	Project Identification Form
PIR	GEF Project Implementation Report
POPP	Programme and Operations Policies and Procedures
PPG	Project Preparation Grant
PSC	Project Steering Committee
PSIP	Public Sector Investment Programme.

SDG	Sustainable Development Goals
SEIS	Shared Environmental Information System
SIDS	Small Island Developing States
SNC	Second National Communication
SPF	Strategic Partnership Framework
STAP	GEF Scientific Technical Advisory Panel
TNC	Third National Communication
TWGs	Technical Working Groups
UNDP-GEF	UNDP Global Environmental Finance Unit
UNFCCC	United Nations Framework Convention on Climate Change

II. DEVELOPMENT CHALLENGE

The Republic of Mauritius is a Small Island Developing State (SIDS) off the south-east coast of the African continent in the south-west Indian Ocean, approximately 900 km east of Madagascar. In 2013, the latest year for which official data are available, net greenhouse gas (GHG) emissions for Mauritius, including the Agriculture, Forestry and Other Land Use (AFOLU) sector, were estimated to be 4.8 MtCO2e – a near-doubling since 2000.

Mauritius has recently completed its Third National Communication to the UNFCCC (TNC, 2016), is currently undertaking its first Biennial Update Report (BUR-1) and plans to commence work on its Fourth National Communication (FNC) in 2020. An updated Nationally Determined Contribution (NDC-2) will be submitted in 2021. The UNEP-GEF project, 'NAMAs for low-carbon island development strategy', which is currently under implementation, intends to (i) strengthen national capability to identify, prioritise and develop mitigation actions to meet NDC targets; (ii) initiate implementation actions on renewable Energy targets; and (iii) set up an MRV framework to track and transparently report on NDC implementation for renewable energy actions. The country also has a large portfolio of GEF and GCF projects under implementation, addressing areas such as renewable energy, energy efficiency, sustainable transport and land use, land use change and forestry (LULUCF).

Under its NDC[3], Mauritius is targeting a 30% reduction in GHG emissions by 2030. Thirteen project options have been identified for adaptation and 10 for mitigation. The financial resource requirements are estimated at USD 5.5 billion, with USD 4 billion allocated for adaptation and the remaining USD 1.5 billion for mitigation activities during the period 2015-2030.

According to the latest GHG emission inventory, submitted along the Third National Communication[4], the electricity sector and the transport sector together account for two-thirds of Mauritius's greenhouse gas emissions in year 2013 (46.5% and 19.6% of national total GHG emissions without LULUCF, respectively). Both sectors are undergoing rapid, transformational, and inter-related change that will significantly alter their emissions profiles.

Electricity demand is increasing rapidly, from a 462 MW to 468 in 2018[5], and will reach more than 600 MW in 2030[6]. Average annual growth in GHG emissions from the electricity sector since 2000 has been 4.3%[4]. The Mauritian grid is emissions-intense, reliant upon coal (39%) and heavy fuel oil (38%) for most of the power generation: the grid emission factor is officially 1.01 tCO_2/MWh[7], but this is subject to uncertainty (see below). The grid is also 'greening' rapidly, with 18% renewable energy penetration today (mainly bagasse) and a target of at least 35% by 2025, as described in the electricity demand forecasts of the Renewable Energy Roadmap 2030 for the electricity sector[6]. According to this roadmap, over 100 MW of new renewable energy – mainly wind and solar – are already under development in 2019-2020 alone. Large-scale energy efficiency efforts are being directed at the manufacturing sector. These trends will interact in complex ways, changing not just the amount of fossil fuel that is used but also the diurnal and seasonal use of different sources of energy.

Meanwhile, the transport sector is also growing rapidly (at the end of 2019 there were 568,879 registered vehicles on the road, up from 556,001 in 2018 and 366,520 in 2009[8]) and is benefitting from a programme of large infrastructure investment (flyovers, road expansions, etc.). The government is considering blending bioethanol, sourced from the country's large sugar industry, with gasoline to reduce emissions. The light-rail Metro Express

[3] Nationally Determined Contribution for the Republic of Mauritius. Available at the following link

[4] Ministry of Social Security, National Solidarity, and Environment and Sustainable Development, 2017. National Greenhouse gas inventory report. Available at the following link

[5] Statistics Mauritius, 2019. Energy and Water statistics of 2018. Available at the following link

[6] Ministry of Energy and Public Utilities, 2019. Renewable Energy Roadmap 2030 for the electricity sector. Available at the following link

[7] https://cdm.unfccc.int/methodologies/standard_base/Grid_emission_Mauritius.pdf

[8] Statistics Mauritius, 2020. Road Transport and Road Traffic Accident Statistics. Available at the following link

started its commercial operations on 10 January 2020 and will transform commuting patterns from rural towns into the capital city of Port Louis. The railway will start in Curepipe and travel through Vacoas, Phoenix, Quatre Bornes, Rose-Hill, Beau Bassin to ultimately end in Port Louis. Currently, only phase 1 (13 km) is completed, serving Rose Hill, Beau Basin and Port Louis, with phase 2 (13 km) due to be completed in 2021. As Mauritius's only railway, it will displace road transport, both conventional buses and private vehicles, in yet-to-be-seen ways. As an electric system drawing power from the grid (initially 11 MW for Phase 1 of the rail system), it is one manifestation of a nascent electrification revolution in the transport sector, accompanied by a tripling – to 10,000 – of the number of hybrid (electric-petrol) cars in the past three years in Mauritius and ambitious government plans to electrify the bus fleet. One of these plans is to use electric shuttle buses as a feeder to transfer commuters to and from the metro stations, which will be implemented in a GEF-7 electric mobility project which was approved in December 2019[9].

It is vital that these fundamental changes to the two largest greenhouse gas-emitting sub-sectors are accurately captured in the national greenhouse gas inventory. Unfortunately, the current inventory suffers from some deficiencies in this respect. Table 1 summarises the inventory improvements needed for specific sectors and sub-sectors, as identified by the National Greenhouse Gas Inventory Report (2017) and the Third National Communication (2016). These include:

- Fossil fuels account for almost half of national GHG emissions, are almost all imported (thus amenable to testing), and the electricity sector of Mauritius is very concentrated with just 8 power plants utilizing fossil fuels. Nevertheless, emissions from the Energy Industries sub-sector are estimated using an IPCC Tier 1 approach. As the Inventory Report notes (page 54) states, "It would be useful for the carbon content of fuels to be tested, so that country-specific carbon emission factors could be used rather than default ones from the 2006 IPCC guidelines." Such nationally-calibrated emission factors would also have application in other sub-sectors that consume fossil fuels – notably, the Manufacturing Industry and Construction sub-sector, where fuel oil is widely used in boilers, and in the Transport sub-sector, where gasoline and diesel are used in vehicles.
- With regard to the Transport sub-sector, the National Land Transport Authority (NLTA) maintains a digital vehicle database that contains information on types of vehicles (including light-duty and heavy-duty split into fuel-types), the age of vehicles, and the use of catalyst and fuel-injection technology. However, activity data – kilometres travelled – is scant and largely derived from the country's bus fleet rather than private vehicles. Furthermore, the lack of nationally calibrated fuel emission factors (EFs) means that the current GHG inventories of Transport is necessarily restricted to a Tier 1 approach.

As Table 1 indicates, other sectors and sub-sectors would also benefit from improvements to the national greenhouse gas inventory. However, many such improvements would improve the accuracy of the inventory only marginally. Iron and Steel Production, for example, forms a prominent component of the Industrial Processes and Product Use (IPPU) sector and is currently analysed using a Tier 1 approach. But Iron and Steel Production accounts for less than 1% of national GHG emissions. Other sectors and sub-sectors represent more important GHG sources or sinks: for example, Solid Waste accounts for almost one-fifth of national emissions. Improved estimation of the GHG characteristics of these sectors/sub-sectors would have a tangible impact on the national inventory. But, as outlined below, many of these sectors/sub-sectors are already being served by other initiatives and projects and there is no need for GEF support. The two exceptions are:

- The Forestry sub-sector. Forests cover approximately 25% of the land area of Mauritius and, as the sugarcane sector contracts, forestry and agroforestry are being promoted by the government as alternative livelihood options for landowners. Carbon sequestration is currently equivalent to a substantial 8% of national GHG emissions. However, this sink estimate is subject to considerable uncertainty due to gaps in activity data (notably, relating to forest on privately held land, to which the Forestry Service has had limited access, relating to trees alongside roads and rivers, and relating to the approximately 180 ha of mangrove forest) and gaps in carbon estimation factors (such as a complete

[9] https://www.thegef.org/project/promoting-low-carbon-electric-public-bus-transport-mauritius

lack of locally calibrated allometric equations and root-to-shoot ratios). While a number of baseline projects are partially addressing the former (activity-related) barrier, none is addressing the latter (estimation factors) barrier.

- The Livestock component of the Agriculture sub-sector. Agriculture accounts for nearly 3% of national GHG emissions, one-quarter of which are attributable to livestock (enteric fermentation and manure). The livestock population is growing rapidly (4% per year) in Mauritius, driven by rising incomes (and hence demand for meat) and farmers transitioning away from the declining sugarcane sector. Data paucity is specifically identified by the National Greenhouse Gas Inventory Report (p. 94) as a key barrier to estimating Livestock GHG emissions: "Some activity data and EFs had to be estimated by using expert knowledge…It is anticipated to empower FAREI [the Food and Agricultural Research and Extension Institute] to improve collection of livestock population data and develop local emission factors to reduce the uncertainty level." Furthermore, FAREI has developed a detailed proposal to improve enteric fermentation GHG estimates that represents an immediate entry-point for GEF support.

Table 1: Improvements Required to the National Greenhouse Gas Inventory

Sector	Adopted GHG Estimation Approach	Improvements Required
% of national GHG emissions (excluding FOLU sink)	*(As noted in the National GHG Inventory and Third National Communication)*	
Energy (77%)	Tier 1 approaches were adopted for all energy sub-sectors, using IPCC default emission factors. Fugitive emissions from fuels were not estimated.	*Inventory, page 7:* "The adopted approach is the simplest Tier 1 but with country-specific net calorific values."
Energy Industries (46%)	Tier 1 approach but with country-specific net calorific values (NCVs), which were derived from the energy statistics maintained by Statistics Mauritius. Mass and volume data on fuel imports were provided by the State Trading Corporation (STC). Consumption data was obtained from CEB, IPPs and Statistics Mauritius. Default emission factors from the 2006 IPCC guidelines were used.	*Inventory, page 54:* "The activity data used for Energy Industries are quite detailed and obtained at plant level. However, this is not the case for EFs…It would be useful for the carbon content of fuels to be tested, so that country-specific carbon emission factors could be used rather than default ones from the 2006 IPCC guidelines."
Manufacturing Industry and Construction (7%)	The activity data comprised the fuel used for the Manufacturing Sector in the Energy Statistics produced by Statistics Mauritius. The split among the manufacturing sub-categories required the estimations of fuels used in boilers based on the proportions of boilers available in each of the sub-categories. Activity data for construction sector are not accounted in energy statistics published. Crude estimates are used as per Third National Communication (TNC) method developed by Consultants are still used to derive activity for construction.	*Inventory, page 55:* "The approach adopted was Tier 1 since not enough country-specific EFs were available."
Transport (19%)	Tier 1 approach used. The NLTA maintains a vehicle database containing information on types of vehicle (including light-duty and heavy-duty split into fuel-types), age of vehicle, and use of catalyst and fuel-injection technology. Fuel consumption and vehicle km travelled estimated from sample surveys of large vehicle fleet operators.	*Inventory, page 61-62:* "The lack of country-specific EFs prevented use of Tier 2 or Tier 3 for CO_2 emissions." *Inventory, page 145:* "Need for [data relating to] vehicle kilometres (surveys), vehicle emissions (tests) and country-specific emission factors."

Sector	Adopted GHG Estimation Approach	Improvements Required
Energy Other Sectors (4%)	Tier 1 approach adopted. Activity data, primarily use of LPG by households and the commercial sector, was obtained from the national energy statistics. For sub sector Agriculture/Forestry/Fishing/Fishing Farms no visibility exists concerning sub sector Fishing (mobile combustion). A proxy method developed by Consultants during TNC is still being used to capture activity data. This method uses mean fish catch per man-day to estimate fuel used. There is also the issue of pleasure craft activities carried out in the tourism sector which are not properly captured.	*Inventory, page 69:* "The activity data used for this category was sufficiently detailed…Improved development of sub-sector EFs will ensure more accuracy." A good institutional arrangement could be made with co-operation of the govt bodies, hotels, and private service providers to submit activity data.
Industrial Processes and Product Use (IPPU) (1%)	Source categories covered by the inventory are Mineral Products (primarily Metal Production – Iron & Steel) and ODS substitutes. A Tier 1 approach was used.	*Inventory, page 72:* "Although Iron & Steel Production is a key category within IPPU, its contribution to GHG emissions is only minor." "Following 2006 IPCC guidelines, since IPPU is not a key category, not much time and effort were put to use to develop higher-Tier methods for this category."
Agriculture, Forestry and Other Land Use (AFOLU)	GHG sources include enteric fermentation, manure management, agricultural soils and field burning.	*Inventory, page 86:* "It is recognised that this sector needs improvement."
Agriculture (3%)	Most agricultural activity data was obtained locally, but EFs used were Tier 1 default factors drawn from the IPCC 2006 Guidelines. The Island of Mauritius meet its growing demand for cattle meat from imports of cattle. As per IPCC Guidelines no mention is made of how to treat imported cattle in estimation of GHG emissions.	*Inventory, page 94:* "Some activity data and EFs had to be estimated by using expert knowledge…It is anticipated to empower FAREI to improve collection of livestock population data and develop local EFs to reduce the uncertainty level." Help and assistance from IPCC Experts in livestock needed.
Forestry (-8%, net sink)	Removals in the forestry sector were estimated using local activity data and default Tier 1 removal factors (gain-loss method). Above-ground biomass and the soil carbon pools were considered.	*Inventory, page 102:* "Most of the country-specific factors were not available (basic wood density, biomass expansion factors, root-to-shoot ratio, amongst others). The removal factors utilised were mostly default values." *Inventory, page 107:* "The major data gaps identified were lack of data and maps for general land cover changes and land uses for the past 10 years and lack of data on private forest lands." *TNC, page 150:* "Limited data on privately-owned forests, trees along rivers and roadsides; and on natural forests (types of trees, age distribution, annual increment)."
Waste (20%)	GHG emissions were generally calculated using local activity data (e.g., amount of waste landfilled,	*Inventory, page 121:*

Sector	Adopted GHG Estimation Approach	Improvements Required
	population connected to the sewer network) using Tier 1 emission factors	"The waste sector is reliant upon accurate and regularly updated data on solid waste composition. The activity data for liquid wastes needs to be studied with a view to develop country-specific EFs."
Solid waste (18%)	The IPCC waste model was used to estimate CH_4 emissions from the Mare Chicose sanitary landfill. A fraction of the biogas is captured and used to generate electricity, for which good data exists; the inventory quantifies the CH_4 emissions that are vented without capture and without oxidation in the cover of the landfill. Composting and waste incineration (clinical waste only) are minor emissions sources, for which default IPCC EFs are used.	*Inventory, page 127:* "Mauritius has country-specific and accurate [municipal solid waste] data." *TNC, page 150:* "Insufficient EF development for emissions from waste."
Liquid waste (1%)	Activity data were sourced from treatment plants, metered water statistics and hotel occupancy rates. Water characteristics were determined using laboratory analyses (SNC Report, 2010). Default CH_4 emission factors were used.	*Inventory, page 139:* "Data on population connected to each wastewater treatment plant is needed for calculations and can be provided by carrying out surveys in catchment areas of the unsewered network…Further waste characterisation will be carried out to have more accurate data for percentage of waste (paper, garden and others)." *TNC, page 150:* "Lack of data on emissions at treatment plants and records of population connected…Capacity building is needed on development of EFs."

In addition to data-specific issues, other barriers serve to hinder the GHG inventory process in Mauritius, and hence weaken the country's transparency and reporting obligations under the Paris Agreement.

Indeed, Article 13 of the Paris agreement establishes an Enhanced Transparency Framework (ETF) for action and support which includes new reporting provisions to its signatories. It outlines the information required of non-Annex I Parties to be submitted to the UNFCCC no less frequently than on a biennial basis in Biennial Transparency Reports (BTRs): a national inventory report (para. 7a), progress made in achieving the NDC (para. 7b), information related to climate change impacts and adaptation (para. 8) and information on technology transfer and capacity building support needed and received (para.10). ETF provisions were further detailed in the modalities, procedures, and guidelines (MPGs) of the ETF through a decision 18/CMA.1. As much as these MPGs are extensive and very detailed, Mauritius along with many other countries lack of capacity to follow them in their entirety. Being aware of this, the convention created a Paris Committee on Capacity building (PCCB), whereas the Global Environmental Facility (GEF) introduced a dedicated finance measure (Capacity-building Initiative for Transparency - CBIT), to support capacity-building of developing countries. In this context, the objective of this project is to support Mauritius to overcome the challenges resulting from the full implementation of the Paris Agreement and the enhanced transparency framework.

To date, Mauritius has relied upon a system of temporary, *ad hoc* institutional arrangements to undertake National Communications and their associated inventories, whereby ministries and other institutions have supplied staff members to technical working groups for limited periods of time. This has led to coordination challenges (over 75 such institutions were involved in the Third National Communication), as well as limited institutional memory (as it is rarely the same staff members who work on successive National Communications), a lack of systematic data archiving and a heavy reliance upon short-term consultants. As Mauritius moves towards a more demanding reporting under the ETF, there is a greater need for institutional continuity and systematic procedures, including

deeper engagement with civil society and the private sector. There is a pressing need to build internal capacities for data collection and GHG estimation to improve data supply and quality in the national greenhouse gas inventory.

There is a need to develop a sustainable solution for archiving the data collected; currently, data is fragmented across multiple computers, is not readily accessible and is difficult to reconstruct for the purposes of building time-series. The Climate Change Division (CCD) of the Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC) operates an online Climate Change Information Centre (CCIC)[10], which offers a ready-made solution to the data archiving problem. Indeed, the CCIC could straightforwardly be upgraded to become a 'climate transparency portal' that hosts both outward-facing content (reports, strategies, public datasets, etc.) and internal data (e.g., raw, and processed inventory data, GIS files, Excel models, IPCC software files, etc.).

Legal and regulatory framework for climate change

In view of its commitment to address climate change, Mauritius was among the first 15 countries to sign and ratify the Paris Agreement in New York on 22 April 2016. The government is also planning to introduce a Climate Change Act to serve as an organising framework for its broad array of existing policies, programmes and strategies relating to climate change:

Vision 2030. The government has set up a High-Powered Committee to prepare a Blueprint for Vision 2030, which will comprise action plans for immediate priorities such as sustainable development, poverty alleviation and the environment. The SDGs, including SDG 13 on Climate Action, are being integrated within Vision 2030.

Public Sector Investment Programme. The PSIP makes provisions for (among others) the purchase of critical disaster risk equipment for National Emergency Operations, the installation of a Multi-Hazard Early Warning, Emergency Alert and Advisories System, and the upgrading and construction of new drains in flood-prone areas.

National Climate Change Adaptation Policy Framework. The Framework integrates climate change into core development policies, strategies, and plans.

Disaster Risk Reduction Strategic Framework and Action Plan. The DRR Strategic Framework and Action Plan addresses, in particular the risks of inland flooding, coastal inundation, and landslides. The government enacted an associated National Disaster Risk Reduction and Management Act in July 2016.

Climate Change Charter for Local Authorities In order to mainstream climate change in the development agenda of local authorities, a Climate Change Charter for Local Authorities has been developed with the objective of initiating and upscaling actions on adaptation to the adverse impacts of climate change and on the mitigation of GHGs emissions at council and community levels.

Gender. MoESWMCC is currently reviewing its Gender Policy Statement (originally formulated in 2012), which is consistent with the operational guidelines of the National Gender Policy Framework (2008). The Statement provides a framework for mainstreaming gender in climate policies, programmes, and activities, thereby promoting women's equal participation with men as decision-makers in shaping a sustainable development society.

Relevant sector policies and plans include:

The ***Long-term Energy Strategy 2009-2025*** (LTES) is currently being updated and will cover the period up to 2030; the revised LTES will be prepared for the period 2019-2030 with a target of 35% renewable energy in the electricity

[10] http://environment.govmu.org/English/Climate_Change/Pages/CCIC.aspx

mix by 2025, to be maintained until 2030. The ***Energy Efficiency Master Plan*** has been validated and the ***Renewable Energy Master Plan*** has been finalised.

The ***Light Rail Transport (LRT) Metro Express Project*** was approved in 2016 and construction began in March 2017 on the occasion of the 25th Republic Day Anniversary in Mauritius. The project is intended to be complete by 2021, with Phase 1 between Port Louis and Rose Hill expected to be completed by September 2019 and Phase 2 – taking the line to 28km in length – between Rose Hill and Curepipe to be completed by September 2021. The Metro Express will be the only railway line in the country.

The ***Strategic Plan 2016-2020 for Food Crops, Livestock and Forestry*** focuses on promoting sustainable management of land, water, and other natural resources, and on building capacity to enable farmers to transition to 'climate-smart agriculture'. A number of strategies and action plans have been formulated to halt and reverse the trend of forest loss and degradation, including the ***National Forest Policy*** (2006), the ***National Biodiversity Strategy & Action Plan*** (2016-2020) and the ***Protected Area Network (PAN) Expansion Strategy***.

Institutional framework for climate action

The National Environment Commission, chaired by the Prime Minister and consisting of relevant line Ministers, is responsible for setting national environmental objectives and targets, and for ensuring coordination between ministries, parastatals and local authorities engaged in environmental programmes. The Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC) serves as the UNFCCC Focal Point. It coordinates Mauritius's actions on climate change, including the NDC, through its Climate Change Division (CCD). CCD contains nine (9) staff members, consisting of seven Environment Officers, one Divisional Environment Officer and one person attached to the CCD under the Service to Mauritius Scheme. All the staff of the CCD work on transparency issues as the latter encompasses mitigation, adaptation, and monitoring, reporting and verification actions. Regarding matters pertaining to financial issues, the inputs of the Finance Section of the Ministry are also sought. More specifically, for the CBIT project, two officers of the CCD will be assigned to the project.

A Project Steering Committee (PSC), under the chair of the Permanent Secretary of MoESWMCC, was set up to provide guidance and facilitate political and stakeholder acceptance of the outcomes of the Third National Communication (TNC, 2016). A Project Technical Committee under the chair of the Director of Environment was set up to provide operational leadership to the TNC process and to deal principally with technical aspects of the TNC. Five Technical Working Groups (TWGs) were established to oversee the implementation of climate change activities in key areas, namely: the GHG inventory; mitigation assessment and environmentally-sound technologies; adaptation; education, training, and public awareness; and research and systematic observation. Four additional Working Groups were established to focus on: national circumstances and the integration of climate change considerations into sustainable development plans; knowledge, information sharing and networking; capacity building; constraints and gaps; and related financial, technical, and capacity needs. A total of 75 institutions were involved in the TNC process.

For the national GHG inventory, six Sub-TWGs were constituted, consisting largely of Ministries' and Departments' staff, as well as personnel from parastatals (such as the Central Electricity Board, CEB) and the private sector. These Sub-TWGs were: Energy Industries, Transport, Energy Other Sector, IPPU, AFOLU and Waste. Over 50 institutions were involved in collecting and processing inventory data. Notable participants included Statistics Mauritius, the Ministry of Energy and Public Utilities, the National Land Transport Authority, the Ministry of Industry, Commerce and Consumer Protection (Industry Division), the Mauritius Cane Industry Authority, the Forestry Service, the Food Agricultural Research and Extension Institute, the Solid Waste Management Division, the Wastewater Management Authority, and others. The Climate Change Division (CCD) was responsible for coordinating data collection. Input of data into the 2006 IPCC inventory software was undertaken by consultants and some Team Leaders. Data processing – i.e., converting data into the form required for the IPCC software – was a laborious process that varied from sector to sector according to data availability and individual institutional capacities.

Baseline barriers to enhanced GHG emissions transparency

Figure 1 presents the baseline scenario problem tree. As outlined above, the national GHG inventory confronts four main barriers in view of meeting the requirements of the ETF and its MPGs: insufficient data (activity and/or emission factors) in Key Category sectors; a high-burden, *ad hoc* and not fully inclusive process by which the inventory is periodically updated; limited institutional capacities to process data in order to generate accurate GHG estimates; and absence of an adequate archiving system.

Capacities vary widely between institutions, with the result that data quantity, data quality and the degree of data processing also vary widely. In many cases, sectoral/sub-sectoral data submissions to the Climate Change Division (the entity responsible for coordinating the national GHG inventory process) are incomplete, in the wrong format or 'raw', requiring considerable follow-up work by CCD prior to entering the data into the inventory.

The result is an increasingly stressed MRV system that is struggling, and will continue to struggle, in the face of the new requirements set out in the ETF and its MPGs, notably the need to track NDC progress and more demanding reporting provisions related to the national GHG emission inventory.

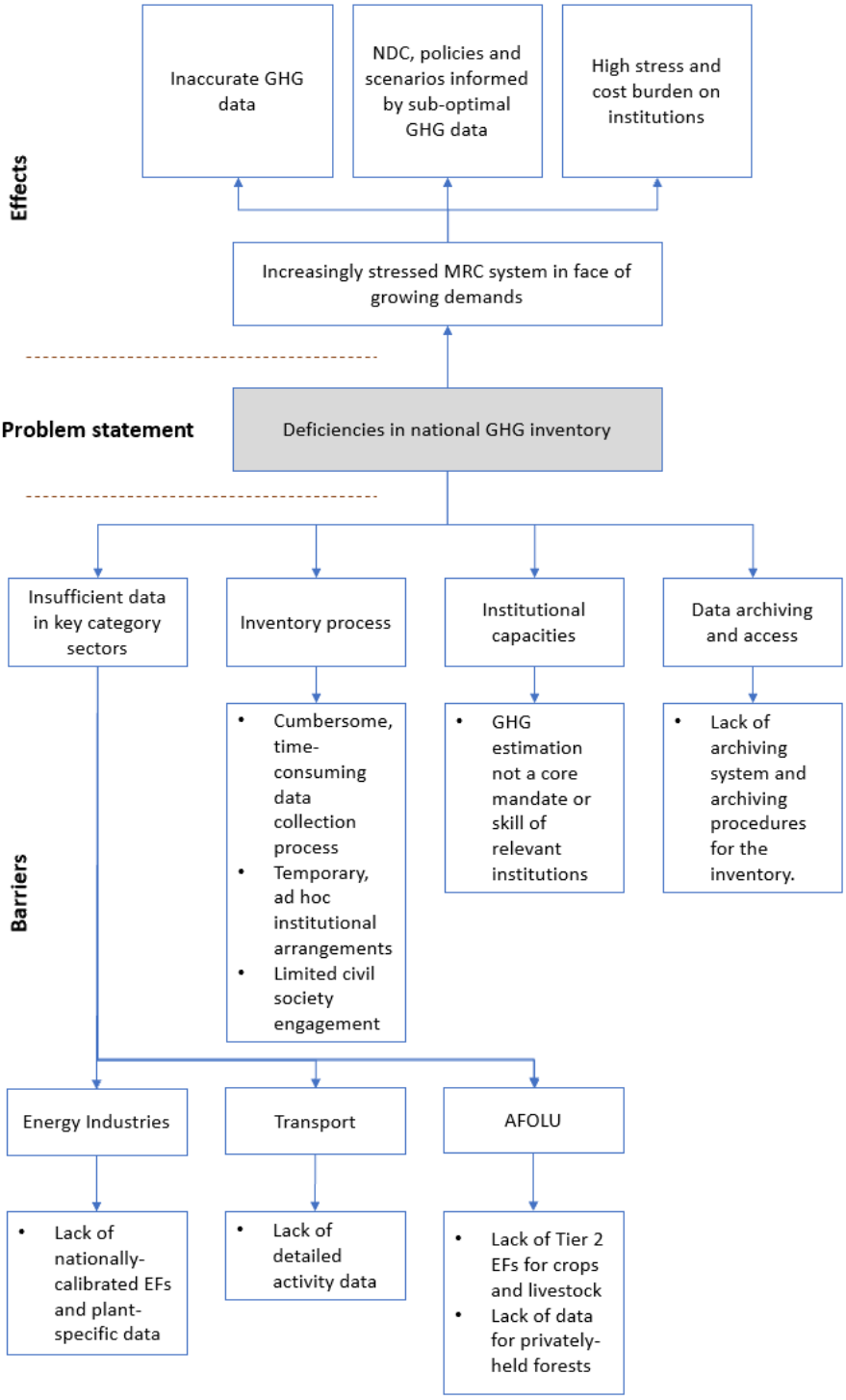


Figure 1: Problem Tree

Consistency with National Priorities

National Communication (NC) under UNFCCC: The project responds to, and is supportive, of the National Communication process. The project design directly responds to inventory deficiencies identified in the Third National Communication and the latest National Greenhouse Gas Inventory Report. For example, the Inventory Report states (p.141): "It is recommended that, during the development of future BURs and NCs, the methodology is improved further, taking into account the development of national emissions factors in key sectors for GHG emissions and use of data from emissions monitoring systems. In addition, the development of a sustainable national inventory system, involving key organisations, in the regular update and improvement of the GHG inventory, should be established."

Biennial Update Report (BUR) under UNFCCC: The first BUR is currently under development. The improvements to the national GHG inventory supported by the GEF project will benefit future BURs.

Nationally Determined Contribution (NDC) under the Paris Agreement: The improvements to GHG accounting brought about by the GEF project will enable more accurate tracking of national and sectoral GHG emissions and will, therefore, facilitate comparisons between actual emissions and emission targets, thereby enabling corrective policy actions to be adopted as and when necessary.

National Climate Change Adaptation Policy Framework (2012): The key objectives of this framework are to foster the development of policies, strategies, plans and processes to avoid, minimise and adapt to the negative impacts of climate change on the key sectors and to avoid or reduce damage to human settlements and infrastructure and loss of lives caused by climate change. Besides, the framework aims to integrate and mainstream climate change into core development policies, strategies and plans of Mauritius. Even though the CBIT project is focused on mitigation, the activities of the CBIT project are in line with this policy framework; the improvements in the CCIC that will be carried out in the CBIT project will contribute to achieve its objectives.

Technology Needs Assessment (TNA) under UNFCCC: The TNA (2012) identifies one priority mitigation sector (Energy Industries) and three priority adaptation sectors (Water, Agriculture and Coastal Zone). The GEF project directly supports two of these (Energy Industries – locally-calibrated emission factors, and Agriculture – livestock emission factor).

National Capacity Self-Assessment (NCSA) under UNCBD, UNFCCC, UNCCD: The NCSA (2005) identified priority issues that are addressed by the GEF project. These include:

- Biodiversity: incomplete forest inventory.
- Climate change: use of renewable energy and energy efficiency; and the need for improved data management in the transport sector.
- Land degradation: clearing/conversion of forest on privately held land; and an unsustainable livestock production system.

III. STRATEGY

The objective of the CBIT project is to assist Mauritius on improving the quality of the national GHG inventory and the data collection, storage and dissemination processes associated with the inventory, thereby improving reporting and transparency, and providing a firmer basis for evidence-based-policy-making.

The objective of the project is aligned with Pillar 2 *Climate Change and Sustainable Development* of the UNDP Country programme document for Mauritius (2017-2020) and outcome 6 *Resilience to Climate Change* of the United Nations Strategic Partnership Framework (2019-2023): A Partnership for Sustainable Development. Regarding the outcome 6 of the Strategic Partnership Framework, by 2023, integrated policy frameworks and enhanced community action shall promote climate and disaster resilience and biodiversity protection and create incentives for the transition to renewable energy.

The project is fully aligned to the Programming Directions for the CBIT (Dated May 18, 2016). Specifically, as per paragraph 85 of the COP decisions adopting the Paris Agreement, it will contribute to:

a) strengthening national institutions for transparency-related activities in line with national priorities.

The CBIT project includes numerous capacity building activities for national institutions on the main climate change transparency areas. The capacity of the institutions will be significantly strengthened and ready for meeting the transparency provisions of the Paris Agreement. The following is the list of capacity building activities defined in the CBIT:

- Within output 1.1: Capacity building activities to enhance technical knowledge on 2006 IPCC methodologies, including sectoral and reference approaches, estimating uncertainty, and developing and using energy balances.
- Within output 1.2: the capacity building will cover 2006 IPCC guidelines, assessment of the impact of climate change policies and measures and information requirements under the enhanced transparency framework.
- Within output 1.3: Training for stakeholder for identifying and estimating the mitigation impact of transport mitigation actions in line with the enhanced transparency framework requirements.
- Within outputs 1.4-1.6: capacity building on the use of 2006 IPCC methodologies in the AFOLU sector, complementary to the activities carried out under UNDP-GEF SLM project (see Table 2).
- Output 3.1. is entirely dedicated to capacity bulging on the use the Excel template-based model for data collection, processing, and submission.

b) providing relevant tools, training, and assistance for meeting the provisions stipulated in Article 13 of the Agreement.

The CBIT project addresses the development of an IT-based system to simplify and streamline the inventory data collection process; this IT system is essential to allow a more regular and demanding inventory preparation, as defined in article 13 of the Paris Agreement.

The CBIT project will also lay the foundations for a sustainable institutional architecture for a national climate change MRV system (output 2.1), which would include all components needed by the enhanced transparency framework: national GHG emission inventory, mitigation, and support. These three components together will enable Mauritius to track progress of its NDC compared to its observed emissions (i.e., national GHG emissions inventory), prospective emissions (mitigation) and support needed to implement climate action (support). Furthermore, this MRV architecture will allow the regular elaboration of national reports, including the future Biennial Transparency Report (BTR).

Furthermore, the CBIT project will extensively provide capacity training in GHG emissions inventory and mitigation, two of the main components of the enhanced transparency framework (see previous bullet) established in article 13 of the Paris agreement.

c) assisting the improvement of transparency over time.

The main objective of the project is to facilitate the collection and generation of information following international best practices and IPCC Guidelines for ensuring the sustainable preparation of national reports, thus enhancing the transparency of the climate change efforts of the country.

Because the implementation of the SDGs should be conducted at the national level, and national reports under the international climate regime can be a valuable source of information for the implementation of SDG accompanying targets, UNDP will support the Government of Mauritius in progressing regarding SDG within this project, particularly regarding SDG 13 (Sustainable Development).

The rationale of the project

The CBIT project will assist Mauritius to improve the quality of the national GHG inventory and the data collection, storage and dissemination processes associated with the inventory, thereby improving reporting and transparency, and providing a firmer basis for evidence-based policymaking. Unfortunately, the current inventory suffers from deficiencies and hence weaken the country's transparency and reporting obligations under the Paris Agreement. Data quantity, data quality and the degree of data processing varies widely, with sectoral and sub-sectoral data submissions to the Climate Change Division (the entity responsible for coordinating the national GHG inventory process) being incomplete.

Without this project and GEF intervention, Mauritius will not be able to improve the national GHG inventory and strengthen the underlying inventory processes, which has immediate benefits for national reporting (the National Communications and Biennial Update Reports), for the tracking of emissions progress against the NDC targets and for future revisions to the NDC target. Further, the country will not be able to increase broader institutional engagement in GHG transparency from the private sector and from civil society, resulting in improved evidence-led policy-making and better integration of the inventory in national development policies and programmes. Failure to improve the national GHG inventory in Mauritius would result in the continuant reliance of the country on ad-hoc institutional arrangements to undertake the National Communications and associated inventories, whereby ministries and institutions have supplied staff members to technical working groups for limited periods of time, leading to coordination challenges, limited institutional memory, and lack of systematic data archiving and heavy reliance upon short-term consultants.

Thus, the project provides an alternative approach that is structured around three main components, which have related outcomes and a number of outputs designed to achieve the objective of the project. Altogether these three components will enhance capacities to meet the provisions stipulated in Article 13 of the Paris Agreement. The three components in which the project is structured are the following:

- Improving the accuracy and localisation of the national greenhouse gas inventory;
- Strengthening the national greenhouse gas inventory process;
- Mainstreaming the national greenhouse gas inventory to enhance transparency and support policy-making.

All three components of the project are focused at supporting national mitigation efforts through an enhanced understanding of GHG emissions, as well as identification of potential emerging shortfalls in mitigation efforts relative to the NDC targets. Components will contribute to improved accuracy of GHG emissions data, which can inform the periodic Global Stocktake of collective progress towards climate goals.

The CBIT proposal has been designed to address the short and long-term capacity building needs as Mauritius is moving towards more frequent reporting in the form of BURs and the NCs, which includes strengthening the institutional continuity and systematic procedures. Capacity building will be done at institutional, individual and policy (systemic) levels. This will ensure creation of a robust, transparent, and sustainable system to be put in place, which will facilitate the management of data and information on climate change mitigation and adaptation and utilized to track progress towards achievement of Mauritius's nationally determined contributions. In the absence of GEF support, Mauritius will continue to rely on fragmented data across multiple computers, which is not readily accessible, is difficult to reconstruct for the purpose of building time-series and requires considerable follow-up work by the CCD prior to entering the data into the inventory. This results in an increasingly stressed MRV system that is struggling and will continue to struggle. However, the alternative will provide an enabling environment for sustainable archiving data solutions, increasing internal capacities for data collection and quality in the national greenhouse gas inventory.

The following figure illustrates the strategy and the theory of change of the project.

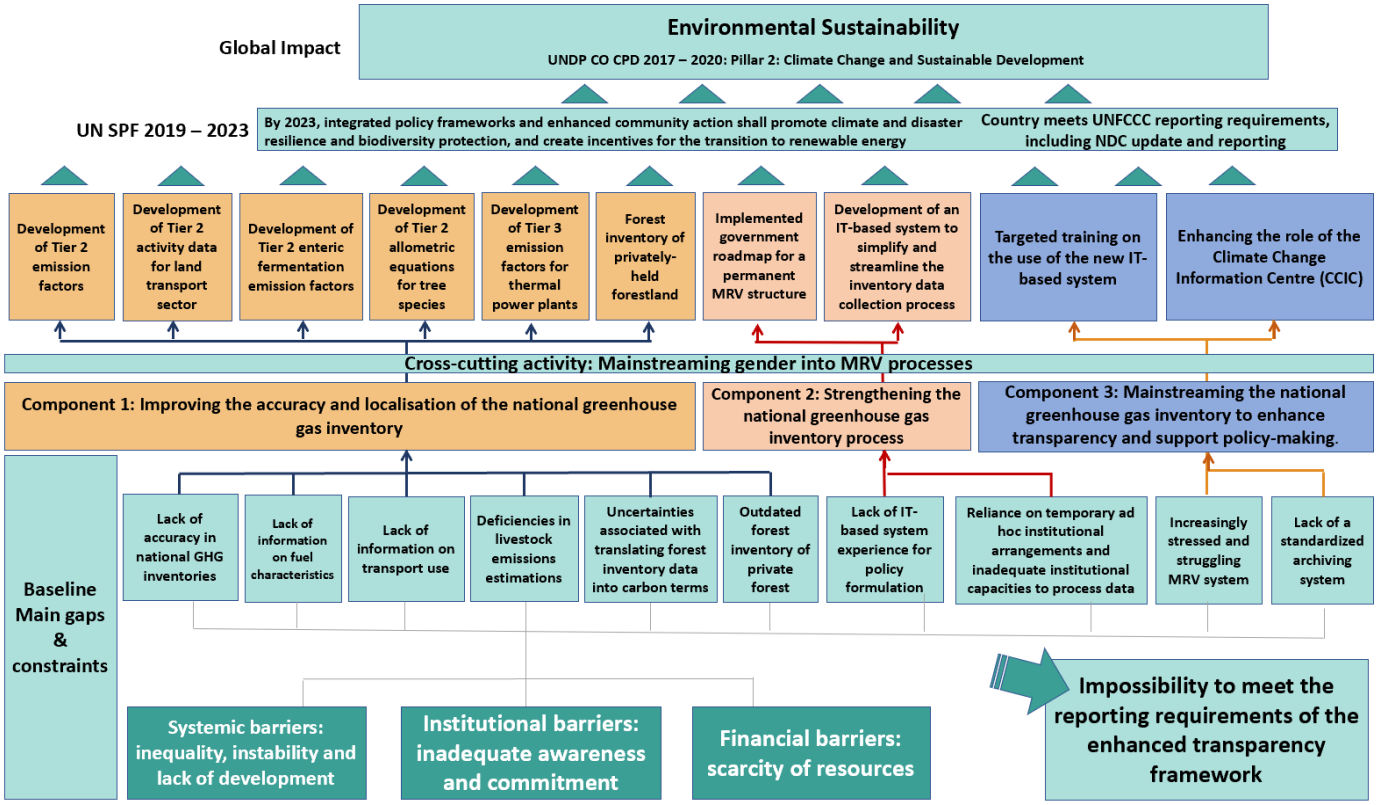


Figure 2. Illustration on the theory of change of the project.

As illustrated in the previous figure, the main constraints, and gaps of Mauritius for the implementation of a national system to meet the requirements of the enhanced transparency framework will be addressed by CBIT outcomes.

The following table details the main constraints and gaps addressed by the CBIT project, the implications for meeting the requirements of the Enhanced Transparency Framework (ETF) and the Modalities, Procedures and Guidelines (MPGs - annex to decision 18/CMA.1) and how the CBIT project address each of the gaps.

Table 2: Results of the CBIT project

Main Constraints and gaps addressed by the CBIT project	Implications for meeting the requirements of the Enhanced Transparency Framework (ETF) and the Modalities, Procedures and Guidelines (MPGs - annex to decision 18/CMA.1).	How is the gap addressed in the CBIT project	End of the project situation
Insufficient data (activity and/or emission factors) in Key Category sectors	The Party is not using advanced tier methods (tier 2/tier3) for its key categories, as required by the decision trees of IPCC 2006 Guidelines (decision trees are available in all sectoral chapter of IPCC 2006 Guidelines). In this line, the MPGs require developing Parties to move to higher tiers when possible - *Each Party should make every effort to use a recommended method (tier level) for key categories* (Chapter 1, section C, paragraph 21 of the MPGs); *Each Party is encouraged to use country-specific and regional emission factors and activity data, where available, or to propose plans to develop them* (Chapter 1, section C, paragraph 24 of the MPGs). The use of tier 1 methods in Key Categories also affects the reporting of the Party related to tracking progress in implementing and achieving its NDC (Chapter 2, section C, paragraphs 64-78 of the MPGs). The GHG emissions currently estimated by the inventory do not reflect the current GHG emission profile of the country, as they are estimated with default emission factors and basic accounting methods. Thence, the impact of policies and measures implemented will not reflect the actual impact of actions, affecting the tracking of the NDC. This issue will affect the reporting on the progress regarding the achievement of NDC and future revisions of the NDC.	The CBIT project will provide support to the country for estimating tier 2/tier 3 methods in the main key categories of the country (component 1 of the CBIT), improving the overall quality of the national inventory, and enhancing the alignment with 2006 IPCC Guidelines. The improvement of the methods will facilitate tracking progress of the NDC, allowing the emissions of the inventory to reflect the current characteristics of the processes and emitting activities carried out in the country and its evolution. In the future, this will also involve the possibility to improve the identification of nationally appropriate mitigation actions to reduce GHG emissions according to the current GHG emission profile of the country.	Mauritius will estimate its national GHG emission inventory using advanced tier methods for the main key categories, related to fuel combustion activities (category 1A Fuel Combustion of the inventory) and agriculture, forestry, and other land use (Sector 3. AFOLU). Mauritius will meet the information provisions of the MPG related to the use of higher tiers for key categories. This will be included in the first BTR of the country. Furthermore, Mauritius will significantly improve the tracking of progress towards the achievement of its NDC, as the national GHG emission inventory (the reference for the NDC) will reflect the real emissions of the country. With its enhanced inventory, Mauritius will be able to estimate the GHG emission reduction impact of policies and measures compared to the real emission profile of the country, allowing to design nationally appropriate mitigation actions that will bring cost-efficient emission reductions to the country.
A high-burden, ad hoc and not fully inclusive process	Currently the preparation of National Communication and associated inventories had relied on ad hoc institutional arrangements, whereby ministries and	The CBIT project will propose a climate change MRV system and a roadmap for its implementation (output 2.1) building from the existing system	Mauritius will have a proposal of MRV system and a roadmap for its implementation based on the legal

Main Constraints and gaps addressed by the CBIT project	Implications for meeting the requirements of the Enhanced Transparency Framework (ETF) and the Modalities, Procedures and Guidelines (MPGs - annex to decision 18/CMA.1).	How is the gap addressed in the CBIT project	End of the project situation
by which the inventory is periodically updated	other institutions have supplied staff members to technical working groups for limited periods of time. The preparation of reports relied on external consultants, which supported the data collection process and the compilation of the inventory in the IPCC software. The data processing and its population into the software was mainly done by consultants in a laborious process, as the different institutions did not provide the data in the format by the software. The current process (ad hoc institutional arrangements and manual data processing) will not allow the country to meet the more demanding requirements of the ETF and MPGs, specifically related to the latest reporting year and the NDC tracking. The provisions of the ETF will require reporting on numerous elements already covered in the previous national inventory report submitted by Mauritius to the UNFCCC along the Third NC (in terms of methods, metrics, and reporting provisions). However, the ETF require to inform on new elements, as the tracking of the NDC (Chapter 2, section C, paragraphs 64-78 of the MPGs) and to include a latest inventory year as two years prior to submission (Chapter 1, section C, paragraph 58 of the MPGs) – three years considering the flexibility provisions – compared to current time lapse of four years in BURs. These enhanced requirements demand a more efficient process of data collection and inventory compilation, which with the current arrangements and data collection process could not be met.	In place for the development of NCs and BURs, considering the complementarities with the NDC-2 and UNEP-GEF NAMAs projects. Additionally, the CBIT project will develop sectoral templates to make the data collection – input to the IPCC software process less time consuming and more sustainable. These templates will necessarily need to adapt to the formats of the IPCC software. The CBIT project will propose a template by IPCC sector, so the institutions can provide the data in the required format without the additional need to process the data for its input into the IPCC software.	competencies of each institution involved. The MRV will define roles and responsibilities by institution and will propose a way to formalise the coordination between stakeholders (Memorandum of Understandings or other national appropriate mechanisms). As a result of the this, the working groups will count with more permanent staff and the sustainability of the inventory preparation process will be ensured. The inventory preparation process will be simplified and automatized with the use of Excel template-based model (developed under output 2.2.). This will allow the country to significantly reduce the time needed to develop annual estimates of GHG emission inventories, being able to meet the MPGs reporting requirements related to the latest reporting year. In cooperation with NC/BUR/BTR project teams, the outcome of this project aims to enhance the capacities to reduce the current time lapse of four years to three years while continue reporting time series starting in year 2000 in line with national circumstances. A capacity building program and a step-by-step manual for the use of the Excel template-based model will be developed to allow its use by current and future government staff (developed under output 3.1).

Main Constraints and gaps addressed by the CBIT project	Implications for meeting the requirements of the Enhanced Transparency Framework (ETF) and the Modalities, Procedures and Guidelines (MPGs - annex to decision 18/CMA.1).	How is the gap addressed in the CBIT project	End of the project situation
Limited institutional capacities to process data in order to generate accurate GHG estimates	In Mauritius there is a heavy reliance upon short-term consultants for developing national report such as national communications, BURs and national GHG emission inventories. As a result of this, the capacity of the institutions to process the data and develop the national reports for the different ETF & MPGs components remains limited. Without the GEF support, the capacity of the government staff will remain reduced.	The CBIT project includes numerous capacity building activities for national institutions on the main climate change transparency areas. The following is the list of capacity building activities defined in the CBIT: Within output 1.1: Capacity building activities to enhance technical knowledge on 2006 IPCC methodologies, including sectoral and reference approaches, estimating uncertainty, and developing and using energy balances. Within output 1.2: the capacity building will cover 2006 IPCC guidelines, assessment of the impact of climate change policies and measures and information requirements under the enhanced transparency framework. Within output 1.3: Training for stakeholder for identifying and estimating the mitigation impact of transport mitigation actions in line with the enhanced transparency framework requirements. Within outputs 1.4-1.6: capacity building on the use of 2006 IPCC methodologies in the AFOLU sector, complementary to the activities carried out under UNDP-GEF SLM project (see Table 2). Output 3.1. is entirely dedicated to capacity bulging on the use the Excel template-based model for data collection, processing, and submission.	The capacity of the institutions will be significantly strengthened and ready for meeting the transparency provisions of the Paris Agreement. The institutions will be able to use the Excel template-based model developed under output 2.2. The expertise of institutions on 2006 IPCC methodologies will be enhanced. The institutions will understand how to use the inventory for assessing the impact of climate change policies and measures.
Absence of an adequate archiving system	Currently, data is fragmented across multiple computers, is not readily accessible and is difficult to reconstruct for the purposes of building time-series. There is a need to develop a sustainable solution for archiving the data collected. With the current system, the country will face difficulties in the future to meet the consistency requirements of the MPGs, specifically: *each Party should use the same methods and a consistent approach to underlying activity data and emission factors for each reported year* (Chapter 1, section C, paragraph 26 of the MPGs); *Each Party shall perform recalculations in accordance with the IPCC guidelines, ensuring that changes in emission trends are not introduced as a result of changes in methods or assumptions across the time series*	The CBIT project will work with the IT stakeholders of the country (the CCD, the Central Informatics Bureau, the Government Online Centre (GOC) and the Central Information Systems Division), to upgrade the CICC, specifically: defining the transfer of information method; defining the server for the CCIC; establishing the dissemination format of the platform. In addition to the upgrades to be made, a roadmap for future improvements will be developed to further enhance the role of the system in the future.	The CCIC will be established as a digital archive for systematic, centralised storage of inventory-related data, using the data provided by the different institutions in the IT format developed under output 2.2. Furthermore, the CBIT project will define a roadmap for further improving the role of the CCIC as a transparency portal.

Main Constraints and gaps addressed by the CBIT project	Implications for meeting the requirements of the Enhanced Transparency Framework (ETF) and the Modalities, Procedures and Guidelines (MPGs - annex to decision 18/CMA.1).	How is the gap addressed in the CBIT project	End of the project situation
	(Chapter 1, section C, paragraph 28 of the MPGs). The Climate Change Division of the MoESWMCC operates an online Climate Change Information Centre (CCIC), which offers a ready-made solution to the data archiving problem. However, as it stands now, the CCIC cannot be used as a transparency portal, as the storage system, the way for the transfer of information, and the procedures for disseminating information are not established for this purpose.		

Country Ownership

The Government of Mauritius and the various national stakeholders are strongly committed with climate change and the need to increase energy self-sufficiency and reduce greenhouse gas emissions. It was among the first 15 countries to sign and ratify the Paris Agreement in New York on 22 April 2016 and is a signatory to other main international environment agreements such as the Sendai Framework for Disaster Risk Reduction, and the Quito Declaration on Sustainable Cities and Human Settlements. This commitment has also been outlined by the country's intended nationally contributions (NDCs) in 2015, the Second National Communication (SNC) to the United Nations Framework Convention on Climate Change (UNFCCC) in 2010, the UNFCCC technology needs assessment in 2014, as well as the numerous government strategies in the long-term energy strategy for 2009-2025.

Another important development displaying Mauritius's commitment is the government preparation of "Vision 2030", which aims to transform the country into a high-income country by 2030 while supporting the 2030 Agenda for Sustainable Development and the Small Island Developing States (SIDS) Accelerated Modalities of Action (SAMOA) Pathway. Mauritius's country programme focusses on inclusive and sustainable development and climate change, with interventions designed to support the achievement of sustainable development goals 12-15 [11]. In line with this commitment, national stakeholders have shown a high-level engagement with the project, with a high participation in the PPG preparation (further information on the involvement of stakeholders during the PPG preparation is provided in annex 7 Stakeholder Engagement Plan).

In the Strategic Partnership Framework (SPF) for the period 2019-2023, the Government of Mauritius and the United Nations have outlined their cooperation and describe how this cooperation will contribute to the National Vision, the country strategic priorities and the Sustainable Development Goals (SDG) of Mauritius. To reach the SPF outcomes, a set of principles have been employed which are: Inclusion and equity to 'leave no one behind, Human rights, gender equality and the empowerment of women, Sustainability and resilience, and Accountability, including the availability and use of quality data. All these principles enforce the following approaches:

- Results-focused programming: based upon a high-quality results framework with indicators.
- Capacity enhancement and knowledge exchange based on sound capacity assessments and innovative measures to strengthen skills and abilities for positive economic, social, and environmental change.
- Risk-informed programming to adapt to changes in the programme environment and to make informed decisions.
- Coherent policy support to address complex multi-sector challenges with greater coordination for effective planning, budgeting, service delivery, and monitoring.
- Partnership to sustain the mutual commitment of the Government and the UN system agencies to the partnership outcomes, in close collaboration with civil society, the private sector, local and international NGOs and regional development institutions[12].

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[11] United Nations Development Programme, Country programme document for Mauritius (2017-2020) (2016)
[12] United Nations, Government of Mauritius & United Nations Strategic Partnership Framework 2019-2023 (2019)

IV. RESULTS AND PARTNERSHIPS

Expected results

The objective of the project is to assist the Republic of Mauritius in strengthening its national greenhouse gas inventory and associated data collection process, and to mainstream greater use of the inventory in policy formulation and NDC tracking.

The Improved quantification and reporting of greenhouse gas emissions have clear and immediate benefits in the form of:

- improved tracking of emissions progress against the NDC target;
- an improved basis for future revisions to the NDC target;
- improved international reporting (the National Communication and Biennial Update Reports);
- identification of GHG mitigation opportunities (and potentially greater ease of attracting international support for addressing such mitigation opportunities);
- and improved evidence-led policy-making.

The baseline scenario for Mauritius is characterised by a number of barriers that require GEF assistance to address. Without GEF intervention, these barriers will continue to prevail, thereby preventing Mauritius from accessing the benefits listed above. The GEF to project builds on a solid baseline of past National Communications and national GHG inventories, as well as a rich ecosystem of baseline projects (see Table 2), in order advance transparency and address the identified barriers. The co-finance mobilised by the project represents a large amount for a project that is, at root, a rather technical intervention focused on a public good (the national GHG inventory). Furthermore, the range of institutions engaged in the project (at least 11 co-financing institutions are anticipated) is extremely high given the fact that the project is an MSP requesting USD 1.3 million of GEF support.

Component 1: Improving the accuracy and localisation of the national greenhouse gas inventory

Output 1.1 Development of Tier 2 emission factors for key fuels: coal, heavy fuel oil, gasoline, diesel, kerosene and liquified petroleum gas – for application in Energy Industries, Transport, Manufacturing Industry and Construction, and Energy Other Sectors

Lead Entities: Central Electricity Board in collaboration with Ministry of Environment, Solid Waste Management and Climate Change, the University of Mauritius, Business Mauritius, Ministry of Industrial Development, SMEs and Cooperatives and the Energy Efficiency Management Office.

This output will result in the development of Tier 2 emission factors for the 2006 IPCC category 1A *Fuel Combustion Activities*, enhancing the accuracy of the GHG emission inventory and facilitating the assessment of impact of mitigation policies in the energy sector. This output will also result in improved capacity on 2006 IPCC methodologies in the relevant institutions of the country.

Mauritius consumes 8 different fossil fuels in different sectors according to the national GHG emission inventory. Energy consumption by fuel type is the activity data used in the inventory of Mauritius for the IPCC category 1A *Fuel combustion Activities*, which encompasses the sub-categories 1A1 Energy Industries, 1A2 Manufacturing Industries and construction, 1A3 Transport and 1A4 Other sectors (which includes the commercial, institutional and residential sectors as well as the fuel combustion in agriculture, forestry, fishing, and fish farms). All the fossil fuels consumed in Mauritius are imported and hence easily accounted for and testable. Working with the University of Mauritius, which has already undertaken some preliminary analysis of the coal emissions, the GEF project will support the process of elaboration of Tier 2 CO_2 emission factors for these fuels. This will serve to improve the accuracy of the

national GHG inventory across multiple sub-sectors that, together, account for almost 80% of national emissions. The activities and results of this output will complement the improvements to activity-related data in the Transport sub-sector that will be supported under Output 1.3. Furthermore, it will also actively support mitigation measures being undertaken by other initiatives. For example, a national energy efficiency MRV system will be established under the UNDP-GEF project, 'Realising energy savings and climate benefits of implementing mandatory energy auditing in the Republic of Mauritius', which will monitor energy consumption (and energy savings) in industrial and manufacturing processes such as steam production. The availability of Tier 2 emission factors for fuel oil and LPG will facilitate more accurate estimates of GHG emissions (and GHG mitigation) from these processes.

Proposed Activities:

- Developing a methodological approach for the development of Tier 2 emission factors, including the definition of the scope, survey design, definition of laboratory testing required, and all methodological steps needed to derive national specific emission factors for the inventory. The process shall ensure the emission factor is in line with 2006 IPCC methodologies and good practices. The specific activities to be carried out in this output will be defined in the methodological approach, ensuring that the expected outputs are achieved, and could include, among others, the following tasks:

    - Collecting the necessary samples with the collaboration of the energy stakeholders of the country.
    - In line with the methodological approach, undertaking laboratory analysis in the premises of the University of Mauritius. The fuel characteristics of the sample and the combustion emissions under controlled circumstances need to be fully documented, allowing to derive national specific emission factors in line with the selected methodology.
    - Processing the information generated for deriving national-specific combustion emission factors.
    - Compare the results obtained with other national-specific emission factors and default values provided by 2006 IPCC Guidelines.
    - Prepare a report documenting the entire process followed for developing the national specific emission factors.
    - Capacity building to energy stakeholders on 2006 IPCC methodologies, including sectoral and reference approaches, estimating uncertainty, and developing and using energy balances. The capacity building exercise shall also address the development of advanced Tier approaches, so the stakeholders can replicate the same approach in other inventory categories in the future. The type of capacity building activities can include workshops, webinars, or recorded tutorials. The capacity building exercise will be documented in a manual to make sure the capacity building exercise is used beyond project implementation. The capacity building will include a dedicated session for gender mainstreaming in mitigation actions, and will foster the active participation of women, in line with the gender action plan described in Annex 8.

Output 1.2 Development of Tier 3 emission factors for Mauritius's 8 thermal power plants and a real-time grid emission factor – for application in Energy Industries and (increasingly) Transport

Lead entities: Ministry of Energy and Public utilities in collaboration with Ministry of Environment, Solid Waste Management and Climate Change, Mauritius Renewable Energy Agency (MARENA), the Central Electricity Board, the Air Pollution Monitoring Unit of the Mauritius Cane Industry Authority, the Energy Efficiency Management Office, Business Mauritius, Independent Power Producers including Alteo Ltd, Terragen Ltd and Omnicane, and the University of Mauritius. See Table A7.1. Project Stakeholders for further information on the involvement of each stakeholder by output.

This output will result in the development of Tier 3 emission factors for electricity generation (emission source 1A1a *Electricity Generation* within the national GHG emissions inventory), further enhancing the accuracy of the national GHG emissions inventory. The output will also result in the obtainment of a real-time grid emission factor, which is needed for estimating the impact of mitigation action and mitigation options. These two elements (Tier 3 emission

factor for electricity production and the real time grid emission factor) will be essential for developing accurate cost-benefit analysis of possible mitigation alternatives in the energy system in Mauritius. This output will also result in improved capacity on 2006 IPCC methodologies in the relevant institutions of the country.

The 8 thermal power plants in Mauritius – which use coal, heavy fuel oil, biomass, and kerosene– account for 85% of the country's installed power capacity.[13] The Central Electricity Board (CEB) operates 4 of these plants and Independent Power Producers (IPPs) the remaining four. Online Continuous Emission Monitoring Systems (OCEMSs), which are a condition of the IPPs EIA licenses, are available in these power plants, producing the data which can be used to develop plant-specific emission factors. However, there is no uniform standard as to which gases should be monitored, nor of the parameters they must adhere to. This has resulted in each IPP having their own monitoring methodology. Alteo Ltd., an IPP, has, for example, already developed a coal CO_2 emission factor for its plant using its OCEMS. Working with the University of Mauritius, the Air Pollution Monitoring Unit of the Mauritius Cane Industry Authority (MCIA), the CEB and IPPs, the GEF project will develop Tier 3 CO_2 emission factors for the country's 8 thermal power plants. In conjunction with the improved plant-specific activity data that will be supplied by the MRV system being established by the UNEP-GEF NAMAs project, this will enable emissions to be accurately tracked – at Tier 3 level of accuracy – in the national GHG inventory.

Combined with CEB data relating to real-time power injections into the grid from the thermal power stations, bagasse plants, hydro-power plants, and wind and solar farms, a real-time weighted-average grid emission factor will, in conjunction with the Mauritius Renewable Energy Agency (MARENA) and Business Mauritius[14], be developed and tracked on a second-by-second basis. By revealing diurnal and seasonal patterns in grid emissions, mitigation efforts – such as energy efficiency interventions in industry and buildings, and electricity tariff-setting – can be optimised for maximum emission-reduction benefits. Similarly, as battery recharging becomes more widespread as the transport sector electrifies, real-time grid emission data will be invaluable in guiding policy-makers, bus companies and private consumers with regard to the best (least-emission) times to plug into the grid.

Proposed Activities:

- Defining the scope and the methodological approach to follow for obtaining the Tier 3 emission factor and real time grid emission factor in coordination with energy stakeholders. The specific activities to be carried out in this output will be defined in the methodological approach, ensuring that the expected outputs are achieved, and could include, among others, the following tasks:
    - Collecting data from the eight thermal power plants for a common period, as defined in the methodological approach.
    - Process the data and perform the necessary calculations to define the Tier 3 emission factor in line with 2006 IPCC Guidelines.
    - Regarding the grid emission factor, as the objective is to estimate a real time grid emission factor, there would be a need to define a benchmark or a range in which the estimates can fluctuate. For that, there will be a need to process the data and perform the necessary calculations for estimating the benchmark for the grid emission factor.
    - Define the roles and responsibilities of the entities involved in both the estimation of the Tier emission factor and the real time grid emission factor.
    - Automatise the calculation for the real time grid emission factor and define the information flow.
    - Prepare a timeline and a workplan for future updates of both the Tier 3 emission factor and the real time grid emission factor. The workplan for the future update of the Tier 3 emission factor will include, among others, the following milestones: processing new information for the updated emission factor, performing the calculation, validation between stakeholders, incorporation in the estimates of the GHG emission inventory. The Workplan for future updates of the real time grid emission factor would include, among others, the following items: assessing the method used for

[13] Including the capacity of the 3 power plants that utilise bagasse in combination with coal.

[14] Business Mauritius **is an independent association that represents 1,200 local businesses and sectoral chambers of commerce.**

the calculation of the real time grid emission factor, identifying improvement alternatives, agreeing in an improved approach, if appropriate, implementing the improvements.

- Capacity building to energy stakeholders on 2006 IPCC methodologies and on how to estimate the impact of mitigation actions in the energy sector. The type of capacity building activities can include workshops, webinars, or recorded tutorials. The capacity building exercise will be documented in a manual to make sure it is used beyond project implementation. The capacity building will include a dedicated session for gender mainstreaming in mitigation actions, and will foster the active participation of women, in line with the gender action plan described in Annex 8.

Output 1.3 Development of Tier 2 activity data for Mauritius's land transport sector (road, Metro), augmented by gender and socio-economic usage data

Entities involved: Ministry of Environment, Solid Waste Management and Climate Change in collaboration with the National Land Transport Authority (under the aegis of the Ministry of Land Transport and Light Rail) and Statistics Mauritius. See Table A7.1. Project Stakeholders for further information on the involvement of each stakeholder by output.

This output will result in improved transport statistics in Mauritius, which will directly contribute to improving the estimates of the national GHG emission inventory and will facilitate the design and implementation of mitigation actions in the transport sector. This output will also result in improved capacity on 2006 IPCC methodologies in the relevant institutions of the country.

Mauritius has a well-developed road network system of 2,502 km[15], of which 100 km are motorways. The number of vehicles is known to be increasing by 5% per year[16] (and more for certain vehicle classes – 9%/year for private cars and 12%/year for motorbikes, for example), and the total number of registered vehicles increased by 51% between 2009-18. While the National Land Transport Authority (NLTA) maintains detailed digital records of vehicle numbers, types and characteristics, there is considerably less information available about vehicle usage – journey frequencies, durations, average speeds, and occupancy rates – that, in conjunction with the fuel emission factor (to be addressed under Output 1.1), determine GHG emissions from the land transport sector. The 2017 national GHG inventory used a top-down approach to estimate Transport sub-sector emissions, using the aggregate sectoral fuel consumption statistics published by Statistics Mauritius in conjunction with assumptions about vehicle usage. However, the survey information that informed those assumptions suffers from a number of deficiencies, notably its dated (in some case decade-old) provenance, its bias towards the bus fleet (which accounts for just 7% of Mauritian vehicles but for which detailed activity data is available) and, importantly, the fact that it does not capture the impact of the soon-to-be-opened (September 2019) Metro Express system which, as Mauritius's only railway and serving Mauritius's capital city, is likely to fundamentally transform driving patterns (modal shift from car to train, modal shift from bus to train, park-and-ride synergies between car and train, etc.).

Aside from the obvious GHG MRV benefits of undertaking updated and detailed travel surveys, granular information about journeys, travel times and public transport usage, particularly when combined with socio-economic and demographic data (i.e. information about the passengers themselves – age, gender, disabilities, employment status, etc.), can be invaluable for informing government policy on such diverse matters as infrastructure investment (road enlargement, bridge-building, etc.), planning bus routes, and calibrating fares and fare subsidies for public transport users. The GEF project will therefore assist the NLTA to undertake a systematic survey programme to generate a detailed set of transport activity data that will enable the use of a Tier 2 estimation approach in the Transport sub-sector. Because the incremental cost of including socio-economic, gender and demographic data in such surveys is negligible, such data will also be collected for public policy purposes. It is envisaged that traditional questionnaire surveys, road-count censuses and GIS analysis will be augmented by more cutting-edge approaches, potentially the

[15] Data for year 2016, available at this Link

[16] Data extracted from table 1.2, available at this Link

use of volunteers' (vehicle owners, bus passengers, Metro Express users) mobile phones as journey tracking devices. The gender disaggregated data can be used in the following National Communication and BUR submissions.

Proposed activities:

- To improve the estimates of the national GHG emission inventory and facilitate the design and implementation actions in the transport sector, a methodological approach will be developed, mainly by one contractor and the NLTA. This will define specific activities to be carried out and will include, among others, the following tasks:
    - Identification of best international and regional practices for transport use surveys. This will include the development of several case studies to analyse in detail the most successful applicable cases.
    - Considering best international practices, design a survey methodology for obtaining data on journey characteristics, including journey frequencies, durations, average speeds, and occupancy rates, disaggregating the information by gender. The design will be made together with NLTA to address possible improvement areas in its statistics.
    - Conducting a pilot test of the survey methodology, collect data and process it.
    - Produce a methodological report with the results of the process, identifying gaps and weaknesses and proposing a roadmap for the implementation of the transport use survey in the regular operations of the NLTA.
    - Perform a capacity building exercise to relevant stakeholders (including NLTA) for identifying and estimating the mitigation impact of transport mitigation actions in line with the enhanced transparency framework requirements. The capacity building exercise shall also address the development of advanced Tier approaches, so the stakeholders can replicate the same approach in other inventory categories in the future. The type of capacity building activities can include workshops, webinars, or recorded tutorials. The capacity building exercise will be documented in a manual to make sure it is used beyond project implementation. The capacity building will include a dedicated session for gender mainstreaming in mitigation actions, and will foster the active participation of women, in line with the gender action plan described in Annex 8.

Output 1.4 Development of Tier 2 enteric fermentation emission factors and model for livestock

Entities involved: Ministry of Environment, Solid Waste Management and Climate Change in collaboration with the Food and Agricultural Research and Extension Institute. See Table A7.1. Project Stakeholders for further information on the involvement of each stakeholder by output.

This output involves the improvement of the estimates of the national GHG emissions inventory of Mauritius, specifically in category 3A *Livestock*. At least one enteric fermentation factor for dairy cows will be obtained through an empirically calibrated statistical model, which will be made freely available to inform future academic work in Mauritius and the development of emission factors elsewhere. Furthermore, this output will result in improved technical capacity in national stakeholders involved in the AFOLU sector. This output will also result in improved capacity on 2006 IPCC methodologies in the relevant institutions of the country.

In principle, there are more than 80 emission factors for the livestock sector that pertain to CH_4 from enteric fermentation, CH_4 from manure management systems and N_2O from manure management from a range of livestock – dairy cows, sheep, goats, horses, pigs, chickens, etc. In Mauritius, however, enteric fermentation accounts for approximately 60% of livestock emissions and ruminants (cattle, deer, goats, sheep) account for 75% of these enteric emissions, with cattle alone accounting for 37% of enteric emissions. Enteric fermentation emission factors for cattle vary considerably according to breed, region and feeding regime. The IPCC Tier 1 enteric fermentation emission factor for North American dairy cows (128 kg CH_4/head/year) is, for example, 64% higher than the equivalent emission factor for African and Middle Eastern cows. In its national GHG inventory, Mauritius uses the Tier 1 African and Middle Eastern emission factor. However, the Mauritian cattle production system differs considerably from that

of the broader region (since a single 'African' system can be said to exist anyway) – for instance, in the preponderance of the Friesen-Creole breed and in the unique molasses/bagasse/straw feed that is given to cattle (the raw materials being by-products of the local sugar industry). The actual emissions produced by Mauritian cattle can, as a consequence, be expected to deviate significantly from the generic IPCC emission factor.

Although no research work has been undertaken to date to determine a local enteric fermentation emission factor, the Food and Agricultural Research and Extension Institute (FAREI), as the lead entity on the AFOLU Sub-TWG of the last national GHG inventory, is well aware of the current deficiencies in estimating livestock emissions and has expressed considerable interest in developing a Tier 2 emission factor. The GEF project will therefore assist FAREI in developing at least one Tier 2 livestock (dairy cow) enteric fermentation factor (i.e., a factor for converting the gross energy in cows' diet to methane), and potentially more than one if this is deemed useful (e.g., if statistical analysis reveals significant differences in emissions between cattle age-classes) and is possible given budgetary and time constraints. To estimate the emission factor(s), an empirically calibrated statistical model will be constructed that evaluates the relationships between feed input characteristics (composition, digestibility, etc.), animal characteristics (metabolic energy requirements, lactation, locomotion, mass, milk production, etc.) and methane production. This model will be made freely available to inform future academic work in Mauritius and the development of emission factors elsewhere. The model will also be used by FAREI – outside of the framework of the GEF project – to develop cattle feed methane scenarios (i.e., scenarios involving different compositions and amounts of feed that led to varying levels of methane emissions), so as to inform the Strategic Plan of the Ministry of Agro-Industry and Food Security, which includes an item concerning the reduction of CH_4 from ruminant feeding regimes.

Proposed activities:

- Developing a quality assurance exercise of the AFOLU sector of the latest available inventory in Mauritius, to identify weaknesses, constrains and gaps. The results of the QA exercise will feed the improvement of output 1.4, Output 1.5 and output 1.6.
- Identify and analyse Tier 2 and Tier 3 enteric fermentation emission factors available in the emission factor database of IPCC and in other countries with similar cattle characteristics. The procedure followed for developing already available Tier 2 and Tier 3 emission factors will feed into the design of a methodology to derive Tier 2 and Tier 3 emission factors in Mauritius.
- Design a methodology for creating a statistical model together with FAREI to derive Tier 2 emission factor for the national GHG emissions inventory.
- Using the above model, estimate a Tier 2 emission factor for enteric fermentation emissions to be used in the inventory of Mauritius.
- A capacity building workshop to FAREI and other relevant AFOLU stakeholders in 2006 IPCC Guidelines and in the development of Tier 2/Tier 3 emission factors. The type of capacity building activities can include workshops, webinars, or recorded tutorials. The capacity building exercise will be documented in a manual to make sure it is used beyond project implementation. The capacity building will include a dedicated session for gender mainstreaming in mitigation actions, and will foster the active participation of women, in line with the gender action plan described in Annex 8.

Output 1.5 Development of Tier 2 allometric equations, root-to-shoot ratios and carbon densities for 4 key tree species in the Mauritian context

Entities involved: Ministry of Environment, Solid Waste Management and Climate Change in collaboration with the Forestry Service. See Table A7.1. Project Stakeholders for further information on the involvement of each stakeholder by output.

This output will result in the implementation of a national specific approach for calculating the emissions of relevant emission sources within category 3B *Forest Land* of the national inventory of Mauritius. This category is one of the most significant sources of emissions in non-Annex I emission inventories and therefore, the information generated in this output will significantly contribute to improving the quality and reliability of the national inventory. This

output will also result in improved capacity on 2006 IPCC methodologies in the relevant institutions of the country, which will be able to replicate the approach followed in other emission sources of the inventory.

Carbon stock changes in forest biomass are important because of: (a) the scale of forest cover, which accounts for one-quarter of the country's land area, and (b) the substantial fluxes that can arise from management and harvesting, natural disturbance, natural mortality, and forest regrowth. Deficiencies in forest activity data are acknowledged in the National GHG Inventory Report and are partially addressed under Output 1.6 (see below). However, there are also considerable uncertainties associated with translating forest inventory data into carbon terms. Growing stock data are available for 6 key tree species (*Pinus elliottii*, *Eucalyptus sp*, *Araucaria sp*, *Tabebuia pallida*, *Cryptomeria japonica* and *Casuarina esqisetifolia*), derived from extensive data on tree species, tree heights, diameter-at-breast height (DBH) and tree cover maintained by the Forestry Service for public forests. But the inventory was able to use only IPCC Tier 1 factors to convert approximate biomass estimates into even more approximate carbon estimates. Furthermore, the inventory considered only above-ground biomass, not (typically substantial) below-ground root systems.

What is needed are: (a) nationally calibrated allometric (non-linear regression) equations to estimate the biomass in above-ground tree components based on diameter at breast height (DBH) and height data; (b) nationally calibrated root-to-shoot ratios to estimate below-ground biomass on the basis of above-ground biomass measurements; and (c) nationally calibrated carbon density factors for converting biomass estimates into carbon estimates. The GEF project will support the Forestry Service to develop these elements for 4 key tree species (drawn from the six species for which growing stock data is available) using a combination of survey plots, testing and laboratory analysis. Although, for cost reasons, the focus will be on 4 tree species, it is likely that multiple equations and factors will be developed for each species, to differentiate, for example, between trees growing in the three key ecological zones of Mauritius: wet upland forest, moist forest, and dry lowland forest. Future GHG inventories will, as a consequence, benefit from Tier 2 estimation methods in the Forestry sub-category. The Forestry Service will also benefit from complementary bio-carbon training (e.g., on the FAO software package, EX-ACT) to be provided by a UNDP-GEF SLM project (see Table 2).

Proposed activities:

- Analysis of the different methodological alternatives for estimating a Tier 2 approach in the different emission sources in sub-category 3B1 Forest Land.
- Define the scope of the analysis and propose a methodology and work plan in agreement with FAREI for the estimation of Tier 2 emission factors. Implement the methodological approach defined which could include, among others, the following activities:

    - Conduct the survey, testing, laboratory analysis or other techniques, if deemed appropriate, to use the targeted models as defined in the methodological approach and work plan.
    - Estimate Tier 2 emission factors for the key forest species available in the country (Pinus elliottii, Eucalyptus sp, Araucaria sp, Tabebuia pallida, Cryptomeria japonica and Casuarina esqisetifolia) and compare the results with 2006 IPCC default values and other values of similar countries.
    - Provide capacity building on the use of 2006 IPCC methodologies in the AFOLU sector, complementary to the activities carried out under UNDP-GEF SLM project (see Table 2). The capacity building exercise shall also address the development of advanced Tier approaches, so the stakeholders can replicate the same approach in other inventory categories in the future. The type of capacity building activities can include workshops, webinars, or recorded tutorials. The capacity building exercise will be documented in a manual to make sure it is used beyond project implementation. The capacity building will include a dedicated session for gender mainstreaming in mitigation actions, and will foster the active participation of women, in line with the gender action plan described in Annex 8.

Output 1.6 Ground-truthed forest inventory of privately held forestland and non-forest tree cover (e.g., along riverbanks and roadsides)

Entities involved: Ministry of Environment, Solid Waste Management and Climate Change in collaboration with the Forestry Service, and the Mauritius Chamber of Agriculture. See Table A7.1. Project Stakeholders for further information on the involvement of each stakeholder by output.

This output will result in the improvement of the activity data of the inventory regarding forests by the extension of the national forestry survey to wider privately owned forest areas including river reserves and along roadsides. The access to these areas[17] has been confirmed during the PPG phase, and will enable to improve the forest inventory of the country. The improved forest inventory will facilitate the improvement of the national GHG emission inventory and will also facilitate the implementation of possible mitigation actions in the sector. This output will also result in improved capacity on 2006 IPCC methodologies and mitigation in the forest sector in the relevant institutions of the country.

There are two types of forest ownership in Mauritius: public and private. Publicly owned (i.e., State-owned) forest cover is 22,000 ha, accounting for approximately 47% of the total forest area[18]. The Forestry Service is responsible for the management of public forest and undertakes regular surveys and inventories. Privately-owned forest land covers approximately 25,000 ha, roughly 53% of the total forest area. Only about 6,500 ha of private forestland (including river and mountain reserves) is protected. Public access to private forestland is limited and, because of accessibility and cost constraints, the Forestry Service has not conducted a comprehensive forest inventory of private forest for over a decade. Remote sensing data is available and the capacity of the Forestry Service to use this data in a GIS context (e.g., through the Collect Earth tool that can be used in conjunction with Google Maps) will be strengthened by a separate UNDP-GEF SLM project (see Table 2) – so, data on forest cover and (coarse) data on the types of tree species present in private forest is available and can be analysed. But there is currently no ground-true data on tree species, nor basic information such as tree heights, diameters, and management regimes (rotational periods, use of agroforestry, etc.).

The GEF project will work with the Forestry Service and Mauritius Chamber of Agriculture, which represents privately-owned forests, to develop a systematic programme of site visits and inventories of privately held forests. Access to the land has been ensured during the PPG phase in interviews with relevant stakeholders (Business Mauritius and Mauritius Chamber of Agriculture).

The project aims to visit a share of the forest plantations which is representative of privately held forestland. The sampling approach could be adapted to possible restrictions to access private land. However, certain level of access will be required. During project preparation, Business Mauritius and the Mauritius Chamber of Agriculture confirmed that the access to private land for getting non-invasive samples will be ensured.

Target sites will be chosen specifically to sample a broad cross-section of forest-types (indigenous vs. alien species, lowland vs upland, timber plantation vs hunting forest, etc.). For each site visited, data on tree species (including exact geographical coordinates of trees) and tree characteristics will be collected. Tree species data will be cross-referenced against remote sensing imagery. This will enable a spectral reflectance species identification model to be developed, which will, in turn, enable the species composition of un-surveyed private forests to be inferred from satellite imagery. The allometric equations and biomass/carbon factors developed under Output 1.5 will be applied to the species data collected under Output 1.6 to improve the accuracy of the national GHG inventory as it pertains to privately held forestland. A similar approach will also be adopted in relation to non-forest trees, notably those planted along riverbanks and roadsides and in urban settings. These have hitherto not been included in forest

[17] for areas used for deer ranching/hunting, the surveys will not be carried out during the hunting season spanning from June to September.
[18] http://forestry.govmu.org/English/Pages/default.aspx

surveys, but the Forestry Service believes that, in aggregate, they contribute substantial carbon storage, potentially as much as an additional 4-7% of 'forest' sink.

Proposed activities:

- Analyse the national forest inventory for identifying possible gaps and propose improvement areas.
- In line with the current forest survey procedures and the improvement areas identified in previous activity, and in full coordination with FAREI and landowners, propose a sampling methodology to improve the forest inventory in privately owned areas in the country.
- Support FAREI in undertaking the survey, following national procedures.
- Process the data gathered to be incorporated in the information system of FAREI. Write a methodological report on the impact of the update made.
- Provide capacity building on the use of 2006 IPCC methodologies in the AFOLU sector, complementary to the activities carried out under UNDP-GEF SLM project (see Table 2). The capacity building exercise shall also address the development of advanced Tier approaches, so the stakeholders can replicate the same approach in other inventory categories in the future. The type of capacity building activities can include workshops, webinars, or recorded tutorials. The capacity building exercise will be documented in a manual to make sure it is used beyond project implementation. The capacity building will include a dedicated session for gender mainstreaming in mitigation actions, and will foster the active participation of women, in line with the gender action plan described in Annex 8.

Component 2: Strengthening the national greenhouse gas inventory process

Output 2.1 Implemented government roadmap for a permanent MRV structure, including firm government financing and institutional commitments

Lead entities involved: Ministry of Environment, Solid Waste Management and Climate Change in collaboration with Statistics Mauritius. All entities listed in Table A7.1. Project Stakeholders shall be involved in this output.

The objective of this output is to lay the foundations for a sustainable institutional architecture for a national climate change MRV system, which would include all components needed by the enhanced transparency framework: national GHG emission inventory, mitigation, and support. These three components together will enable Mauritius to track progress of its NDC compared to its observed emissions (i.e., national GHG emissions inventory), prospective emissions (mitigation) and support needed to implement climate action (support). Furthermore, this MRV architecture will allow the regular elaboration of national reports, including the future Biennial Transparency Report (BTR). This output will build from the developments made under the NDC review project (NDC-2), in which a domestic MRV system for NDC tracking will be outlined.

As outlined in the Third National Communication and the National GHG Inventory Report, the government is considering a number of options to strengthen the institutional framework for climate change in Mauritius. This reflects acknowledgement at the highest levels of government that climate change is becoming an increasingly important policy matter, both domestically and internationally, as well as the fact that the difficulties currently being encountered in data collection and processing are likely to grow in the future as climate reporting and transparency requirements become more frequent and more detailed. Another, potentially complementary, measure being considered is to include a recurring national budget line item to cover the costs of continuous MRV activities, including ongoing maintenance and improvement of the national GHG inventory. The MRV roles and responsibilities of new institutions such as MARENA and the Utilities Regulatory Authority (both established in 2016) also need to be considered.

Proposed activities:

- Analysis of the existing legal framework, competences, staffing and budgets as they relate to climate MRV of the key entities involved in the MRV system, including all entities identified in the stakeholder engagement plan of the CBIT project. Analysis of legislative gaps for the participation of the entities in the MRV system. This analysis will aim at defining detailed roles and responsibilities of all entities involved/to be involved in the national MRV system based on their current competences.
- Identification of potential actions needed to formalise the involvement of the institutions in the MRV system.
- Identify best practices in successful non-Annex I countries implementing climate change MRV systems. These case studies shall identify the roles and responsibilities of national stakeholders involved in the MRV and the legal framework in place to enable the functioning of the MRV system as well as best practices in gender mainstreaming in MRV systems.
- Based on the previous analysis, develop a proposal for an enhanced institutional architecture for a climate change gender inclusive MRV, which will need to respond to the information requirements of the enhanced transparency framework (GHG emission inventories, mitigation, support and NDC tracking). The institutional architecture shall clearly define the roles and responsibilities of each entity involved in the MRV system. A proposal of template for Memorandum of Understandings will be developed for its use in the MRV system, if appropriate. The proposal will include recommendations on the revision of the budget for those entities having additional MRV responsibilities under the enhanced MRV system, when appropriate.
- The potential revision of the budget to incorporate additional MRV activities under the regular operation of national entities will be specifically addressed by the Ministry of Finance, Economic Planning and Development and the involved Ministries under this output. Bilateral meetings will be held between the entities involved to identify the additional resources required. The proposal for an enhanced institutional architecture for a climate change gender inclusive MRV will include a proposal of revision of the budget to ensure the sustainability of the system.
- Validate the proposal of institutional architecture with climate change stakeholders.
- Develop a roadmap for the implementation of the enhanced institutional architecture, if appropriate.

Output 2.2 Development of an IT-based system to simplify and streamline the inventory data collection process

Lead entities involved: Ministry of Environment, Solid Waste Management and Climate Change in collaboration with Statistics Mauritius. See Table A7.1. Project Stakeholders for further information on the involvement of each stakeholder by output.

This output will lead to the development of an Excel template-based model for data collection (i.e., a set of customised excel workbooks for the inventory data collection process), processing and submission, to automatically convert the data from the original raw format into the format needed by the GHG emissions inventory. This will reduce the time burden for data collection, facilitating the inventory process.

As outlined in the Development Challenge section, to date Mauritius has relied upon a system of temporary, *ad hoc* institutional arrangements to undertake National Communications and their associated inventories, whereby ministries and other institutions have supplied staff members to technical working groups for limited periods of time. Capacities vary widely between institutions, with the result that data quantity, data quality and the degree of data processing also vary widely. Mauritius has required the support of external consultants to collect the data from the institutions, process it to adapt it to the IPCC software format and input it into the IPCC software. The CCD with support from consultants has developed several excel formats for data collection, but these are not systematic, homogeneous and lack of the quality needed for simplifying the data collection process.

Although improvements will be made to the institutional structure surrounding MRV (Output 2.1), the ongoing reliance of CCD upon a range of line ministries and other institutions for inventory data is inevitable and inescapable, as these ministries and institutions typically have the mandates, the datasets and the sectoral expertise required. Instead, what is needed is a simplified, streamlined process that leverages the data available and converts this into

the data required for the inventory while minimising the time, cost and analytical burden on the ministries and institutions involved. This need not require a 'high tech' solution and, indeed, given the variety of operating systems, software packages, data formats and technological skills deployed across the approximately 50 institutions involved in supplying data to the inventory, a 'low tech', 'lowest common denominator' solution is preferred. Accordingly, the GEF project will work with CCD, Statistics Mauritius, and each of the ~50 data suppliers to develop one Excel workbook by inventory sector adapted to the data available at the corresponding institution to meet the information requirements of the inventory. CCD has prior, positive, experience developing Excel workbooks for earlier climate mitigation initiatives. Each workbook will be tailor-made to accept the raw data available to each supplier, to automatically convert the raw data into inventory-required data and to format it into the tabular form needed for subsequent entry into the IPCC inventory software. Data provenance, limitations and processing assumptions will be fully documented in the workbook, thereby providing a 'paper trail' that can be used for subsequent quality control/quality assurance purposes. Cells containing formulae, pivot tables and output tables will be locked, so as to ensure that only raw data can be inputted. But, even if manual input of the data from the Excel tables into the IPCC software is still required, the use of bespoke Excel workbooks will ensure that the burden on data-supply institutions is markedly reduced and that the data submitted to CCD is of the appropriate form, quality, and format. The Excel workbooks will be uploaded to (by data-supply institutions) and downloaded from (by CCD) a secure area of the enhanced Climate Change Information Centre (see Output 3.2 below). This will facilitate inventory-related data exchange. The upload/download area will have differentiated user access rights such that institutions can access only 'their' workbooks and not those of other institutions, thereby respecting Mauritius's strict data confidentiality rules as well as potentially commercially- sensitive information (such as, for example, IPPs' electricity generation data).

Proposed activities:

- Analyse the existent excel workbooks at the CCD and the data available in each data provider database system.
- Analyse the possibility of developing an application programming interface (API) that allows the output tables to be seamlessly imported from Excel into the IPCC software.
- Identify the gaps and needs of the existent workbooks and develop a work plan for improving the existent workbooks, creating new files when needed.
- Coordinate with stakeholders to ensure the excel workbooks are adjusted to the circumstances and expectations of both data providers and CCD.
- Develop a set of workbooks validated by stakeholders for data sharing between data providers and CCD for its use in the national GHG emission inventory. The templates will be done by sector, considering the specificities of the data available in the different institutions.
- Ensure the workbooks follow the principles of the QA/QC plan of Mauritius and verify that the data provided in the workbooks can be used to directly populate the IPCC software.

Component 3: Mainstreaming the national greenhouse gas inventory to enhance transparency and support policy-making

Output 3.1 Targeted training on the use of the new IT-based system and on the use of the inventory for policy formulation, target-setting, scenario analysis and MRV of NDC commitments

Entities involved: Ministry of Environment, Solid Waste Management and Climate Change. See Table A7.1. Project Stakeholders for further information on the involvement of each stakeholder by output.

The Excel template-based model for data collection, processing and submission will be made as straightforward as possible for data-supply institutions. Furthermore, each workbook will be developed in conjunction with each data-supply institution, so that it precisely matches the data availability and data constraints that each institution faces. Nonetheless, training will subsequently be provided to the institutions on the use of the Excel workbooks and on the CCIC uploading service that will be used for submission of the completed workbooks. Although this training is not

expected to be especially technical or conceptually 'difficult', it is considered useful for generating understanding and, critically, awareness of the new system. This training will be rather time-consuming, due to the fact that each workbook will necessarily be different (tailored to the precise needs of each institution). It is, therefore, envisaged that a number of training workshops will be required, each addressing a number (between 5-10) of institutions that share commonalities – e.g. institutions that cover similar sub-sectors or use similar data-types or face similar data constraints.

Proposed activities:

- Developing a capacitation plan, which will include a set of capacity building workshops and a step-by-step manual for the use of the excel template-based model.
- Delivering capacity building workshops on the use the Excel template-based model for data collection, processing, and submission. Different workshops will be developed, grouping the institutions considering their common characteristics.

Output 3.2 Enhancing the role of the Climate Change Information Centre (CCIC) as a transparency portal

Entities involved: Ministry of Environment, Solid Waste Management and Climate Change in collaboration with Statistics Mauritius, the Central Informatics Bureau, the Central Information Systems Division, and the Government Online Centre. See Table A7.1. Project Stakeholders for further information on the involvement of each stakeholder by output.

The online Climate Change Information Centre (CCIC) was established by the Climate Change Division in 2013 as a centre for climate change related data and information, assisting in decision-making. The Centre also provides early warning climate risk information to support initiative toward climate resilient community. The CCIC represents a ready-made solution to three separate problems: (a) the need for a simplified, standardised process by which institutions can supply GHG inventory data to CCD, (b) the need for a digital archive for systematic, centralised storage of inventory-related data, and (c) the need for a 'transparency portal' that provides easy access to climate information (including but not limited to GHG inventory data) to users – not just to the general public but also to institutions that wish to use inventory data for detailed policy and scenario planning purposes.

The website forms part of the overall website of the Ministry of Environment, Solid Waste Management and Climate Change. It is a website with some static information as well as downloadable pdf documents. During the PPG phase, the following improvements for the CCIC were identified together with the Central Information Systems Division and the Central Informatics Bureau:

(i) There is much room for improvement of the website so that it becomes more attractive, dynamic, and responsive in terms of the display of information. It should also be compatible with different devices such as laptop/tablet/mobile phones and similar equipment-friendly in terms of ergonomics and navigation.

(ii) There is in fact a need to give more visibility to the information being provided the CCIC by transforming the website into a full-fledge portal and redesigning all the pages. The portal will show the importance of GHG information dissemination to stakeholders.

(iii) As it stands now, the CCIC cannot be used as a transparency portal, as the storage system, the way for the transfer of information, and the procedures for disseminating information are not established for this purpose. In the CBIT project, the CCIC will be established as a digital archive for systematic, centralised storage of inventory-related data, using the data provided by the different institutions in the IT format developed under output 2.2. For doing so, the following elements must be addressed:

- The transfer of information method should be defined and will ideally use the Infohighway platform[19].
- The server for the CCIC must be defined. The existing secured G-Cloud based on Intel Operating Systems available at the Government Online Centre (GOC), can be used as infrastructure for the central server.
- The dissemination format needs to be established. Data can be made available in standard format such as CSV, Microsoft Word/Excel, and PDF format. This format will be of great importance to students, researchers, and other stakeholders for further processing. Generation of reports in datasets format that can be uploaded to the Open Data Portal of Mauritius (https://data.govmu.org/dkan/)

The GEF project will work with CCD, the Central Informatics Bureau, the Government Online Centre (GOC) and the Central Information Systems Division to upgrade the CICC as per the improvement areas identified.

The CBIT project will also support MoESWMCC and Statistics Mauritius, in the context of the baseline Shared Environmental Information System (SEIS) project, to link the SEIS Indicator Reporting Information System (IRIS) to the CCIC, such that inventory data can be 'pulled' from the CCIC and displayed in IRIS on an ongoing basis.

Proposed activities:

The improvements and related priorities to be made in the CCIC will be recommended by the CCD, the Central Informatics Bureau, Government Online Centre, and the Central Information Systems Division. Given the limited budget for this output, these stakeholders will need to prioritize what improvements to develop under the CBIT project and to set a roadmap for its future development. The Ministry of Environment, Solid Waste Management and Climate Change will validate and approve the recommendations. A meeting will be maintained with this purpose between these entities to define the specific activities of the output, including:

- Improving the responsiveness and compatibility of the CCIC website, redesigning all the pages of the portal.
- Defining and implementing the processes for transferring and storing information GHG emission inventory information in the portal, including the IT system developed under output 2.2.
- Defining and implementing the processes for disseminating information from the CCIC.
- Developing a roadmap for further improving the role of the CCIC as a transparency portal. This roadmap will consider the possibility to include in the CCIC a repository of climate change training material.

Component 4: Monitoring and Evaluation and Knowledge Management

Component 4 includes both standard M&E activities and the capture and sharing of project knowledge for use at the national, regional, and global level. Knowledge capture and sharing will take place throughout the project.

Output 4.1 Project results and outcomes monitored and evaluated

This output focuses on standard GEF and UNDP M&E activities, which are described in detail in Section VI.

Proposed activities

- Conduct inception workshop and confirm project baseline and indicators.
- Monitor project implementation and results as they affect both women and men on an ongoing basis.

[19] https://ih.govmu.org/#

- Present project status and lessons learned to the Project Manager and Project Steering Committee and to the GEF in the form of a Project Implementation Report (PIR) annually in order to inform management decision-making.
- Conduct an independent terminal evaluation approximately six months prior to the completion of project
- Prepare and submit a final report to UNDP and the implementing partner.

Output 4.2 Lessons learned, and best practices shared with other Parties through the Global Coordination Platform and other cooperation networks

This output will support knowledge management to capture, document, and share the broad variety of data, information, and knowledge generated by project activities. It will also enable Mauritius to contribute and be an active partner of the CBIT Global Coordination Platform, by exchanging information with other countries as well as actively participating in CBIT workshops. Sharing lessons learned and experiences through the global platform will ensure that Mauritius's CBIT project is aligned with other national, regional, and global transparency initiatives.

Proposed activities

- Capture lessons learned from the project throughout implementation. This will include the development of a case-study on mainstreaming gender in CBIT projects.
- Share templates, lessons learned, and best practices with all relevant stakeholders in Mauritius.
- Share templates, lessons learned, and best practices with other Parties through the Global Coordination Platform and other regional and global cooperation networks.
- Participate in selected CBIT regional and global workshops.

Knowledge Management approach is further elaborated in Annex 15.

Partnerships

Baseline projects

Table 2 provides an overview of relevant baseline projects. Together, these projects seek to address a number of the barriers described above. They present an opportunity for the GEF project to target its efforts in order to, at a minimum, avoid duplication and overlap but, more strategically, to build on and link with other initiatives to maximise GEF impacts.

The BUR-1 project is, for example, developing a number of crop-based emission factors and an ICI-funded project is quantifying wastewater GHG emissions in large hotels (which operate their own wastewater treatment plants and were not fully captured in the last GHG inventory): these are valuable activities that the GEF project need not undertake. Meanwhile, a UNDP-GEF SLM project is undertaking a detailed forest mapping exercise that will address the need for more comprehensive forest activity data (land area and tree-types); the GEF project can usefully complement this work by supporting the development of locally calibrated carbon estimation factors that, together with the activity data, will allow the national GHG inventory to adopt Tier 2 estimation approaches in the Forestry sub-sector. Similarly, the GEF project can work with the new Mauritius Renewable Energy Agency (MARENA), created in 2016 with a mandate to promote renewable energy and currently receiving set-up and technical assistance from a UNDP-GCF project, to develop a real-time grid emission factor system that can more accurately quantify GHG emissions from the Energy Industries sub-sector (and from the increasingly electrified Transport sub-sector) as well as inform MARENA's target-setting/tracking work. A UNEP-GEF NAMAs project will establish an MRV system for the Energy Industries sub-sector, facilitating collection of data relating to MWh generated by different power plants; the GEF project can complement this activity-oriented MRV system with the development of Tier 3 emission factors.

The coordination between projects will be ensured by the Implementing Entity for the CBIT project, the Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC), which serves as the UNFCCC Focal Point. It coordinates Mauritius's actions on climate change and oversee directly or indirectly all climate change projects implemented in Mauritius. The PMU will work under the MoESWMCC, avoiding overlaps and exploiting synergies between projects. Further information on the proposed governance for the project is described in section VII governance arrangements.

The following table summarizes the main baseline projects and initiatives in relation with the implementation of the CBIT project:

Table 3: Baseline Projects and Initiatives

Initiative	Donor	Key implementing partner	Time frame	Main activities of the project and description of the complementarity and coordination approach with CBIT to avoid overlaps and exploit synergies
Biennial Update Report (BUR-1)	GEF-financed, UN Environment-implemented	MoESWMCC	2017-2020	**Main activities of the project related to the CBIT:** Update national GHG inventory for 2014-16 and revision of 2000-13 inventories Development of selected Tier 2 emission factors (agriculture) Capacity building on IPCC 2006 methodologies and geospatial analysis Domestic MRV systems (sectoral) **Complementarity and coordination between projects:** The long-term approach of the CBIT is complementary to the BUR/NC projects, whose primary objective is to develop the reports following the BUR and NC reporting guidelines. The CBIT project will make use of the already existing NCs/BURs Project Management Unit, which is hosted by the Climate Change Unit, for the management of the project. Having the same PMU ensures a full coordination of BUR/NC projects under the GEF and the CBIT project. This arrangement ensures a full coordination between projects. The PMU participated in the design of the CBIT project and also participates in the BUR/NC projects financed by the GEF, avoiding duplication of efforts, and exploiting synergies. Output 2.1. of the CBIT project will build from the progress made in the BUR project related to MRV activities.
Fourth National Communication (FNC)	GEF-financed, UN Environment implemented	Ministry of Environment, Solid Waste Management and Climate Change (CCD)	2020-2024	**Main activities of the project related to the CBIT:** Conduct a National Greenhouse Gas Inventories as well as update the GHG inventory figures from the first BUR. Capacity Building on the 2006 IPCC Inventory Guidelines and Software **Complementarity and coordination between projects:** The long-term approach of the CBIT is complementary to the BUR/NC projects, whose primary objective is to

Initiative	Donor	Key implementing partner	Time frame	Main activities of the project and description of the complementarity and coordination approach with CBIT to avoid overlaps and exploit synergies
				develop the reports following the BUR and NC reporting guidelines. The CBIT project will make use of the already existing NCs/BURs Project Management Unit, which is hosted by the Climate Change Unit, for the management of the project. Having the same PMU ensures a full coordination of BUR/NC projects under the GEF and the CBIT project. This arrangement ensures a full coordination between projects. The PMU participated in the design of the CBIT project and also participates in the BUR/NC projects financed by the GEF, avoiding duplication of efforts, and exploiting synergies.
Review and update of the NDC (NDC-2)	Government of France	MoESWMCC	2019-2020	**Main activities of the project related to the CBIT:** Update NDC target Development of a proposal for a domestic MRV system for NDC tracking. Mechanism for assessing the carbon footprint of implemented measures **Complementarity and coordination between projects:** The NDC-2 project will specifically address the MRV for the NDC, considering the indicators required for NDC tracking and the arrangements needed for the future update of the NDC (to be done every five years). The proposal of MRV for the NDC will involve links with the GHG emission inventory, mitigation, and support components, which will be addressed under the CBIT project. The CBIT project will consider the inputs from the NDC-2 project to make a proposal of integrated MRV for all the components needed under the ETF (GHG emission inventories, mitigation, support and NDC tracking).
NAMAs for low-carbon island development strategy	GEF-financed, UN Environment-implemented	MoESWMCC	2017-2021	**Main activities of the project related to the CBIT:** Strengthened national capability to identify, prioritise and develop mitigation actions to meet NDC targets Initiate implementation actions on renewable energy targets MRV system for the electricity sector and to track NDC implementation for renewable energy actions **Complementarity and coordination between projects:** The new emission factors developed under outputs 1.1 - 1.3. will facilitate the assessment, prioritization, and development of mitigation actions in the energy sector. The capacity building exercises under outcomes 1.1. – 1.3. will consider the capacity building already provided under the NAMA, to ensure the capacity building is

Initiative	Donor	Key implementing partner	Time frame	Main activities of the project and description of the complementarity and coordination approach with CBIT to avoid overlaps and exploit synergies
				complementary. Further, the NAMA will consider that tier2-tier 3 EF are being developed under the CBIT, so the MRV system for the electricity sector also cover them. Output 2.1 will be built from the developments on the sectoral MRV system developed under the NAMA project. The coordination will be ensured by the PMU under the MoESWMCC, which is also the implementing agency for the NAMA.
Shared Environmental Information System (SEIS)	UNEP	MoESWMCC	2017-2019	**Main activities of the project related to the CBIT:** Development of an Indicator Reporting Information System (IRIS) to help the Ministry and Statistics Mauritius to collect, analyse and publish quality information in a timely manner For reporting on MEAs, SDGs and integrated environmental assessment processes **Complementarity and coordination between projects:** The developments under output 3.2., which will be developed together with the IT stakeholders (mainly the Central Informatics Bureau and the Central Information Systems Division), will build from the existent systems and developments to strengthen the Climate Change Information Centre (CCIC) as a transparency portal. The CCD and the PMU have already engaged with the IT stakeholders during the PPG phase, and this coordination will be extended during the CBIT project implementation. The GEF project will also support MoESWMCC and Statistics Mauritius, in the context of the baseline Shared Environmental Information System (SEIS) project, to link the SEIS Indicator Reporting Information System (IRIS) to the CCIC, such that inventory data can be 'pulled' from the CCIC and displayed in IRIS on an ongoing basis.
Realising energy savings and climate benefits of implementing mandatory energy auditing the Republic of Mauritius	GEF-financed, UNDP-implemented *(At CEO Endorsement stage)*	Energy Efficiency Management Office (EEMO) within the Ministry of Energy and Public Utilities	2019-2024	**Main activities of the project related to the CBIT:** Enhancement of the national mandatory energy audit programme Implementation of boiler and RAC energy efficiency recommendations for large energy consumers and the promotion of energy efficient, low-GWP refrigerants Provision of credit line for the implementation of energy audit recommendations Implementation of energy management and energy MRV systems in large energy consumers and SMEs

Initiative	Donor	Key implementing partner	Time frame	Main activities of the project and description of the complementarity and coordination approach with CBIT to avoid overlaps and exploit synergies
				Complementarity and coordination between projects: The MRV system developed in the energy savings project shall be considered under the overarching domestic MRV system which is addressed under the NDC-2 and the CBIT project. The presence of the Ministry of Energy and Public Utilities in the project board of the CBIT and the overall coordination of the MoESWMCC will ensure the complementarity and the coordination of efforts.
Accelerating the transformational shift to a low-carbon economy in the Republic of Mauritius	GCF-financed, UNDP-implemented	Ministry of Finance and Economic Development (NDA of the GCF)	2017-2024	**Main activities of the project related to the CBIT:** Institutional strengthening for renewable energy (MARENA) Installation of battery energy storage system and accompanying software for the national grid to absorb up to 185 MW of intermittent renewable energy 25 MW of rooftop PV installed **Complementarity and coordination between projects:** MARENA´s involvement in the CBIT is in line with the objectives of the GCF and national priorities. Specifically, MARENA is targeted as one of the key stakeholders to participate in the capacity building exercises under outputs 1.1. -1.4. of the CBIT. This capacity is additional to the training activities developed under the GCF project. Further, MARENA is part of the technical committee on energy (see further information on section VII on governance arrangements) and has been consulted under the PPG phase on the structure of the CBIT. Furthermore, the NDA of the GCF, the Ministry of Finance and Economic Development, will be involved in the project board of the CBIT project, for ensuring complementarity and coordination.
Transforming the tourism value chain in developing countries and SIDS	International Climate Initiative (IKI)-financed, UN Environment-implemented	Ministry of Tourism & External Communications - Mauritius	2017-2020	**Main activities of the project related to the CBIT:** Develop a national action plan to reduce GHG emissions and improve resource efficiency in selected tourism value chains Identification of key emissions sources and potential mitigation interventions in hotels Technical capacity building workshops for hotels **Complementarity and coordination between projects:** The information generated under the CBIT project will be disseminated to a wider audience so the emission factors and improved GHG emission inventory can be

Initiative	Donor	Key implementing partner	Time frame	Main activities of the project and description of the complementarity and coordination approach with CBIT to avoid overlaps and exploit synergies
				used by all national stakeholders. A specific component has been to the CBIT regarding dissemination of results (component 4). There are no overlaps on the scope of the projects.
Promoting the low-carbon transport sector in the Republic of Mauritius	GEF-financed, UNDP-implemented PPG ongoing – PIF approved in December 2020	Ministry of Public Infrastructure and Land Transport (MPILT), Ministry of Energy and Public Utilities National Land Transport Authority (NLTA) National Transport Corporation (NTC) Trac Management and Road Safety Unit (TMRSU) Private Bus Companies	2020-2025	**Main activities of the project related to the CBIT:** Promote capital investments into developing sustainable transport infrastructure (electric buses) to reduce transport related GHG emissions Engage and build technical capacities of transport-related policy-makers, regulatory agencies, financial institutions, and the private sector **Complementarity and coordination between projects:** Transport stakeholders are involved in the CBIT project in the transport Technical Committee, in which the National Land Transport Authority is the chair. Further, the Ministry of Energy and public utilities is the chair of the energy technical Committee. The coordination of efforts between projects is thus ensured through the participation of these two key stakeholders in both projects. The use of the inventory for the development of transport mitigation actions will be included under the capacity building activities of output 1.4. Transport stakeholders are targeted as key stakeholders to participate in the capacity building exercises this output. The CBIT project will contribute to enhance the capacity of transport-related institutions, but in a different scope than the low carbon sector project. The two projects are fully complementary, and the coordination is ensured.
Mainstreaming sustainable land management and biodiversity conservation in the Republic of Mauritius	GEF-financed, UNDP-implemented	Ministry of Agro-Industry and Food Security	Pending approval-2023	**Main activities of the project related to the CBIT:** Strengthen the policy and institutional framework for the promotion of SLM, including integration of LDN targets into sector policies Develop an Integrated Land Information System as a decision support tool Capacity development on carbon balance software tools (including Collect Earth, EX-ACT and WOCAT methodologies) Landscape-scale terrestrial ecosystem and land-use assessment (including development of thematic maps) – for ecosystems, forests, agricultural and livestock productivity, and degraded land Planting and restoration of forestland, riverine and mountain reserves, and agricultural land Gender mainstreaming in project activities

Initiative	Donor	Key implementing partner	Time frame	Main activities of the project and description of the complementarity and coordination approach with CBIT to avoid overlaps and exploit synergies
				Complementarity and coordination between projects: The improvement of the forest inventory and the AFOLU estimates of the inventory under the CBIT project will facilitate the development of this project, as better national data will ease land-use and territorial assessments as well as policy making. No overlaps are identified between projects. The ministry of Agro-industry is the chair of the AFOLU technical Committee for the governance of the CBIT project, so the avoidance of overlaps and coordination of efforts is ensured.

Risks

All project activities fall under SESP exemption criteria.

The main identified risks to the successful implementation of the project are identified in the table below.

Table 4. Risks identified

Risk	Type of risk	Risk Category	Mitigation Approach
Political risks associated with changes in government priorities	Political	L	As a climate-vulnerable SIDS, the Republic of Mauritius is a strong supporter of the UNFCCC and Paris Agreement. Furthermore, the GEF project supports obligatory (as opposed to optional) GHG reporting requirements under the UNFCCC, notably in the form of the national GHG inventory. Accordingly, it is extremely unlikely that government support for the project will decline from its currently high level. Continuous engagement with a broad range of stakeholders will further minimise impacts of any political changes on the project, as will the fact that the Executing Entity (MoESWMCC) also serves as the UNFCCC Focal Point for Mauritius.
Inadequate participation and support of all stakeholders and partners, and poor cooperation between participating institutions	Organizational	L	The project responds to explicit requests for assistance articulated in the Third National Communication and the National GHG Inventory Report, and as further reinforced in other official reports (such as the Technology Needs Assessment and the National Capacity Self-Assessment) and during stakeholder consultations undertaken for PIF development. The level of stakeholder interest and engagement is extremely high, and all project interventions are explicitly aligned with the relevant institutions' strategies and policies (e.g., the Long-Term Energy Strategy, the MARENA Action Plan, the Strategic Plan of the Ministry of Agro-Industry and Food Security, etc.). Inadequate participation is, accordingly, considered to be a low risk, further mitigated by the project's intention to engage in continuous liaison with institutions, regular reporting, monitoring of progress and acknowledgement of efforts and achievements by each institution. Participating institutions have been actively involved from the beginning in design, implementation, and management decisions, and will be fully involved in project preparation. Explicit roles and responsibilities will be allocated, in line with institutional mandates and institutional roles in the national GHG inventory.
Staff turnover: Considering that	Organizational	L/M	Capacity building activities will involve a carefully selected group of relevant experts within each ministry and agency to ensure that capacity can be

Risk	Type of risk	Risk Category	Mitigation Approach
the CBIT project includes targeted capacity building, there is a risk of losing the capacity and skills acquired due to staff turnover			retained, and succession planning will be discussed as a part of training. Guidelines and methodologies will be produced in written format (i.e., manuals), and the excel based IT system will be documented extensively, which will also contribute to retaining institutional memory.
Climate change risks	Social and Environmental	L	The mean surface temperature of Mauritius is increasing by approximately 0.16˚C per decade. Annual rainfall over mainland Mauritius (i.e., excluding the outer islands) has reduced by approximately 63mm per decade over the past century. Rainfall variability has increased significantly, exacerbating water stress in the western and northern districts while simultaneously producing more flash floods. The frequency of intense tropical cyclones (with wind gusts greater than 234 km/hour) is increasing. The Technology Needs Assessment (TNA) notes that the indigenous component of the electricity mix (i.e., bagasse, wind and mini hydro) is vulnerable to this increasing climate variability. There is a risk that growing electricity demand will need to be met through increased imports of fossil fuels. Given that the reduction of energy imports is a central government policy objective and forms the centrepiece of the Long-Term Energy Strategy, any threats to the potential of domestic electricity generation to reduce energy dependence will be monitored closely. The project's support to greater transparency in the Energy Industries sector will assist such monitoring. Notably, the real-time grid emission factor developed with GEF project support will provide a key summary indicator for quantitatively assessing the evolving contribution of renewable energies to the electricity mix.
Face to face meetings, site visits and workshops cannot be held due to potential restrictions (such as those due to the Coronavirus outbreak), leading to delays in project implementation.	Organizational	L/M	There are several activities foreseen within the project involving face to face meetings, site visits and workshops. Site visits will be arranged following the necessary health and safety measures, avoiding contact, maintaining physical distance, and wearing masks and gloves, as recommended by the medical authorities. Workshops could be replaced by recorded webinars, providing training to stakeholders that can be used after project implementation. Face to face meetings can be postponed, considering that the duration of the project is four year. If needed, face to face meeting could be replaced by videoconferences and/or calls. With these measures, the implementation of the project will be secured.

Due to the continuous evolution of the COVID-19 pandemic and its already observed and potential consequences on project design and implementation, the risks, response measures and opportunities related to the COVID-19 are addressed separately, as described hereby.

COVID-19 risk analysis, response measures and opportunities

Risk analysis and response measures

COVID poses a risk to several aspects of project design and implementation. The key risks are related to the availability of technical expertise, capacity and changes in timelines, stakeholder engagement processes, enabling environment, and financing. The main risks identified, and the response measure considered in the CBIT are shown in the following table.

Table 5**. COVID response measures**

COVID-19 related risk		**Response measure**
Availability of technical expertise, capacity, and changes in timelines	Training and knowledge management activities cannot be held due to restrictions	A combination of remote and digital-based guidance by international experts and utilization of national experts will be used to ensure the implementation of the activities. Activities related to knowledge management and possible exchanges will adhere to UNDP guidance on travel and precautions related to containment of the COVID-19 global pandemic, and the project will develop virtual or on-line activities to support these exchanges where possible. The same modalities will be employed when technical trainings are not possible in person.
	Limited capacity and experience for remote work and online interactions affect the effectiveness of the interventions.	The development of guidelines, templates and manuals for each output developed within the project will ensure the outputs of the project can be used beyond project implementation and will allow the staff to access detailed information on MRV process, ensuring the sustainability of the work and reinforcing the institutional capacity of the institutions involved.
	Delays in project implementation	Most activities and events will be organized and conducted using virtual platforms to ensure that any COVID-19 related limitations will be dealt with in a timely manner. Furthermore, the design of the project has considered delays up to one year in the implementation of the activities by splitting the work in four years and allowing most of the activities to be developed in parallel.
	Limited availability of international and national consultants to support project implementation.	UNDP and the government of Mauritius maintain a list of consultants with expertise in the different MRV components and proven competences for carrying out home based assignments.
Stakeholder Engagement Process	Mobility of stakeholders and staff is affected	The project design has taken into account steps to minimize these risks such as limiting travel to or from areas where COVID-19 is prevalent, and will also provide training on regular hand washing, social distancing and wearing masks in public for the project staff and stakeholders during the inception phase. These trainings will be repeated throughout the project implementation and reinforced during settings where it is determined to be high risks areas.
	Highly vulnerable actors and typically marginalized groups are not involved in project implementation	

COVID-19 related risk		Response measure
Enabling Environment	Government priorities change because of the pandemic	The high-level involvement and commitment of national stakeholders shown in the PPG reaffirms the interest of the country and ensures the project implementation is country driven. The design of the project activities, prioritising the use of virtual platforms, will allow stakeholder to continue with their involvement in potential lockdown phases.
Financing	Co-financing availability	The contribution from the government of Mauritius is provided in-kind, in the form of government personnel and public resources. Thus, the co-finance is not affected. The involvement of the staff from the PPG phase ensures the engagement of national stakeholders, that will be allowed to continue with project implementation home-based, if appropriate.
	Price increase in procurement	The possibilities for developing the work virtually ensures that the demand for procurement is sufficient to meet the project requirements in a cost-effective way.

Opportunity analysis

Although indirectly, most of the activities to achieve the project results are likely to have a bearing on COVID-19 efforts. CBIT will provide result in improved institutional arrangements and in the implementation of an MRV system; both will consider the COVID-19, and post circumstances. The national Greenhouse Gas (GHG) Inventory for the year 2016 and the Mitigation actions and their effects would also touch upon the risks and assumptions based on socio-economic impacts of COVID-19.

A positive impact from COVID-19 is opportunity to slowly introduce e-governance (online public service provision and delivery without physical interactions) over time, enabling service provisions in both rural and urban areas.

Given the fact that this project underlying principle is to cut emissions, COVID-19 is likely to have environmental and development benefits at the appropriate scale. Given the long-term need of practicing social distancing, COVID-19 is likely to introduce policy changes to many global meetings and conferences including those of the UNFCCC, GEF, UNCBD, UNCCD to enable innovative and digital modalities to be fully employed, applied, and rolled out to countries. This is likely to change the modalities (currently travel heavy and posing risks of exposure through physical contact) of conducting Convention businesses and contribute to the long-term desired outcome of the Convention.

Stakeholder engagement

A summary of stakeholder involvement in the project to date and the stakeholder engagement plan for the project is provided in Annex 7, including a summary of the stakeholder validation workshop and a list of participants.

Gender equality and the empowerment of woman in the MRV framework

The project will be a meaningful entry point for training, awareness-raising, and capacity-building efforts to ensure women's equal engagement in and benefit from climate change actions. It will help to understand how both men and women are involved in managing their environments, and it will clarify the overall picture of the effects of climate change on different groups of citizens, increasing transparency.

In terms of overall project approach, the project is aligned with the 2018 guidance from the GEF on gender equality,[20] addressing gender equality and women's empowerment throughout the project cycle in the following ways:

- The project will monitor the share of women and men who are direct project beneficiaries, and it will also monitor the nature of these benefits.
- Gender-sensitive targets and activities will be monitored in project reporting, both in annual reports and PIRs and in the mid-term evaluation and the terminal evaluation.
- The project will take into account the *Gender Responsive National Communications Toolkit* developed by the Global Support Programme through UNDP and in collaboration with UNEP and the GEF.

The project's technical work, directed at improving the quality, continuity, and availability of the national GHG inventory, will benefit men and women alike – through improved transparency, improved policy-making and an improved ability to measure mitigation efforts against the NDC target. The enhanced CCIC (Output 3.2) will have a section dedicated to gender-specific information, publications, and activities as they pertain the climate change impacts and climate change mitigation/adaptation efforts. Training provided by the project (Under outputs 1.1 -1.6 and Output 3.1) will be gender-balanced, ensuring at least 40% of beneficiaries are women (a ratio that is broadly reflective of the gender composition of the public sector) and aiming to achieve a 60% ratio. Output 1.3 (Development of Tier 2 activity data for Mauritius's land transport sector) will specifically collect data on the gender (as well as socio-economic and demographic characteristics) of private and public transport users so that future government policy-making and investment decisions can incorporate gender considerations.

A gender specialist will monitor the implementation of a gender action plan during the project implementation.

South-South and Triangular Cooperation

Learning opportunities and technology transfer from peer countries will be further explored during project implementation. To present opportunities for replication in other countries, the project will codify good practices and facilitate dissemination through global ongoing South-South and global platforms, such as the CBIT Global Platform, the UN South-South Galaxy knowledge sharing platform, and PANORAMA[21] .

In addition, to bring the voice of Mauritius to global and regional fora, the project will explore opportunities for meaningful participation in specific events where UNDP could support engagement with the global development discourse on transparency-related issues. The project will furthermore provide opportunities for regional cooperation with countries that are implementing CBIT initiatives in geopolitical, social, and environmental contexts relevant to the proposed project in Mauritius.

Innovativeness, Sustainability and Potential for Scaling Up

The project is innovative. It applies IPCC best practice by supporting the development of higher-Tier GHG estimation approaches for Key Category sectors/sub-sectors. Upgrading of the Climate Change Information Centre into a climate transparency portal represents an innovative (but least-cost) approach to the twin problems of (a) maintaining a comprehensive data archive and (b) ensuring stakeholders, both domestic and international, are able straightforwardly access the full range of public documents and datasets relating to climate change in Mauritius. The development of the Excel based IT system will bring transparency to the inventory process in the long term, ensuring the data is collected and archived in a systematic manner. Furthermore, the enhancement of the CCIC will contribute to improve the dissemination of the inventory results to national and international stakeholders, contributing to the transparency of the process.

[20] GEF (2018), *GEF Policy on Gender Equality.*
[21] https://panorama.solutions/en

The project is intrinsically sustainable. It addresses a future need that is (a) recurring and (b) imposed on Mauritius by international treaty (UNFCCC) requirements – that of a periodically updated national GHG inventory that informs National Communications and BURs. By not only improving the quality of the inventory (through, for example, the development of nationally calibrated emission factors) but also by improving the *process* by which the inventory is compiled and by building the *capacities* of relevant institutions to contribute to the inventory and to better incorporate use of the inventory to inform other policy development/implementation needs, the project will ensure that its benefits are sustained into the future. The CBIT project will develop manuals to document each capacity building exercise and will develop a step-by-step manual for the use of the excel template-based model that will ensure its use by future staff. This will ensure the CBIT project will further improve the capacity of institutions in the future.

The project has high scale-up potential. Building on their experience and expertise developed during the project, Mauritian stakeholders can apply similar approaches to developing Tier 2 and Tier 3 emission factors for other sectors and sub-sectors, as well as improving activity data where required (e.g., in the marine transport sub-sector and the liquid wastewater sector). Emission factors, allometric equations and other outputs of the project will be uploaded to relevant databases (e.g., the IPCC emission factor database, the GlobAllomeTree database, etc.) for application elsewhere.

Project Map and Coordinates

In general, the project is not specifically focused on geographical regions or sites. Some project Outputs (e.g., Output 1.1: development of fuel emission factors, or Output 3.1: training on the GHG inventory) have no spatial dimension. Other Outputs (e.g., Output 1.2: development of Tier 3 emission factors for the electricity sub-sector, or Output 1.3: development of Tier 2 activity data for Mauritius's land transport sector) do have an underlying geographical basis (e.g., the locations of power plants and of transport routes) but this geography does not have a bearing on the project's impacts or benefits. Nonetheless, Figure 3 in Annex 1 provides a map of the national electricity grid of Mauritius – indicating the locations of the country's 8 thermal power plants – and also shows the route of Phases 1 and 2 of the Metro Express light railway systems.

V. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): SDG *13: Climate Action*
This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD): UNSPF Outcome 6 Resilience to climate change. UN SPF 2019 – 2023: By 2023, integrated policy frameworks and enhanced community action shall promote climate and disaster resilience and biodiversity protection, and create incentives for the transition to renewable energy UNDP CPD Outcome 2: Design and implementation of a portfolio of activities and solutions developed at national and subnational levels for sustainable management of natural resources, integration of ecosystem services approaches, sound management of chemicals and waste, while ensuring that climate change challenges in terms of adaptation and mitigation are fully addressed

	Objective and Outcome Indicators (no more than a total of 20 indicators)	**Baseline[22]**	**Mid-term Target**	**End of Project Target**
Project Objective: **To assist the Republic of Mauritius in strengthening its national greenhouse gas inventory and associated data collection process, and to mainstream greater use of the inventory in policy formulation and NDC tracking**	Indicator 1: direct project beneficiaries disaggregated by sex (individual people)	*0*	60 direct beneficiaries, of whom 30 are women	120 direct beneficiaries, of whom at least 60 are women
	Indicator 2 (Indicator 3 of CBIT tracking tool): Quality of MRV Systems*	3	6	9
	Indicator 3 (Indicator 4 of CBIT tracking tool): Meeting Convention reporting requirements and including mitigation contributions	Initial NDC, Initial, Second, Third and Fourth National Communications; and First BURs submitted to the UNFCCC	Updated NDC submitted by the Government	The First Biennial Transparency Report submitted to the UNFCCC
	Indicator 4 (Indicator 5 of CBIT tracking tool): Qualitative assessment of institutional capacity for transparency-related activities**	2	3	4
Project component 1	**Improving the accuracy and localisation of the national greenhouse gas inventory**			
Project Outcome[23] 1.1 Key Category sectors benefit from locally-calibrated emission factors and/or activity data, enabling the inventory to advance to Tier 2 or Tier 3 GHG estimation approaches	Indicator 5: Number of IPCC sub-categories (among sub-categories 1A1, 1A2, 1A3, 1A4, 1A5, 3A1 and 3B1) using an advanced Tier approach (Tier 2 or Tier 3) in the national emission inventory.	0	At least one IPCC category (among sub-categories 1A1, 1A2, 1A3, 1A4, 1A5, 3A1 and 3B1) use a Tier 2/Tier 3 approach in the national GHG emissions inventory.	At least five IPCC sub-categories (among sub-categories 1A1, 1A2, 1A3, 1A4, 1A5, 3A1 and 3B1) use a Tier 2/Tier 3 approach in the national GHG emissions inventory.
	Indicator 6: Number of national experts trained on 2006 IPCC methodologies and on the development of advanced Tier approaches.	0	At least 20 experts have been trained on 2006 IPCC methodologies.	At least 60 experts (out of which at least 50%, i.e., 30 experts will be women) have been trained on 2006 IPCC methodologies

[22] Baseline, mid-term and end of project target levels must be expressed in the same neutral unit of analysis as the corresponding indicator. Baseline is the current/original status or condition and needs to be quantified. The baseline can be zero when appropriate given the project has not started. The baseline must be established before the project document is submitted to the GEF for final approval. The baseline values will be used to measure the success of the project through implementation monitoring and evaluation.

[23] Outcomes are medium term results that the project makes a contribution towards, and that are designed to help achieve the longer-term objective. Achievement of outcomes will be influenced both by project outputs and additional factors that may be outside the direct control of the project.

	Objective and Outcome Indicators (no more than a total of 20 indicators)	Baseline[22]	Mid-term Target	End of Project Target
Outputs to achieve under Outcome 1.1	1.1 Development of Tier 2 emission factors for key fuels: coal, heavy fuel oil, gasoline, diesel, kerosene and liquified petroleum gas – for application in Energy Industries, Transport, Manufacturing Industry and Construction, and Energy Other Sectors 1.2 Development of Tier 3 emission factors for Mauritius's 8 thermal power plants and a real-time grid emission factor – for application in Energy Industries and (increasingly) Transport 1.3 Development of Tier 2 activity data for Mauritius's land transport sector (road, Metro), augmented by gender and socio-economic usage data 1.4 Development of Tier 2 enteric fermentation emission factors and model for livestock 1.5 Development of Tier 2 allometric equations, root-to-shoot ratios, and carbon densities for 4 key tree species in the Mauritian context 1.6 Ground-truthing forest inventory of privately held forestland and non-forest tree cover (e.g., along riverbanks and roadsides)			
Project component 2	**Strengthening the national greenhouse gas inventory process**			
Outcome 2.1 Reduced burden (time, cost) on institutions supplying data to the national greenhouse gas inventory	Indicator 7: Presence of institutional arrangements for a national transparency framework	There are currently no formal institutional arrangements for a national transparency framework. The roles and responsibilities of the entities involved/to be involved in the MRV system are not defined.	An Analysis of the existing legal framework, competences, staffing and budgets as they relate to climate MRV of the key entities involved in the MRV system is available.	By the end of the project, Mauritius will have a roadmap for the implementation of an enhanced institutional architecture for its MRV system.
	Indicator 8: Progress in the development of an Excel-based system that is being used for continuous data collection and reporting to the UNFCCC.	Data are currently collected on an ad hoc, project-by-project basis	A first draft of the Excel template base model (i.e., a first draft of each of the four sectoral excel templates) is available.	By the end of the project, an Excel template-based model for data collection, processing and submission is operational and used for the collection of data for the estimation of the national GHG emissions inventory.
Outputs to achieve under Outcome 2.1	2.1 Implemented government roadmap for a permanent MRV structure, including firm government financing and institutional commitments 2.2 Development of an IT-based system to simplify and streamline the inventory data collection process			
Project component 3	**Mainstreaming the national greenhouse gas inventory to enhance transparency and support policy-making**			
Outcome 3.1 Enhanced policy-relevance of the national greenhouse gas inventory, transitioning from a periodic UNFCCC obligation to a useful policy tool	Indicator 9: Number of experts trained on the use of the IT based system for inventory preparation.	0	At least 15 experts have been trained on the use of the IT system.	At least 20 experts (out of which 10 will be women) have been trained on the use of the IT system.
Outputs to achieve under Outcome 3.1	*3.1 Targeted training on the use of the new IT-based system and on the use of the inventory for policy formulation, target-setting, scenario analysis and MRV of NDC commitments*			

	Objective and Outcome Indicators (no more than a total of 20 indicators)	Baseline[22]	Mid-term Target	End of Project Target
	3.2 Enhancing the role of the Climate Change Information Centre (CCIC) as a transparency portal			
Project component 4	**Monitoring and Evaluation and Knowledge Management**			
Outcome 4.1	*Indicator 10:* Dissemination of good practices and lessons learned.	Not applicable	Two blog articles on good practices and lessons learnt. One of the articles shall be focused on gender mainstreaming.	Three blog articles on good practices and lessons learnt. One of the articles shall be focused on gender mainstreaming, and at least one article shall be focused on best practices for GHG emission inventories. A report on lessons learnt of the CBIT project in Mauritius will be published and shared in the CBIT Global Platform.
Outputs to achieve under Outcome 4.1	*4.1 Project results and outcomes monitored and evaluated* *4.2 Lessons learned, and best practices shared with other Parties through the Global Coordination Platform and other cooperation networks*			

*Guidance for Ratings for indicator 2 (scale 1-10):

1. Very little measurement is done; reporting is partial and irregular, and verification is not there

2. Measurement systems are in place, but data is of poor quality and/or methodologies are not very robust; reporting is done only on request or to limited audience or partially; verification is not there

3. Measurement systems are in place for a few activities, improved data quality and methodologies, but not cost or time efficient; wider access to reporting is still limited and information is partial; verification is rudimentary/non-standardized

4. Measurement systems are strong in a limited set of activities; however, analyses still need improvement; periodic monitoring and reporting although not yet cost/time efficient; verification is only upon specific request and limited

5. Measurement systems are strong for a limited set of activities and periodically report on key GHG related indicators i.e., mainstreamed into the activity implementation; reporting is improved through few pathways but limited audience and formats; verification limited

6. Measurement systems are strong and cover a greater percentage of activities – feedback loops exist even if they are not fully functioning; reporting is available through multiple pathways and formats but may not be complete/transparent; verification is done through standard methodologies but only partially (i.e., not all data is verifiable)

7. Measurement regarding GHG is broadly done (with widely acceptable methodologies), need for more sophisticated analyses to improve policy; Reporting is periodic with improvements in transparency; verification is done through more sophisticated methods even if partially

8. Strong standardized measurements processes established for key indicators and mainstreamed into institutional policy implementation; reporting is widely available in multiple formats; verification is done for a larger set of information

9. Strong Monitoring and Reporting systems – robust methodologies, cost effective and efficient, periodic; verification done to a significant degree

10. Strong MRV systems that provide quality GHG related information in a transparent, accurate and accessible to a wide audience, with feedback of information from MRV flowing into policy design and implementation

**Guidance for Ratings for indicator 4 (scale 1-4):

1. No designated transparency institution to support and coordinate the planning and implementation of transparency activities under Article 13 of the Paris Agreement exists.

2. Designated transparency institution exists, but with limited staff and capacity to support and coordinate implementation of transparency activities under Article 13 of Paris Agreement. Institution lacks authority or mandate to coordinate transparency activities under Article 13.

3. Designated transparency institution has an organizational unit with standing staff with some capacity to coordinate and implement transparency activities under Article 13 of the Paris Agreement. Institution has authority or mandate to coordinate

transparency activities under Article 13. Activities are not integrated into national planning or budgeting activities.

4. Designated transparency institution(s) has an organizational unit with standing staff with some capacity to coordinate and implement transparency activities. Institution(s) has clear mandate or authority to coordinate activities under Article 13 of the Paris Agreement, and activities are integrated into national planning and budgeting activities

VI. MONITORING AND EVALUATION (M&E) PLAN

The project results, corresponding indicators and mid-term and end-of-project targets in the project results framework will be monitored annually and evaluated periodically during project implementation. If baseline data for some results indicators is not yet available, it will be collected during the first year of project implementation. The Monitoring Plan included in Annex 3 details the roles, responsibilities, frequency of monitoring project results.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. The UNDP Country Office is responsible for ensuring full compliance with all UNDP project monitoring, quality assurance, risk management, and evaluation requirements. Specifically, UNDP will follow the project QA template available at https://intranet-apps.undp.org/ProjectQA/Forms/DesignPrint?fid=3761

Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the GEF Monitoring Policy and the GEF Evaluation Policy and other relevant GEF policies[24]. The costed M&E plan included below, and the Monitoring plan in Annex, will guide the GEF-specific M&E activities to be undertaken by this project.

In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report.

Additional GEF monitoring and reporting requirements:

Inception Workshop and Report: A project inception workshop will be held within 60 days of project CEO endorsement, with the aim to:

a. Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation.
b. Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
c. Review the results framework and monitoring plan.
d. Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP and other stakeholders in project-level M&E.
e. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.
f. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.
g. Plan and schedule Project Board meetings and finalize the first-year annual work plan.
h. Formally launch the Project.

GEF Project Implementation Report (PIR):

The annual GEF PIR covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR. The PIR submitted to the GEF will be shared with the

[24] See https://www.thegef.org/gef/policies_guidelines

Project Board. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

Biennial evaluation: This project does not include a mid-term review. However, an evaluation will be carried out after two years since the start of the project to analyse progress and take corrective measures, if appropriate. Status Survey Questionnaires will be used, in line with GEF and UNFCCC reporting requirements for NCs and BURs.

Knowledge management: The project team will ensure extraction and dissemination of lessons learned and good practices also in relation to mainstreaming gender equality considerations in climate action to enable adaptive management and upscaling or replication at local and global scales. Results will be disseminated to targeted audiences through relevant information sharing fora and networks. The project will contribute to scientific, policy-based and/or any other networks as appropriate (e.g. by providing content, and/or enabling participation of stakeholders/beneficiaries including women)

GEF and/or LDCF Core Indicators:

The GEF and/or LDCF/SCCF Core indicators included as Annex 11 will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the indicator status. The updated monitoring data should be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent ground-truthing. The methodologies to be used in data collection have been defined by the GEF and are available on the GEF website.

Terminal Evaluation (TE):

An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center.

The evaluation will be 'independent, impartial and rigorous. The consultants that will be hired by UNDP evaluation specialists to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the consultants should not be in a position where there may be the possibility of future contracts regarding the project being evaluated.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate.

The final TE report and TE TOR will be publicly available in English and posted on the UNDP ERC by *(*3 September 2025*)*. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report's completion.

Final Report:

The project's terminal GEF PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lessons learned and opportunities for scaling up.

Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information**:** To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper

acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[25] and the GEF policy on public involvement[26].

Monitoring and Evaluation Plan and Budget:			
GEF M&E requirements	**Responsible Parties**	**Indicative costs (US$)**	**Time frame**
Inception Workshop	UNDP country Office/ Project Management Unit	USD 3,000[27]	Within 60 days from the date of First Disbursement.
Inception Report	Project Manager	None	Within 1 month after the Inception Workshop.
Monitoring of indicators in project results framework	Project Manager and project assistant	USD 5,500	Annually prior to GEF PIR. This will include GEF core indicators.
GEF Project Implementation Report (PIR)	Project Manager, UNDP Country Office, and RTA	*None*	Annually typically between June-August
Monitoring all risks (UNDP risk register)	UNDP Country Office Project Manager	USD 2,900	On-going.
Monitoring of stakeholder engagement plan	Project Manager *M&E expert*	*None*	On-going.
Monitoring of gender action plan	Project Gender Officer	None	On-going.
Supervision missions	UNDP Country Office	None[28]	Annually
Oversight missions	RTA and BPPS/GEF	None	Troubleshooting as needed
Biennial evaluation	Project Manager *M&E expert*	*USD 8,000*	November 2022
Biennial progress of GEF and/or LDCF Core indicators and METT or other required Tracking Tools	Project manager	*None*	*Biennially*
Terminal GEF *and/or LDCF/SCCF* Core indicators *and METT or other required Tracking Tools*	Project Manager	*None*	Before terminal evaluation mission takes place
Independent Terminal Evaluation (TE)	Independent evaluator *M&E expert*	USD 21,000	3 September 2025
TOTAL indicative COST		*USD 40,400*	

[25] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/
[26] See https://www.thegef.org/gef/policies_guidelines
[27] This amount includes venue rental and expenses related to logistics. The costs of UNDP CO and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.
[28] The costs of UNDP CO and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Roles and responsibilities of the project's governance mechanism:

Implementing Partner: The Implementing Partner for this project is the Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC).

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

The Implementing Partner is responsible for executing this project. Specific tasks include:

- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- Risk management as outlined in this Project Document;
- Procurement of goods and services, including human resources;
- Financial management, including overseeing financial expenditures against project budgets;
- Approving and signing the multiyear workplan;
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

Project stakeholders and target groups:

Four (4) Technical Committees will be set up. The Technical Committees will be comprised of stakeholders from both the Public, Private and NGO/CBO sectors. As required, stakeholders from additional public bodies and the private sector will be invited to participate in Technical Committees to discuss and advise on specific project activities. Technical Committees will review deliverables under the project as well as any other matters referred to them for advice by the Project Board and will make appropriate recommendations to the Project Board.

The four (4) Technical Committees will be set up as follows:

Technical Committee 1 – Energy Use Industries:

- Central Electricity Board (Chair)
- Ministry of Environment, Solid Waste Management and Climate Change
- Ministry of Finance, Economic Planning and Development
- Statistics Mauritius
- IT Stakeholders (CIB, CISD, GOC)
- EEMO
- Ministry of Industrial Development, SMEs, and Cooperatives
- Business Mauritius
- University of Mauritius
- UNDP

Technical Committee 2 – Real-time grid emission factor:

- Ministry of Energy and Public Utilities (Chair)
- Ministry of Environment, Solid Waste Management and Climate Change Division
- Ministry of Finance, Economic Planning and Development
- Statistics Mauritius
- IT Stakeholders (CIB, CISD, GOC)
- CEB
- MARENA
- EEMO
- MCIA
- Independent Power Producers
- Business Mauritius
- University of Mauritius
- UNDP

Technical Committee 3 - Transport:

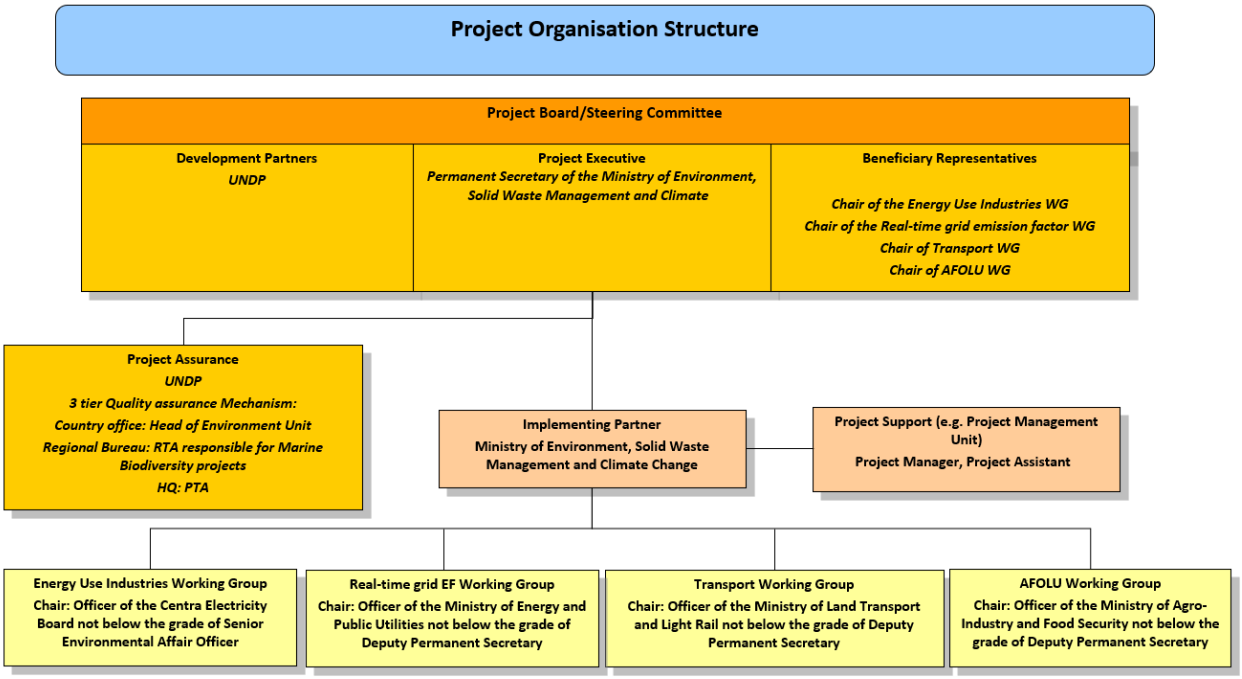
- National Land Transport Authority **(Chair)**
- Ministry of Environment, Solid Waste Management and Climate Change
- Ministry of Finance, Economic Planning and Development
- Statistics Mauritius
- IT Stakeholders (CISD, GOC, CIB)
- Representative of bus owners
- Representative of taxi owners
- Business Mauritius
- UNDP

Technical Committee 4 - AFOLU

- Ministry of Agro-Industry and Food Security **(Chair)**
- Ministry of Finance, Economic Planning and Development
- Statistics Mauritius
- IT Stakeholders (CISD, GOC, CIB)
- FAREI
- Forestry Service
- Mauritius Chamber of Agriculture
- UNDP

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 Board/Steering Committee.

Project organisation structure:



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

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

Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks, and agree on possible mitigation and management actions to address specific risks;
- Agree on project manager's tolerances as required, within the parameters set by UNDP-GEF, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded;
- Advise on major and minor amendments to the project within the parameters set by UNDP-GEF;
- Ensure coordination between various donor and government-funded projects and programmes;
- Ensure coordination with various government agencies and their participation in project activities;
- Track and monitor co-financing for this project;
- Review the project progress, assess performance, and appraise the Annual Work Plan for the following year;
- Appraise the annual project implementation report, including the quality assessment rating report;
- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project;
- Review combined delivery reports prior to certification by the implementing partner;

- Provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Address project-level grievances;
- Approve the project Inception Report, Mid-term Review and Terminal Evaluation reports and corresponding management responses;
- Review the final project report package during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.
- Ensure highest levels of transparency and take all measures to avoid any real or perceived conflicts of interest

The composition of the Project Board must include the following roles:

a. Project Executive: Is an individual who represents ownership of the project and chairs the Project Board. The Executive is normally the national counterpart for nationally implemented projects. The Project Executive is: The Permanent Secretary of the Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC), Mr. Nazir Soobratty.

b. Beneficiary Representative(s): Individuals or groups representing the interests of those who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often civil society representative(s) can fulfil this role. The Beneficiary representative (s) is/are:

   - Chair of the Technical Committee on Energy Use Industry: Officer of the Centra Electricity Board not below the grade of Senior Environmental Affair Officer
   - Chair of the Technical Committee on real-time grid EF: Officer of the Ministry of Energy and Public Utilities not below the grade of Lead Engineer
   - Chair of the Technical Committee on Transport: Officer of the Ministry of Land Transport and Light Rail not below the grade of Deputy Permanent Secretary.
   - Chair of the Technical Committee on AFOLU: Officer of the Ministry of Agro-Industry and Food Security not below the grade of Deputy Permanent Secretary.

The following entities are also highlighted as representatives of key beneficiaries of the project: AFD – Representative nominated by the Director of AFD; UNEP – representative nominated by the country director of UNEP; representatives from the following national entities: Ministry of Finance, Economic Development and Planning, Ministry of Environment, Solid Waste Management and Climate Change, Ministry of Agro-Industry and Food Security, Ministry of Energy and Public Utilities, Statistics Mauritius and Business Mauritius.

c. Development Partner(s): Individuals or groups representing the interests of the parties concerned that provide funding and/or technical expertise to the project. The Development Partner(s) is: UNDP – Resident Representative.

d. Project Assurance: UNDP performs the quality assurance role and supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. UNDP provides a three – tier oversight services involving the UNDP Country Offices and UNDP at regional and headquarters levels. Project assurance is totally independent of the Project Management function.

Project extensions: The UNDP-GEF Executive Coordinator must approve all project extension requests. Note that all extensions incur costs and the GEF project budget cannot be increased. A single extension may be granted on an exceptional basis and only if the following conditions are met: one extension only for a project for a maximum

of six months; the project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs will be covered by non-GEF resources; the UNDP Country Office oversight costs during the extension period must be covered by non-GEF resoruces.

VIII. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is USD 2,068,350. This is financed through a GEF grant of USD 1,269,850 administered by UNDP, and additional support of USD 798,500. UNDP, as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co-financing transferred to UNDP bank account only.

Confirmed Co-financing: The actual realization of project co-financing will be monitored during the terminal evaluation process and will be reported to the GEF. Co-financing will be used for the following project activities/outputs:

Co-financing source	Co-financing type	Co-financing amount	Planned Co-financing Activities/Outputs	Risks	Risk Mitigation Measures
UNDP CO	In-kind	20,000	Technical inputs, logistic support, mission support, transportation services	None	The project team shall alert the Project Board if any issues regarding the co-financing occurs during the project implementation
Agence Francaise de Developement	In-kind	30,000	Participation in meetings and overseeing the project, logistical support, and mission support.	None	
Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC)	In-kind	240,000	Office space and utilities, staff time, meeting venue etc. Participation in all outputs of the project.	None	
Central Electricity board	In-kind	100,000	Technical support, provision of logistics facilities, participation in workshops and meetings, staff time allocated for the CBIT. Outputs 1.1. and 1.2.	None	
Food and Agricultural Research and Extension Institute (FAREI)	In-kind	80,500[29]	Technical support, provision of logistics facilities, site visits, participation in workshops and meetings, staff time allocated for the CBIT. Outputs 1.4.	None	
Forestry service, Ministry of Agro-Industry and food security	In-kind	50,000	Technical support, provision of logistics facilities, site visits, participation in workshops and meetings, staff time allocated for the CBIT. Output 1.5 and 1.6	None	
Mauritius Renewable Energy Agency (MARENA)	In-kind	75,000	Technical support, provision of logistics	None	

[29] *Food and Agricultural Research and Extension Institute's co-financing letter includes contribution to related projects (NAMA, Switch Africa Green, NC4 and BUR) in the amount of USD 27,000 which is deducted from the total amount of USD 107,500.*

Co-financing source	Co-financing type	Co-financing amount	Planned Co-financing Activities/Outputs	Risks	Risk Mitigation Measures
			facilities, participation in workshops and meetings, staff time allocated for the CBIT. Outputs 1.1. and 1.2.		
Ministry of Energy and Public Utilities	In-kind	68,000	Technical support, provision of logistics facilities, participation in workshops and meetings, staff time allocated for the CBIT. Outputs 1.1. and 1.2.	None	
National and Land Transport Authority (NTL)	In-kind	100,000	Technical support, provision of logistics facilities, participation in workshops and meetings, staff time allocated for the CBIT. Outputs 1.3	None	
Independent Power Producer (Omnicane)	In-kind	30,000	Participation in workshops and meetings, site visits, surveys, monitoring and surveillance, time to review documents and for submission of inputs/comments. Use of online emission monitoring equipment. Output 1.2.	None	
University of Mauritius	In-kind	5,000	Participation in workshops and meetings and time to review documents and for submission of inputs/comments.	None	

Budget Revision and Tolerance: As per UNDP requirements outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board.

Should the following deviations occur, the Project Manager/CTA and UNDP Country Office will seek the approval of the BPPS/GEF team to ensure accurate reporting to the GEF:
a) Budget re-allocations among components in the project budget with amounts involving 10% of the total project grant or more;
b) Introduction of new budget items that exceed 5% of original GEF allocation.

Any over expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

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

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

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

Transfer or disposal of assets: In consultation with the Implementing Partner and other parties of the project, UNDP is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project. In all cases of transfer, a transfer document must be prepared and kept on file[30]. The transfer should be done before Project Management Unit complete their assignments.

Financial completion (closure): The project will be financially closed when the following conditions have been met: a) the project is operationally completed or has been cancelled; b) the Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

The project will be financially completed **within 6 months of operational closure or after the date of cancellation**. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the BPPS/GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

Refund to GEF: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the BPPS/GEF Directorate in New York. No action is required by the UNDP Country Office on the actual refund from UNDP project to the GEF Trustee.

30 See https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default.

IX. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Atlas Award ID:	00128404	Atlas Output Project ID:	00122417
Atlas Proposal or Award Title:	CBIT – Greenhouse Gas Inventory		
Atlas Business Unit	MUS10		
Atlas Primary Output Project Title	CBIT – GHG Inventory		
UNDP-GEF PIMS No.	6433		
Implementing Partner	*Ministry of Environment, Solid Waste Management and Climate Change*		

Atlas Activity (GEF Component)	Atlas Implementing Agent	Atlas Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Account Description	Amount Year {1} (USD)	Amount Year {2} (USD)	Amount Year {3} (USD)	Amount Year {4} (USD)	Total (USD)	See Budget Note:
COMPONENT 1 Improving the accuracy and localisation of the national greenhouse gas inventory	*MoESWMCC*	**62000**	**GEF Trustee**	71300	Local Consultants	78,850	81,550	78,050	82,350	320,800	[1]
				71600	Travel	1,000	1,000	1,000	1,000	4,000	[2]
				72100	Contractual Services-Companies	199,000	140,933	124,133	100,134	564,200	[3]
				74200	Audio Visual&Print Prod Costs	1,500	2,000	1,000	2,500	7,000	[4]
				75700	Training, Workshops and Confer	5,000	2,000	5,000	2,000	14,000	[5]
					Total Component 1	**285,350**	**227,483**	**209,183**	**187,984**	**910,000**	
COMPONENT 2: Strengthening the national greenhouse gas inventory process	*MoESWMCC*	**62000**	**GEF Trustee**	72100	Contractual Services-Companies	-	30,660	20,440	-	51,100	[6]
				71300	Local Consultants	17,000	47,800	10,300	-	75,100	[7]
				71600	Travel	1,000	1,900	500	-	3,400	[8]
				75700	Training, Workshops and Confer	2,000	3,000	-	-	5,000	[9]
					Total Component 2	**20,000**	**83,360**	**31,240**	-	**134,600**	
COMPONENT 3: Mainstreaming the national greenhouse gas inventory to enhance transparency and support policymaking	*MoESWMCC*	**62000**	**GEF Trustee**	71300	Local Consultants	-	-	35,750	35,750	71,500	[10]
				74200	Audio Visual&Print Prod Costs	-	-	1,250	1,250	2,500	[11]
				75700	Training, Workshops and Confer	-	-	3,000	3,000	6,000	[12]
					Total Component 3	-	-	**40,000**	**40,000**	**80,000**	
COMPONENT 4: KM and M&E	*MoESWMCC*	**62000**	**GEF Trustee**	71200	International Consultants	-	-	-	21,000	21,000	[13]
				71300	Local Consultants	3,500	5,500	3,500	3,500	16,000	[14]
				74200	Audio Visual&Print Prod Costs	100	100	100	100	400	[15]
				75700	Training, Workshops and Confer	3,000	-	-	-	3,000	[16]
					Total Component 4	**6,600**	**5,600**	**3,600**	**24,600**	**40,400**	
PROJECT MANAGEMENT UNIT	*MoESWMCC*	**62000**	**GEF Trustee**	71400	Contractual Services - Individ	21,450	21,450	21,450	21,450	85,800	[17]
				74100	Professional Services	4,000	4,000	4,000	4,000	16,000	[18]

Atlas Activity (GEF Component)	Atlas Implementing Agent	Atlas Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Account Description	Amount Year {1} (USD)	Amount Year {2} (USD)	Amount Year {3} (USD)	Amount Year {4} (USD)	Total (USD)	See Budget Note:
				72800	Communic & Audio Visual Equip	2,050	500	500	-	3,050	[19]
					Total Management	**27,500**	**25,950**	**25,950**	**25,450**	**104,850**	
					PROJECT TOTAL	**339,450**	**342,393**	**309,973**	**278,034**	**1,269,850**	

Summary of Funds: [31]

	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Total
GEF	**339,450**	**342,393**	**309,973**	**278,034**	**1,269,850**
Agence Francaise de Developement	**7,500**	**7,500**	**7,500**	**7,500**	**30,000**
Ministry of Social Security, National Solidarity, and Environment and Sustainable Development (MoSSNSESD)	**60,000**	**60,000**	**60,000**	**60,000**	**240,000**
Central Electricity board	**25,000**	**25,000**	**25,000**	**25,000**	**100,000**
Food and Agricultural Research and Extension Institute (FAREI)	**20,125**	**20,125**	**20,125**	**20,125**	**80,500**[32]
Forestry service, Ministry of Agro-Industry and food security	**12,500**	**12,500**	**12,500**	**12,500**	**50,000**
Mauritius Renewable Energy Agency (MARENA)	**18,750**	**18,750**	**18,750**	**18,750**	**75,000**
Ministry of Energy and Public Utilities	**17,000**	**17,000**	**17,000**	**17,000**	**68,000**
National and Land Transport Authority (NTL)	**25,000**	**25,000**	**25,000**	**25,000**	**100,000**
UNDP	**5,000**	**5,000**	**5,000**	**5,000**	**20,000**
Independent Power Producer (Omnicane)	**7,500**	**7,500**	**7,500**	**7,500**	**30,000**
University of Mauritius	**5,000**				**5,000**
TOTAL	**542,825**	**540,768**	**508,348**	**476,409**	**2,068,350**

[31] *Summary table includes all financing of all kinds: GEF financing, co-financing, cash, in-kind, etc.*

[32] *Food and Agricultural Research and Extension Institute's co-financing letter includes contribution to related projects (NAMA, Switch Africa Green, NC4 and BUR) in the amount of USD 27,000 which is deducted from the total amount of USD 107,500.*

Budget note number	Comments
[1]	Specialist on GHG emissions from the energy sector for output 1.1. Development of Tier 2 emission factors for key fuels (150 days; 250 USD/day) Specialist on GHG emissions from electricity production for output 1.2 Development of Tier 3 emission factors for thermal power plants (150 days; 250 USD/day) Specialist on GHG emissions from transport for output 1.3 Development of Tier 2 activity data for land transport sector (150 days; 250 USD/day) Specialist on GHG emissions from the agriculture sector for output 1.4 Development of Tier 2 enteric fermentation emission factors for livestock (200 days; 250 USD/day) Specialist on GHG emissions from the Forestry and Land Use sector for output 1.6 Forest inventory of forestland and non-forest tree cover (250 days; 250 USD/day) National consultant to support project coordination, coordination of stakeholders for the development of advanced tiers in outputs 1.1-1.6; assistance in data collection; quality assurance of the reports and relevant results; ensure that the results are in line with national circumstances; assist the project manager in project implementation and in the development of project reports; biennial evaluation. (26 months; 3,500 USD/month) Gender specialist (6 weeks; 800 USD/week)
[2]	Travel expenses to attend relevant workshops.
[3]	One contract by output for carrying out the technical activities defined **(**see activities defined in section IV and/or annex 6. Overview of technical consultancies**)**
[4]	Production of printed Project information sheets and other outreach material
[5]	Meetings for discussing the methodological approach to follow under each output. Validation meetings. Capacity building workshops on 2006 IPCC methodologies and on the development of advanced Tier approaches.
[6]	One contract for carrying out the technical activities defined for output 2.1 **(**see activities defined in section IV and/or annex 6. Overview of technical consultancies**)**
[7]	Specialist on climate change MRV systems for output 2.1 (45 days; 250 USD/day) Specialist on GHG emission inventories with experience in Mauritius for output 2.2 (165 days; 250 USD/day) National consultant to support project coordination, coordination of stakeholders for the development of advanced tiers in outputs 2.1-2.2; assistance in data collection; quality assurance of the reports and relevant results; ensure that the results are in line with national circumstances; assist the project manager in project implementation and in the development of project reports; biennial evaluation. (6 months; USD 3,500/month) Local gender specialist (2 weeks; USD 800/week)
[8]	Travel expenses to attend relevant workshops. Travel and DSA of international consultant
[9]	Meetings for discussing the methodological approach to follow and coordination meeting under each output. Validation meetings
[10]	Specialist on GHG emission inventories with experience in Mauritius for output 3.1 (40 days; 250 USD/day) National consultant to support project coordination, coordination of stakeholders for the development of advanced tiers in outputs 3.1-3.2; assistance in data collection; quality assurance of the reports and relevant results; ensure that the results are in line with national circumstances; assist the project manager in project implementation and in the development of project reports; biennial evaluation (66 days; 250 USD/day). IT specialist for output 3.2 (180 days; 250 USD/day)
[11]	Production of printed Project information sheets and other outreach material
[12]	Meetings for discussing the methodological approach to follow and coordination meeting under each output.

Budget note number	Comments
	Validation meetings
[13]	International independent consultant for terminal evaluation (21,000 USD; lumpsum)
[14]	National consultant for biennial evaluation (8,000 USD), nat. consultant to support project coordination, terminal evaluation, monitoring activities, and supporting the development of dissemination products (4 months; 2000 USD/month)
[15]	Production of printed Project information sheets and other outreach material
[16]	Project inception workshop and validation workshop
[17]	Support for Project Manager (6 months; 3,500 USD/month) and Project Assistant (36 months; 1,800 USD/month) salaries; The cost of the technical work is distributed among technical components while PM work is budgeted and will be charged to PMU cost.
[18]	Financial audits as per UNDP and GEF requirements
[19]	Information Technology equipment

X. LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Mauritius and UNDP, signed on 29 August 1974. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

This project will be implemented by Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC) ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

XI. RISK MANAGEMENT

1. Consistent with the Article III of the SBAA, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

   a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;

   b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

2. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.

3. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.

4. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.

   (a) In the implementation of the activities under this Project Document, the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").

   (b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment.

5. a) In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities), and shall require from its sub-parties referred to in paragraph 4 (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include: policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will and will require that such sub-parties will take all appropriate measures to:

      i. Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;

ii. Offer employees and associated personnel training on prevention and response to SH and SEA, where the Implementing Partner and its sub-parties referred to in paragraph 4 have not put in place its own training regarding the prevention of SH and SEA, the Implementing Partner and its sub-parties may use the training material available at UNDP;

iii. Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties referred to in paragraph 4 have been informed or have otherwise become aware, and status thereof;

iv. Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and

v. Promptly and confidentially record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in paragraph 4 with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.

b) The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties referred to in paragraph 4, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.

6. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

7. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

8. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

9. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

10. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

11. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes in accordance with UNDP's regulations, rules, policies and procedures. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

12. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

    Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

13. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail the Implementing Partner's obligations under this Project Document.

    Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

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

14. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

15. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

16. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.

XII. MANDATORY ANNEXES

Annex 1: Project Map and geospatial coordinates of the project area

Annex 2: Multiyear Workplan

Annex 3: Monitoring Plan

Annex 4: Social and Environmental Screening Procedure (SESP).

Annex 5: UNDP Atlas Risk Register

Annex 6: Overview of technical consultancies/subcontracts

Annex 7: Stakeholder Engagement Plan

Annex 8: Gender Analysis and Gender Action Plan

Annex 9: Procurement Plan – for first year of implementation especially

Annex 10: Co-financing letters

Annex 11: GEF and/or LDCF/SCCF Core indicators

Annex 12: GEF Taxonomy

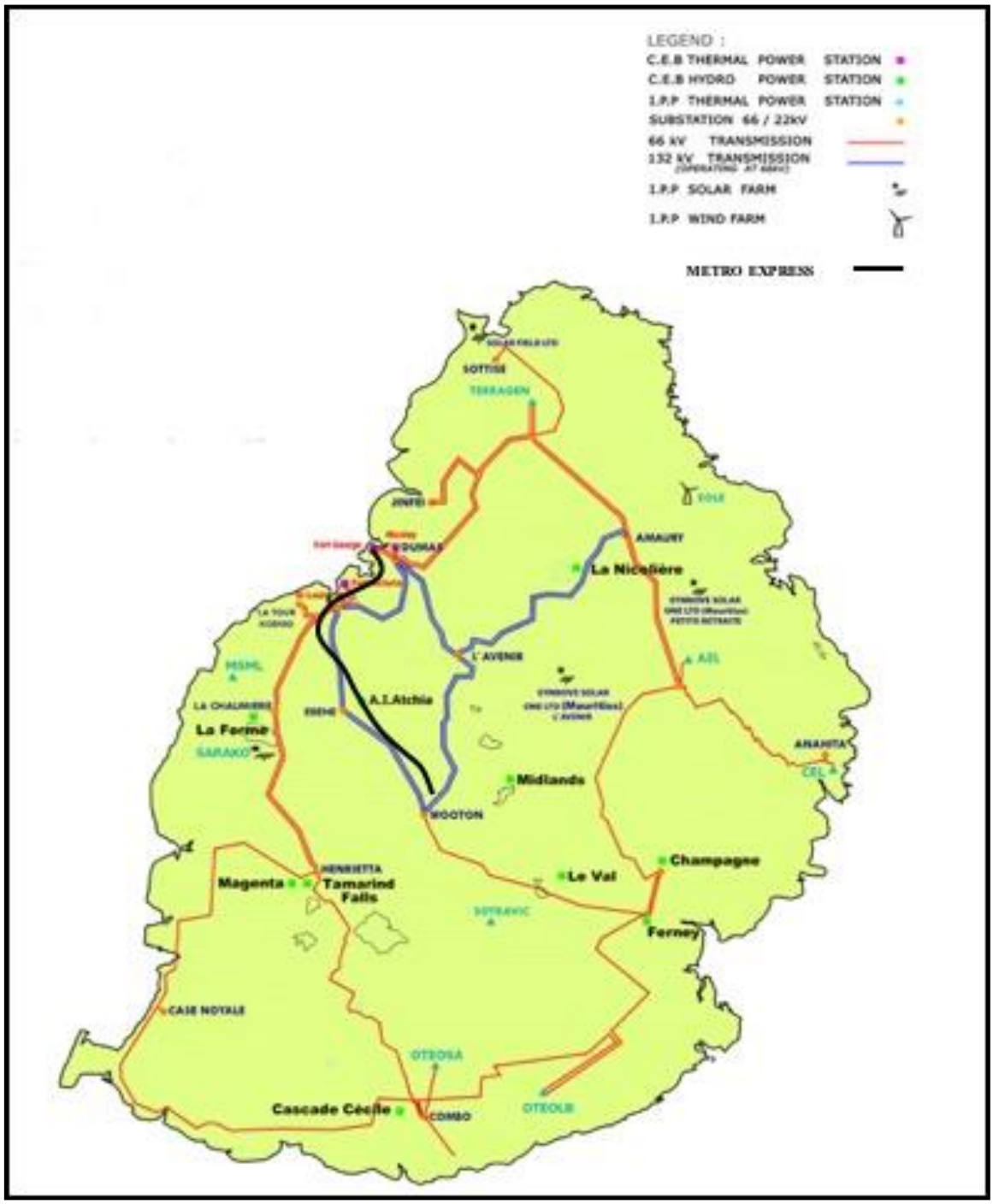
Annex 13: Partners Capacity Assessment Tool and HACT assessment

Annex 14: UNDP Project Quality Assurance Report (to be completed in UNDP online corporate planning system)

Annex 15: Knowledge management approach

Annex 1: Project map and Geospatial Coordinates of project sites

Figure 3: Map of the Main Island of Mauritius (showing the locations of thermal power stations and the Metro Express)



Annex 2: Multi Year Work Plan

Component	Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Improving the accuracy and localisation of the national greenhouse gas inventory	1.1 Key Category sectors benefit from locally-calibrated emission factors and/or activity data, enabling the inventory to advance to Tier 2 or Tier 3 GHG estimation approaches	1.1 Development of Tier 2 emission factors for key fuels: coal, heavy fuel oil, gasoline, diesel, kerosene and liquified petroleum gas – for application in Energy Industries, Transport, Manufacturing Industry and Construction, and Energy Other Sectors	Developing a methodological approach for the development of Tier 2 emission factors, including the definition of the scope, survey design, definition of laboratory testing required, and all methodological steps needed to derive national specific emission factors for the inventory. The process shall ensure the emission factor is in line with 2006 IPCC methodologies and good practices.																
			Collecting the necessary samples with the collaboration of the energy stakeholders of the country.																
			In line with the methodological approach, undertaking laboratory analysis in the premises of the University of Mauritius. The fuel characteristics of the sample and the combustion emissions under controlled circumstances need to be fully documented.																
			Processing the information generated for deriving national-specific combustion emission factors.																
			Compare the results obtained with other national-specific emission factors and default values provided by 2006 IPCC Guidelines.																
			Prepare a report documenting the entire process followed for developing the national specific emission factors.																
			Capacity building to energy stakeholders on 2006 IPCC methodologies, including sectoral and reference approaches, estimating uncertainty, and developing and using energy balances.																
		1.2 Development of Tier 3 emission factors for Mauritius's 8 thermal power plants and a real-time grid emission factor – for application in Energy Industries and (increasingly) Transport	Defining the scope and the methodological approach to follow for obtaining the Tier 3 emission factor and real time grid emission factor in coordination with energy stakeholders.																
			Collecting data from the nine thermal power plants for a common period, as defined in the methodological approach.																
			Process the data and perform the necessary calculations to define the Tier 3 emission factor in line with 2006 IPCC Guidelines.																
			Process the data and perform the necessary calculations for estimating a benchmark for the grid emission factor.																
			Define the roles and responsibilities of the entities involved in both the estimation of the Tier 3 emission factor and the real time grid emission factor.																

Component	Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
			Prepare a timeline and a workplan for future updates of both the Tier 3 emission factor and the real time grid emission factor.																
			Automatise the calculation for the real time grid emission factor and define the information flow.																
			Capacity building to energy stakeholders on 2006 IPCC methodologies and on how to estimate the mitigation impact of mitigation actions in the energy sector.																
		1.3 Development of Tier 2 activity data for Mauritius's land transport sector (road, Metro), augmented by gender and socio-economic usage data	Identification of best international and regional practices for transport use surveys. This will include the development of several case studies to analyse in detail the most successful applicable cases.																
			Considering best international practices, design a survey methodology for obtaining data on journey characteristics, including journey frequencies, durations, average speeds, and occupancy rates. The design will be made together with NLTA to address possible improvement areas in its statistics.																
			Conducting a pilot test of the survey methodology, collect data and process it.																
			Produce a methodological report with the results of the process, identifying gaps and weaknesses and proposing a roadmap for the implementation of the transport use survey in the regular operations of the NLTA.																
			Perform a capacity building exercise to relevant stakeholders (including NLTA) for identifying and estimating the mitigation impact of transport mitigation actions in line with the enhanced transparency framework requirements.																
		1.4 Development of Tier 2 enteric fermentation emission factors and model for livestock	Developing a quality assurance exercise of the AFOLU sector of the latest available inventory in Mauritius, to identify weaknesses, constrains and gaps. This QA exercise will feed the improvement of output 1.4, Output 1.5 and output 1.6.																
			Identify and analyse Tier 2 and Tier 3 emission factors available in the emission factor database of IPCC and in other countries with similar cattle characteristics.																
			Design a methodology for creating a statistical model together with FAREI to derive Tier 2 emission factor for the national GHG emissions inventory.																
			Using the above model, estimate a Tier 2 emission factor for enteric fermentation emissions to be used in the inventory of Mauritius																

Component	Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
			A capacity building workshop to FAREI and other relevant AFOLU stakeholders in 2006 IPCC Guidelines and in the development of Tier 2/Tier 3 emission factors.																
		1.5 Development of Tier 2 allometric equations, root-to-shoot ratios, and carbon densities for 4 key tree species in the Mauritian context	Analysis of the different methodological alternatives for estimating a Tier 2 approach in the different emission sources in sub-category 3B1 Forest Land.																
			Define the scope of the analysis and propose a methodology and work plan in agreement with FAREI for the estimation of Tier 2 emission factors.																
			Conduct the survey, testing, laboratory analysis or other techniques, if deemed appropriate, to use the targeted models as defined in the methodological approach and work plan.																
			Estimate Tier 2 emission factors for the key forest species available in the country (Pinus elliottii, Eucalyptus sp, Araucaria sp, Tabebuia pallida, Cryptomeria japonica and Casuarina esqisetifolia) and compare the results with 2006 IPCC default values and other values of similar countries.																
			Provide capacity building on the use of 2006 IPCC methodologies in the AFOLU sector, complementary to the activities carried out under UNDP-GEF SLM project (see Table 2). The capacity building exercise shall also address the development of advanced Tier approaches, so the stakeholders can replicate the same approach in other inventory categories in the future.																
		1.6 Ground-truthing forest inventory of privately held forestland and non-forest tree cover (e.g., along riverbanks and roadsides)	Analyse the national forest inventory for identifying possible gaps and propose improvement areas.																
			In line with the current forest survey procedures and the improvement areas identified in previous activity, and in full coordination with FAREI and landowners, propose a sampling methodology to improve the forest inventory in privately owned areas in the country.																
			Support FAREI in undertaking the survey, following national procedures																
			Process the data gathered to be incorporated in the information system of FAREI. Write a methodological report on the impact of the update made.																
			Provide capacity building on the use of 2006 IPCC methodologies in the AFOLU sector, complementary to the activities carried out under UNDP-GEF SLM project (see Table 2).																

Component	Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
2: Strengthening the national greenhouse gas inventory process	2.1 Reduced burden (time, cost) on institutions supplying data to the national greenhouse gas inventory	2.1 Implemented government roadmap for a permanent MRV structure, including firm government financing and institutional commitments	Analysis of the existing legal framework, competences, staffing and budgets as they relate to climate MRV of the key entities involved in the MRV system, including all entities identified in the stakeholder engagement plan of the CBIT project. This analysis will aim at defining detailed roles and responsibilities of all entities involved/to be involved in the national MRV system based on their current competences.																
			Develop case studies on successful non-Annex I countries implementing climate change MRV systems. These case studies shall identify the roles and responsibilities of national stakeholders involved in the MRV and the legal framework in place to enable the functioning of the MRV system.																
			Based on the case studies and the analysis of competences, develop a proposal for an enhanced institutional architecture for the climate change MRV of Mauritius, which will need to respond to the information requirements of the enhanced transparency framework (GHG emission inventories, mitigation, support and NDC tracking). The institutional architecture shall clearly define the roles and responsibilities of each entity involved in the MRV system.																
			Develop a roadmap for the implementation of the enhanced institutional architecture, if appropriate.																
		2.2 Development of an IT-based system to simplify and streamline the inventory data collection process	Analyse the existent excel workbooks at the CCD and the data available in each data provider database system.																
			Analyse the possibility of developing an application programming interface (API) that allows the output tables to be seamlessly imported from Excel into the IPCC software																
			Identify the gaps and needs of the existent workbooks and develop a work plan for improving the existent workbooks, creating new files when needed.																
			Coordinate with stakeholders to ensure the excel workbooks are adjusted to the circumstances and expectations of both data providers and CCD.																
			Develop a set of workbooks validated by stakeholders for data sharing between data providers and CCD for its use in the national GHG emission inventory.																
3: Mainstreaming the	3.1 Enhanced policy-relevance of the national greenhouse	Output 3.1 Targeted training on the use of the new IT-based	Developing a capacitation plan, which will include a set of capacity building workshops and a step-by-step manual for the use of the excel template-based model.																

Component	Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
national greenhouse gas inventory to enhance transparency and support policy-making	gas inventory, transitioning from a periodic UNFCCC obligation to a useful policy tool	system and on the use of the inventory for policy formulation, target-setting, scenario analysis and MRV of NDC commitments	Delivering capacity building workshops on the use the Excel template-based model for data collection, processing, and submission. Different workshops will be developed, grouping the institutions considering their common characteristics.																
		Output 3.2 Enhancing the role of the Climate Change Information Centre (CCIC) as a transparency portal	Consultation between the CCD, the Central Informatics Bureau, and the Central Information Systems Division to prioritise improvements in the CCIC website.																
			Improving the responsiveness and compatibility of the CCIC website, redesigning all the pages of the portal.																
			Defining and implementing the processes for transferring and storing information GHG emission inventory information in the portal, including the IT system developed under output 2.2.																
			Defining and implementing the processes for disseminating information from the CCIC.																
			Developing a roadmap for further improving the role of the CCIC as a transparency portal.																

Annex 3: Monitoring Plan

This Monitoring Plan and the M&E Plan and Budget in Section VI of this project document will both guide monitoring and evaluation at the project level for the duration of project implementation.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[33]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
Project objective from the results framework This CBIT project will assist the Republic of Mauritius in strengthening its national greenhouse gas inventory and associated data collection process, and to mainstream greater use of the inventory in policy formulation and NDC tracking	***Indicator 1*** Direct project beneficiaries disaggregated by sex (individual people)	***Baseline:*** 0 ***Mid-term target:*** 60 direct beneficiaries, of whom 30 are women ***End of project target:*** 120 direct beneficiaries, of whom at least 60 are women	Direct beneficiaries from the proposed activities of the CBIT project are estimated to be around 120 professionals over a period of four years. MOE encourages a gender balanced approach and aspire for an ideal ratio of 1:1 between beneficiaries; men and women at all decision-making levels.	Attendance sheets, interviews, and reports of participants to the different workshops and other activities within the CBIT project to estimate the number of trained individuals	Annually Reported in DO tab of the GEF PIR	Project management Unit and consultants in charge of the mid-term and final evaluation	Number of people involved in the reporting to the UNFCCC and number of people mentioned in the consultant's reports disaggregated by gender	The objective to train technical staff with an ideal ratio of 1:1 between men and woman during the CBIT project depends on the staff from the different ministries and national entities that will participate, which do not consist of an equal share in gender
	Indicator 2 Quality of MRV Systems (Indicator 3 of CBIT tracking tool)	***Baseline:*** 3 ***Mid-term target:*** 6 ***End of project target:*** 9	(scale 1-10): 1. Very little measurement is done; reporting is partial and irregular, and verification is not there 2. Measurement systems are in place, but data is of poor quality and/or methodologies are not very robust; reporting is done only on request or to limited	Terminal Evaluation consultant will evaluate the success in the implementation of the project as well as the quality of the reports submitted to the UNFCCC and the summary	Annually	Project manager and consultants in charge of the mid-term and final evaluation	Summary reports elaborated by the technical team of experts during the technical analysis of BURs	

[33] Data collection methods should outline specific tools used to collect data and additional information as necessary to support monitoring. The PIR cannot be used as a source of verification.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[33]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
			audience or partially; verification is not there 3. Measurement systems are in place for a few activities, improved data quality and methodologies, but not cost or time efficient; wider access to reporting is still limited and information is partial; verification is rudimentary/non-standardized 4. Measurement systems are strong in a limited set of activities however; analyses still need improvement; periodic monitoring and reporting although not yet cost/time efficient; verification is only upon specific request and limited 5. Measurement systems are strong for a limited set of activities and periodically report on key GHG related indicators i.e., mainstreamed into the activity implementation; reporting is improved through few pathways but limited audience and formats; verification limited 6. Measurement systems are strong and cover a greater percentage of activities – feedback loops exist even if they are not fully functioning; reporting is available through multiple pathways and formats but may not be complete/transparent;	reports received from UNFCCC. Interviews with all relevant stakeholders will also ascertain their level of involvement. CSOs, NGOs and central institutions should also be interviewed to assess their knowledge and roles. The level of operation of the new MRV system should be assessed as well as the degree of implementation of legal instruments on the field.				

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[33]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
			verification is done through standard methodologies but only partially (i.e., not all data is verifiable) 7. Measurement regarding GHG is broadly done (with widely acceptable methodologies), need for more sophisticated analyses to improve policy; Reporting is periodic with improvements in transparency; verification is done through more sophisticated methods even if partially 8. Strong standardized measurements processes established for key indicators and mainstreamed into institutional policy implementation; reporting is widely available in multiple formats; verification is done for a larger set of information 9. Strong Monitoring and Reporting systems – robust methodologies, cost effective and efficient, periodic; verification done to a significant degree 10. Strong MRV systems that provide quality GHG related information in a transparent, accurate and accessible to a wide audience, with feedback of information from MRV flowing into policy design and implementation.					

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[33]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	Indicator 3 Meeting Convention reporting requirements and including mitigation contributions (Indicator 4 of CBIT tracking tool)	***Baseline:*** Initial NDC, Initial, Second, Third and Fourth National Communications; and First BURs submitted to the UNFCCC ***Mid-term target:*** Updated NDC endorsed by the Government ***End of project target:*** Updated NDC submitted to the UNFCCC	Developing country Parties must send to the UNFCCC an update of their NDCs (the first one in 2020) every five years, National Communications every four years and BURs every two years till 2024. From 2024 the BTRs will be submitted annually and will replace both the NCs and the BURs. Currently (May 2020) India is updating its first NDC.	UNFCC website and interviews	Annually	Project manager and consultants in charge of the mid-term and final evaluation	UNFCCC website	
	Indicator 4 Qualitative assessment of institutional capacity for transparency-related activities (Indicator 4 of CBIT tracking tool)	***Baseline:*** 2 ***Mid-term target:*** 3 ***End of project target:*** 4	(scale 1-4): 1. No designated transparency institution to support and coordinate the planning and implementation of transparency activities under Article 13 of the Paris Agreement exists. 2. Designated transparency institution exists, but with limited staff and capacity to support and coordinate implementation of transparency activities under Article 13 of Paris Agreement. Institution lacks authority or mandate to coordinate transparency activities under Article 13. 3. Designated transparency institution has an organizational unit with	Information reported in national documents and publications and by interviews	Annually	Project manager and consultants in charge of the mid-term and final evaluation	Reports submitted to the UNFCCC and national publications and working papers	The assessment of the institutional capacity is qualitative by nature which poses a risk of subjectivity in the assessment.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[33]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
			standing staff with some capacity to coordinate and implement transparency activities under Article 13 of the Paris Agreement. Institution has authority or mandate to coordinate transparency activities under Article 13. Activities are not integrated into national planning or budgeting activities. 4. Designated transparency institution(s) has an organizational unit with standing staff with some capacity to coordinate and implement transparency activities. Institution(s) has clear mandate or authority to coordinate activities under Article 13 of the Paris Agreement, and activities are integrated into national planning and budgeting activities					
Project Outcome 1 Improving the accuracy and localisation of the national greenhouse gas inventory	***Indicator 5*** Number of IPCC sub-categories (among sub-categories 1A1, 1A2, 1A3, 1A4, 1A5, 3A1 and 3B1) using an advanced Tier approach (Tier 2 or Tier 3) in the	***Baseline:*** 0 ***Mid-term target:*** At least one IPCC category (among sub-categories 1A1, 1A2, 1A3, 1A4, 1A5, 3A1 and 3B1) use a Tier 2/Tier 3 approach in the national GHG emissions inventory. ***End of project target:***	This indicator aims to measure the development of locally calibrated emission factors in order to use an advanced Tier approach in the national emission inventory.	Evaluation of the used data and methodologies for the national emission inventory from national documents	Annually	Project Manager	Qualitative assessment of the national GHG inventory and verification of the proper way of measuring and collecting GHG emissions	

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[33]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	national emission inventory.	At least five IPCC sub-categories (among sub-categories 1A1, 1A2, 1A3, 1A4, 1A5, 3A1 and 3B1) use a Tier 2/Tier 3 approach in the national GHG emissions inventory.						
	Indicator 6 Number of national experts trained on 2006 IPCC methodologies and on the development of advanced Tier approaches	***Baseline:*** 0 ***Mid-term target:*** At least 20 experts have been trained on 2006 IPCC methodologies. ***End of project target:*** At least 60 experts (out of which 30 will be women) have been trained on 2006 IPCC methodologies	The objective of this indicator is to measure the participation of stakeholders in the use of the new methodologies and approaches.	Training and capacity building workshop reports	Annually	Project Manager	Reports on the provided trainings and degree of knowledge of the interviewed stakeholders	
Project Outcome 2 Strengthening the national greenhouse gas inventory process	***Indicator 7*** Presence of institutional arrangements for a national transparency framework	***Baseline:*** There are currently no formal institutional arrangements for a national transparency framework. The roles and responsibilities of the entities involved/to be involved in the MRV	This indicator will monitor the development of a national enhanced institutional framework concerning MRV activities.	Enhanced institutional architecture for its MRV system is developed under the CBIT project	Annually	Project Manager	Qualitative assessment of the improved MRV system	

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[33]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
		system are not defined. ***Mid-term target:*** An Analysis of the existing legal framework, competences, staffing and budgets as they relate to climate MRV of the key entities involved in the MRV system is available. ***End of project target:*** By the end of the project, Mauritius will have a roadmap for the implementation of an enhanced institutional architecture for its MRV system.						
	Indicator 8 Presence of an operational Excel-based system that is being used for continuous data collection and reporting to the UNFCCC.	***Baseline:*** Data are currently collected on an ad hoc, project-by-project basis. ***Mid-term target:*** A first draft of the Excel template base model is available. ***End of project target:*** By the end of the project, an Excel	The objective of this indicator is to measure the implementation of an operational Excel-based system for data collection and reporting to the UNFCCC.	Evaluation of the progress of the development of the Excel-based system	Annually	Project Manager	Assessment of the operationalization of the data collection and reporting system Degree of knowledge of the interviewed stakeholders on the use of the improved data	

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[33]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
		template-based model for data collection, processing and submission is operational and used for the collection of data for the estimation of the national GHG emissions inventory.					collecting system	
Project Outcome 3 Mainstreaming the national greenhouse gas inventory to enhance transparency and support policy-making	***Indicator 9*** Number of experts trained on the use of the IT based system for inventory preparation.	***Baseline:*** 0 ***Mid-term target:*** At least 10 experts have been trained on the use of the IT system. ***End of project target:*** At least 20 experts (out of which 10 will be women) have been trained on the use of the IT system.	This indicator aims to monitor the training on the use of the IT based system for the inventory preparation	Training and capacity building workshop reports and interviews	Annually	Project Manager	Reports on the provided trainings and degree of knowledge of the interviewed stakeholders	
Project Outcome 4 Monitoring and evaluation and knowledge management	***Indicator 10*** Dissemination of good practices and lessons learned	**Baseline:** Not applicable ***Mid-term target:*** Two blog articles on good practices and lessons learnt. One of the articles shall be focused on gender mainstreaming.	The objective of this indicator is to monitor the development of dissemination products for sharing lessons learned in the project.	Interviews with the Project Manager and other relevant stakeholders	Two last years of the project	Project Manager annually and terminal evaluation consultants four months prior to project closure	Information available online, in meetings minutes and in the GEF CBIT platform	

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[33]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
		End of project target: Two blog articles on good practices and lessons learnt. One of the articles shall be focused on gender mainstreaming, and at least one article shall be focused on best practices for GHG emission inventories.						

Annex 4: UNDP Social and Environmental Screening Procedure (SESP)

Justification for the SESP exemption- CBIT Mauritius

Capacity Building Initiative for Transparency (CBIT) is an initiative that supports developing countries to build institutional and technical capacity to meet the new requirements of the enhanced transparency framework defined in Article 13 of the Paris Agreement.

The CBIT has three broad aims:

- Strengthen national institutions for transparency-related activities in line with national priorities;
- Provide relevant tools, training, and assistance for meeting the provisions stipulated in Article 13 of the Agreement;
- Assist in the improvement of transparency over time.

The main focus of this CBIT project is to assist the Government of Mauritius in providing support for building institutional and technical capacities to meet these enhanced transparency requirements as defined in Article 13 of the Paris Agreement. It will use a capacity strengthening approach to shift from ad hoc reporting to a continuous process of monitoring, reporting, and verification (MRV) that will capture transparency activities and allow the country to track its progress against its commitments under its National Determined Contribution (NDC). The project has indeed four components:

1. Improving the accuracy and localisation of the national greenhouse gas inventory
2. Strengthening the national greenhouse gas inventory process
3. Mainstreaming the national greenhouse gas inventory to enhance transparency and support policymaking
4. Knowledge Management and Monitoring and evaluation

All project activities fall under SESP exemption criteria as broadly shown here:

- Preparation and dissemination of reports, documents and communication material (National Communication and Biennial Update Reports: project component 1, 2 and 3)
- Organization of an event, workshop, training (creating capacities for climate reporting: all project components)
- Strengthening capacities of partners to participate in international negotiations and conferences (supporting and enforcing a technical baseline for UNFCCC negotiations: all project components)
- Partnership coordination (including UN coordination) and management of networks (specially a coordination with other GEF projects and activities in the country on climate mitigation and adaptation: all project components)

The combined implementation of those outcomes will allow Mauritius to be able to better prepare its climate reporting and tracking documents to be submitted through Biennial Transparency Reports and National Communications (both EAs) to the UNFCCC and it is in line with the exemption criteria presented above.

Based on the exemption criteria, this project is considered exempted from the SESP screening

Annex 5: UNDP Risk Register

#	Description	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner
1	Political risks associated with changes in government priorities	Political	P[34] = 2 I[35] = 3	As a climate-vulnerable SIDS, the Republic of Mauritius is a strong supporter of the UNFCCC and Paris Agreement. Furthermore, the GEF project supports obligatory (as opposed to optional) GHG reporting requirements under the UNFCCC, notably in the form of the national GHG inventory. Accordingly, it is extremely unlikely that government support for the project will decline from its currently high level. Continuous engagement with a broad range of stakeholders will further minimise impacts of any political changes on the project, as will the fact that the Executing Entity (MoESWMCC) also serves as the UNFCCC Focal Point for Mauritius.	Project Board/steering committee + Project Manager
2	Inadequate participation and support of all stakeholders and partners, and poor cooperation between participating institutions	Organizational	P = 1 I = 2	The project responds to explicit requests for assistance articulated in the Third National Communication and the National GHG Inventory Report, and as further reinforced in other official reports (such as the Technology Needs Assessment and the National Capacity Self-Assessment) and during stakeholder consultations undertaken for PIF development. The level of stakeholder interest and engagement is extremely high, and all project interventions are explicitly aligned with the relevant institutions' strategies and policies (e.g., the Long-Term Energy Strategy, the MARENA Action Plan, the Strategic Plan of the Ministry of Agro-Industry and Food Security, etc.). Inadequate participation is, accordingly, considered to be a low risk, further mitigated by the project's intention to engage in continuous liaison with institutions, regular reporting, monitoring of progress and acknowledgement of efforts and achievements by each institution. Participating institutions have been actively involved from the beginning in design, implementation and management decisions, and will be fully involved in project preparation. Explicit roles and responsibilities will be allocated, in line with institutional mandates and institutional roles in the national GHG inventory.	Project Board/steering committee + Project Manager
3	Staff turnover: Considering that the CBIT project includes targeted capacity building, there is a risk of losing the capacity	Organizational	P=3 I=1	Capacity building activities will involve a carefully selected group of relevant experts within each ministry and agency to ensure that capacity can be retained, and succession planning will be discussed as a part of training. Guidelines and methodologies will be produced in written format (i.e., manuals), and the excel based IT system will be documented extensively, which will also contribute to retaining institutional memory.	Project Board/steering committee + Project Manager

[34] Probability (P) from 1 (low) to 5 (high)
[35] Impact (I) from 1 (low) to 5 (high)

#	Description	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner
	and skills acquired due to staff turnover				
4	Climate change risks	Social and Environmental	P = 2 I = 2	The mean surface temperature of Mauritius is increasing by approximately 0.16˚C per decade. Annual rainfall over mainland Mauritius (i.e., excluding the outer islands) has reduced by approximately 63mm per decade over the past century. Rainfall variability has increased significantly, exacerbating water stress in the western and northern districts while simultaneously producing more flash floods. The frequency of intense tropical cyclones (with wind gusts greater than 234 km/hour) is increasing. The Technology Needs Assessment (TNA) notes that the indigenous component of the electricity mix (i.e., bagasse, wind and mini hydro) is vulnerable to this increasing climate variability. There is a risk that growing electricity demand will need to be met through increased imports of fossil fuels. Given that the reduction of energy imports is a central government policy objective and forms the centrepiece of the Long-Term Energy Strategy, any threats to the potential of domestic electricity generation to reduce energy dependence will be monitored closely. The project's support to greater transparency in the Energy Industries sector will assist such monitoring. Notably, the real-time grid emission factor developed with GEF project support will provide a key summary indicator for quantitatively assessing the evolving contribution of renewable energies to the electricity mix.	Project Board/steering committee
4	Face to face meetings, site visits and workshops cannot be held due to potential restrictions (such as those due to the Coronavirus outbreak), leading to delays in project implementation.	Organizational	P=3 I=1	There are several activities foreseen within the project involving face to face meetings, site visits and workshops. Site visits will be arranged following the necessary health and safety measures, avoiding contact, maintaining physical distance, and wearing masks and gloves, as recommended by the medical authorities. Workshops could be replaced by recorded webinars, providing training to stakeholders that can be used after project implementation. Face to face meetings can be postponed, considering that the duration of the project is four year. If needed, face to face meeting could be replaced by videoconferences and/or calls. With these measures, the implementation of the project will be secured.	Project Board/steering committee + Project Manager

Annex 6: Overview of Technical Consultancies

Consultant	Time Input	Tasks, Inputs and Outputs
For Project Management / Monitoring & Evaluation		
Local / National contracting		
Project Manager/project coordinator **Rate: USD 3,500/month**	48 months/ over 4 years	The Project Manager (PM) will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants, and sub-contractors. The project manager will promote the coordination with implementing partners, to ensure alignment of efforts with the CBIT project. It will be responsible for M&E activities as defined in the M&E Plan.
Project assistant **Rate: USD 1,800/month**	48 months/ over 4 years	The project assistant of the project will have a background on GHG emission inventories and MRV. The project assistant will monitor the implementation of the gender action plan and will provide guidance on all components of the project as needed.
For Technical Assistance		
Component 1: Improving the accuracy and localization of the national greenhouse gas inventory		
Local / National contracting		
Specialist on GHG emissions energy sector **Rate: USD 250/day**	150 days/ over 4 years	Output 1.1 – The national specialist on GHG emissions from the energy sector is focused in supporting the international expert with the coordination among stakeholders, collecting data and working with the university. The following tasks will be performed: ▪ Support the development of a methodological approach for the development of Tier 2 emission factors, including the definition of the scope, survey design, definition of laboratory testing required, and all methodological steps needed to derive national specific emission factors for the inventory. The process shall ensure the emission factor is in line with 2006 IPCC methodologies and good practices. ▪ Collecting the necessary samples with the collaboration of the energy stakeholders of the country. ▪ In line with the methodological approach, undertaking laboratory analysis in the premises of the University of Mauritius. The fuel characteristics of the sample and the combustion emissions under controlled circumstances need to be fully documented. ▪ Processing the information generated for deriving national-specific combustion emission factors. ▪ Compare the results obtained with other national-specific emission factors and default values provided by 2006 IPCC Guidelines. ▪ Prepare a report documenting the entire process followed for developing the national specific emission factors. ▪ Support the capacity building to energy stakeholders on 2006 IPCC methodologies, including sectoral and reference approaches, estimating uncertainty, and developing and using energy balances. The capacity building exercise shall also address the development of advanced Tier approaches, so the stakeholders can replicate the same approach in other inventory categories in the future.

Consultant	Time Input	Tasks, Inputs and Outputs
Specialist on GHG emissions electricity production **Rate: USD 250/day**	150 days/over 4 years	Output 1.2 – The national specialist on GHG emissions from electricity production will carry out the overall work, and will perform the following tasks: ▪ Support the definition of the scope and the methodological approach to follow for obtaining the Tier 3 emission factor and real time grid emission factor in coordination with energy stakeholders. ▪ Collecting data from the nine thermal power plants for a common period, as defined in the methodological approach. ▪ Process the data and perform the necessary calculations to define the Tier 3 emission factor in line with 2006 IPCC Guidelines. ▪ Process the data and perform the necessary calculations for estimating a benchmark for the grid emission factor. ▪ Define the roles and responsibilities of the entities involved in both the estimation of the Tier 3 emission factor and the real time grid emission factor. ▪ Prepare a timeline and a workplan for future updates of both the Tier 3 emission factor and the real time grid emission factor. ▪ Automatise the calculation for the real time grid emission factor and define the information flow. ▪ Support the capacity building to energy stakeholders on 2006 IPCC methodologies and on how to estimate the mitigation impact of mitigation actions in the energy sector.
Specialist on GHG emissions transport **Rate: USD 250/day**	150 days/over 4 years	Output 1.3 – The national specialist on GHG emissions from transport is focused in ensuring coordination of the proposed activities and ensuring that the survey of the contractors meet the requirement of NLTA. The following tasks will be performed: ▪ Support the identification of best international and regional practices for transport use surveys. This will include the development of several case studies to analyse in detail the most successful applicable cases. ▪ Support the design of a survey methodology for obtaining data on journey characteristics, including journey frequencies, durations, average speeds, and occupancy rates. The design will be made together with NLTA to address possible improvement areas in its statistics. ▪ Support the pilot test of the survey methodology, collect data, and process it. ▪ Support the development of a methodological report with the results of the process, identifying gaps and weaknesses and proposing a roadmap for the implementation of the transport use survey in the regular operations of the NLTA. ▪ Support the capacity building exercise to relevant stakeholders (including NLTA) for identifying and estimating the mitigation impact of transport mitigation actions in line with the enhanced transparency framework requirements. The capacity building exercise shall also address the development of advanced Tier approaches, so the stakeholders can replicate the same approach in other inventory categories in the future.

Consultant	Time Input	Tasks, Inputs and Outputs
Specialist on GHG emissions agriculture sector **Rate: USD 250/day**	200 days/over 4 years	Output 1.4 – The national specialist on GHG emissions for the agriculture sector is focused on developing the Tier 2 EF with FAREI and in full coordination with the international consultant. The following tasks will be performed: ▪ Support the Identification and analysis of Tier 2 and Tier 3 emission factors available in the emission factor database of IPCC and in other countries with similar cattle characteristics. ▪ Support the design a methodology for creating a statistical model together with FAREI to derive Tier 2 emission factor for the national GHG emissions inventory. ▪ Support the estimation a Tier 2 emission factor for enteric fermentation emissions to be used in the inventory of Mauritius. ▪ Support the capacity building workshop to FAREI and other relevant AFOLU stakeholders in 2006 IPCC Guidelines and in the development of Tier 2/Tier 3 emission factors.
Specialist on GHG emissions forestry and land use **Rate: USD 250/day**	250 days/over 4 years	Output 1.6 – The national specialist on GHG emissions from the forestry and land use sector is focused on support the international expert, collecting data and arrange the coordination among stakeholders. The following tasks will be performed: ▪ Support FAREI in undertaking the survey, following national procedures. ▪ Process the data gathered to be incorporated in the information system of FAREI. Write a methodological report on the impact of the update made.
National consultant to support project coordination, M&E, and developments under all outputs **Rate: 3,500 USD/month**	26 month/over 4 years	The consultant will have a technical background, with demonstrated experience on GHG emission inventories and on monitoring and evaluation of projects. The following tasks will be performed: ▪ Carry out the Monitoring and evaluation of the component 1 based on the M&E Plan. ▪ Support the coordination of the project, engaging with key stakeholders and facilitating the implementation of the project. ▪ Support the definition of the methodological approach of outputs 1.1 – 1.7, ensuring they are in line with the project rationale and the adapted to national circumstances. ▪ Support for the development of workshops and capacity building activities, in collaboration with relevant sub-contractors and consultants. ▪ Support the project management unit on the day-to-day management of the project, specifically in the technical areas of the project. ▪ Validation of deliverables of all outputs of component 1.
Gender specialist **Rate: 800 USD/week**	6 weeks/over 4 years	The consultant will have a background on gender studies with relevant experience on the development of gender analysis and gender action plans. The following tasks will be performed: ▪ Monitor the implementation of the gender action plan ▪ Propose corrective measures to mainstream gender on the development of component 1 ▪ Support the update of the gender analysis

Consultant	Time Input	Tasks, Inputs and Outputs
International / Regional and global contracting		
No international contracting is envisaged under the component.		
Component 2: Strengthening the national greenhouse gas inventory process		
Local / National contracting		
Specialist on climate change MRV system **Rate: USD 250/day**	45 days/ over 4 years	Output 2.1 – The national specialist on climate change MRV systems will focus supporting the international expert on all tasks and arranging the coordination with stakeholders. The following tasks will be performed: ▪ Supporting the analysis of the existing legal framework, competences, staffing and budgets as they relate to climate MRV of the key entities involved in the MRV system, including all entities identified in the stakeholder engagement plan of the CBIT project. This analysis will aim at defining detailed roles and responsibilities of all entities involved/to be involved in the national MRV system based on their current competences. ▪ Supporting the development of a proposal for an enhanced institutional architecture for the climate change MRV of Mauritius, which will need to respond to the information requirements of the enhanced transparency framework (GHG emission inventories, mitigation, support and NDC tracking). The institutional architecture shall clearly define the roles and responsibilities of each entity involved in the MRV system. ▪ Supporting the development of a roadmap for the implementation of the enhanced institutional architecture, if appropriate.
Specialist on GHG emission inventories with experience in Mauritius **Rate: USD 250/day**	165 days/over 4 years	Output 2.2 – The national specialist on GHG emission inventories with experience in Mauritius will focus on developing all tasks of the output in coordination with the CCD. The following tasks will be performed: ▪ Analyse the existent excel workbooks at the CCD and the data available in each data provider database system. ▪ Analyse the possibility of developing an application programming interface (API) that allows the output tables to be seamlessly imported from Excel into the IPCC software ▪ Identify the gaps and needs of the existent workbooks and develop a work plan for improving the existent workbooks, creating new files when needed. ▪ Coordinate with stakeholders to ensure the excel workbooks are adjusted to the circumstances and expectations of both data providers and CCD. ▪ Develop a set of workbooks validated by stakeholders for data sharing between data providers and CCD for its use in the national GHG emission inventory.

Consultant	Time Input	Tasks, Inputs and Outputs
National consultant to support project coordination, M&E, and developments under all outputs **Rate: 3,500 USD/month**	6 month/over 4 years	The consultant will have a technical background, with demonstrated experience on GHG emission inventories and on monitoring and evaluation of projects. The following tasks will be performed: ▪ Carry out the Monitoring and evaluation of the component 2 based on the M&E Plan. ▪ Support the coordination of the project, engaging with key stakeholders and facilitating the implementation of the project. ▪ Support the definition of the methodological approach of outputs 2.1 – 2.2, ensuring they are in line with the project rationale and the adapted to national circumstances. ▪ Support for the development of workshops and capacity building activities, in collaboration with relevant sub-contractors and consultants. ▪ Support the project management unit on the day-to-day management of the project, specifically in the technical areas of the project. ▪ Validation of deliverables of all outputs of component 2.
Gender specialist **Rate: 800 USD/week**	2 weeks/over 4 years	The consultant will have a background on gender studies with relevant experience on the development of gender analysis and gender action plans. The following tasks will be performed: ▪ Monitor the implementation of the gender action plan ▪ Propose corrective measures to mainstream gender on the development of component 2 ▪ Support the update of the gender analysis
International / Regional and global contracting		
No international contracting is envisaged under the component.		
Component 3: Mainstreaming the national greenhouse gas inventory to enhance transparency and support policymaking		
Local / National contracting		
Specialist on GHG emission inventories with experience in Mauritius **Rate: USD 250/day**	40 days/ over 4 years	Output 3.1 – The national specialist on GHG emission inventories with experience in Mauritius will perform the following tasks: ▪ Developing a capacitation plan, which will include a set of capacity building workshops and a step-by-step manual for the use of the excel template-based model. ▪ Delivering capacity building workshops on the use the Excel template-based model for data collection, processing, and submission. Different workshops will be developed, grouping the institutions considering their common characteristics.

Consultant	Time Input	Tasks, Inputs and Outputs
IT specialist **Rate: USD 250/day**	180 days/over 4 years	Output 3.2 – In coordination with the CCD, the Central Informatics Bureau and the Central Information Systems Division, the national IT specialist will perform a set of tasks for the enhancement of the CCIC, which could include support for: ▪ Improving the responsiveness and compatibility of the CCIC website, redesigning all the pages of the portal. ▪ Defining and implementing the processes for transferring and storing information GHG emission inventory information in the portal, including the IT system developed under output 2.2. ▪ Defining and implementing the processes for disseminating information from the CCIC. ▪ Developing a roadmap for further improving the role of the CCIC as a transparency portal.
National consultant to support project coordination, M&E, and developments under all outputs **Rate: 250 USD/day**	66 days/over 4 years	The consultant will have a technical background, with demonstrated experience on GHG emission inventories and on monitoring and evaluation of projects. The following tasks will be performed: ▪ Carry out the Monitoring and evaluation of the component 3 based on the M&E Plan. ▪ Support the coordination of the project, engaging with key stakeholders and facilitating the implementation of the project. ▪ Support the definition of the methodological approach of outputs 3.1 – 3.2, ensuring they are in line with the project rationale and the adapted to national circumstances. ▪ Support for the development of workshops and capacity building activities, in collaboration with relevant sub-contractors and consultants. ▪ Support the project management unit on the day-to-day management of the project, specifically in the technical areas of the project. ▪ Validation of deliverables of all outputs of component 3. ▪ Include gender considerations in line with the gender action plan in the development of the activities under component 3.
International / Regional and global contracting		
No international contracting is envisaged under the component.		
Component 4: Monitoring and evaluation and knowledge management		
Local / National contracting		
National consultant for biennial evaluation **Rate:** 2,000 USD lumpsum	NA	Output 4.1 – The national expert on monitoring and evaluation of the project outcomes will perform the following task: - Perform the Biennial evaluation in line with the M&E plan of the project and monitoring plan specified in Annex 3 of the ProDoc. - Support the implementation of M&E plan and the terminal evaluation, if appropriate. - Monitor the stakeholder engagement plan

Consultant	Time Input	Tasks, Inputs and Outputs
National consultant to support project coordination, M&E, and developments under all outputs **Rate: 3,500 USD/month**	4 month/over 4 years	The consultant will have a technical background, with demonstrated experience on GHG emission inventories and on monitoring and evaluation of projects. The following tasks will be performed: ▪ Support the development of dissemination products, in line with the specifications described under project components 1-3. ▪ Support the Monitoring and evaluation of the project based on the M&E Plan. ▪ Support the coordination of the project, engaging with key stakeholders and facilitating the implementation of the project. ▪ Review the documentation of the project and gather feedback from stakeholders/consultants when needed. ▪ Ensure the deadlines for the dissemination of products are met.
International / Regional and global contracting		
Consultant for terminal evaluation	15,000 USD	Output 4.1 – The international independent consultant for terminal evaluation will perform the final evaluation.

Consultancies – Companies		
Consultancy	Budget	Tasks, Inputs and Outputs
Component 1: Improving the accuracy and localization of the national greenhouse gas inventory		
Carrying out the activities defined under output 1.1 with support from a national consultant	USD 60,000	Output 1.1 – Company/contractor for carrying out the activities defined under output 1.1 with the support from a national consultant. The contractor will lead the development of the activities for this output: ▪ Developing a methodological approach for the development of Tier 2 emission factors, including the definition of the scope, survey design, definition of laboratory testing required, and all methodological steps needed to derive national specific emission factors for the inventory. The process shall ensure the emission factor is in line with 2006 IPCC methodologies and good practices. The specific activities to be carried out in this output will be defined in the methodological approach, ensuring that the expected outputs are achieved, and could include, among others, the following tasks: o Collecting the necessary samples with the collaboration of the energy stakeholders of the country. o In line with the methodological approach, undertaking laboratory analysis in the premises of the University of Mauritius. The fuel characteristics of the sample and the combustion emissions under controlled circumstances need to be fully documented, allowing to derive national specific emission factors in line with the selected methodology. o Processing the information generated for deriving national-specific combustion emission factors. o Compare the results obtained with other national-specific emission factors and default values provided by 2006 IPCC Guidelines. o Prepare a report documenting the entire process followed for developing the national specific emission factors. o Capacity building to energy stakeholders on 2006 IPCC methodologies, including sectoral and reference approaches, estimating uncertainty, and developing and using energy balances. The capacity building exercise shall also address the development of advanced Tier approaches, so the stakeholders can replicate the same approach in other inventory categories in the future. The type of capacity building activities can include workshops, webinars, or recorded tutorials.

Carrying out the activities defined under output 1.2 with support from a national consultant	USD 60,000	Output 1.2 – Company/contractor for carrying out the activities defined under output 1.2 with the support from a national consultant. The contractor will lead the development of the activities for this output: ▪ Defining the scope and the methodological approach to follow for obtaining the Tier 3 emission factor and real time grid emission factor in coordination with energy stakeholders. The specific activities to be carried out in this output will be defined in the methodological approach, ensuring that the expected outputs are achieved, and could include, among others, the following tasks: o Collecting data from the nine thermal power plants for a common period, as defined in the methodological approach. o Process the data and perform the necessary calculations to define the Tier 3 emission factor in line with 2006 IPCC Guidelines. o Regarding the grid emission factor, as the objective is to estimate a real time grid emission factor, there would be a need to define a benchmark or a range in which the estimates can fluctuate. For that, there will be a need to process the data and perform the necessary calculations for estimating the benchmark for the grid emission factor. o Define the roles and responsibilities of the entities involved in both the estimation of the Tier emission factor and the real time grid emission factor. o Automatise the calculation for the real time grid emission factor and define the information flow. o Prepare a timeline and a workplan for future updates of both the Tier 3 emission factor and the real time grid emission factor. The workplan for the future update of the Tier 3 emission factor will include, among others, the following milestones: processing new information for the updated emission factor, performing the calculation, validation between stakeholders, incorporation in the estimates of the GHG emission inventory. The Workplan for future updates of the real time grid emission factor would include, among others, the following items: assessing the method used for the calculation of the real time grid emission factor, identifying improvement alternatives, agreeing in an improved approach, if appropriate, implementing the improvements. o Capacity building to energy stakeholders on 2006 IPCC methodologies and on how to estimate the impact of mitigation actions in the energy sector. The capacity building will include a dedicated session for gender mainstreaming in mitigation actions, and will foster the active participation of women, in line with the gender action plan described in Annex 8.

Carrying out the activities defined under output 1.3 with support from a national consultant	USD 150,400	Output 1.3 – Company/contractor for carrying out the activities defined under output 1.3 with the support from a national consultant. The contractor will carry out the survey and lead the development of the activities for this output: ▪ To improve the estimates of the national GHG emission inventory and facilitate the design and implementation actions in the transport sector, a methodological approach will be developed, mainly by one contractor and the NLTA. This will define specific activities to be carried out and will include, among others, the following tasks: o Identification of best international and regional practices for transport use surveys. This will include the development of several case studies to analyse in detail the most successful applicable cases. o Considering best international practices, design a survey methodology for obtaining data on journey characteristics, including journey frequencies, durations, average speeds, and occupancy rates, disaggregating the information by gender. The design will be made together with NLTA to address possible improvement areas in its statistics. o Conducting a pilot test of the survey methodology, collect data and process it. o Produce a methodological report with the results of the process, identifying gaps and weaknesses and proposing a roadmap for the implementation of the transport use survey in the regular operations of the NLTA. o Perform a capacity building exercise to relevant stakeholders (including NLTA) for identifying and estimating the mitigation impact of transport mitigation actions in line with the enhanced transparency framework requirements. The capacity building exercise shall also address the development of advanced Tier approaches, so the stakeholders can replicate the same approach in other inventory categories in the future. The capacity building will include a dedicated session for gender mainstreaming in mitigation actions, and will foster the active participation of women, in line with the gender action plan described in Annex 8.
Carrying out the activities defined under output 1.4 with support from a national consultant	USD 60,000	Output 1.3 – Company/contractor for carrying out the activities defined under output 1.3 with the support from a national consultant. The contractor will carry out the survey and lead the development of the activities for this output: ▪ Developing a quality assurance exercise of the AFOLU sector of the latest available inventory in Mauritius, to identify weaknesses, constrains and gaps. This QA exercise will feed the improvement of output 1.4, Output 1.5 and output 1.6. ▪ Identify and analyse Tier 2 and Tier 3 enteric fermentation emission factors available in the emission factor database of IPCC and in other countries with similar cattle characteristics. The procedure followed for developing already available Tier 2 and Tier 3 emission factors will feed into the design of a methodology to derive Tier 2 and Tier 3 emission factors in Mauritius. ▪ Design a methodology for creating a statistical model together with FAREI to derive Tier 2 emission factor for the national GHG emissions inventory. ▪ Using the above model, estimate a Tier 2 emission factor for enteric fermentation emissions to be used in the inventory of Mauritius. ▪ A capacity building workshop to FAREI and other relevant AFOLU stakeholders in 2006 IPCC Guidelines and in the development of Tier 2/Tier 3 emission factors.

Carrying out the activities under output 1.5	USD 150,000	Output 1.5 – Company/contractor for carrying out the activities under output 1.5 and lead the development of the activities: ▪ Analysis of the different methodological alternatives for estimating a Tier 2 approach in the different emission sources in sub-category 3B1 Forest Land. ▪ Define the scope of the analysis and propose a methodology and work plan in agreement with FAREI for the estimation of Tier 2 emission factors. Implement the methodological approach defined which could include, among others, the following activities: o Conduct the survey, testing, laboratory analysis or other techniques, if deemed appropriate, to use the targeted models as defined in the methodological approach and work plan. o Estimate Tier 2 emission factors for the key forest species available in the country (Pinus elliottii, Eucalyptus sp, Araucaria sp, Tabebuia pallida, Cryptomeria japonica and Casuarina esqisetifolia) and compare the results with 2006 IPCC default values and other values of similar countries. ▪ Provide capacity building on the use of 2006 IPCC methodologies in the AFOLU sector, complementary to the activities carried out under UNDP-GEF SLM project (see Table 2). The capacity building exercise shall also address the development of advanced Tier approaches, so the stakeholders can replicate the same approach in other inventory categories in the future.
Carrying out the activities under output 1.6	USD 83,800	Output 1.6 – Company/contractor for carrying out the activities defined under output 1.6 with the support from a national consultant. The contractor will lead the development of the activities for this output: ▪ Analyse the national forest inventory for identifying possible gaps and propose improvement areas. ▪ In line with the current forest survey procedures and the improvement areas identified in previous activity, and in full coordination with FAREI and landowners, propose a sampling methodology to improve the forest inventory in privately owned areas in the country. ▪ Support FAREI in undertaking the survey, following national procedures. ▪ Process the data gathered to be incorporated in the information system of FAREI. Write a methodological report on the impact of the update made. ▪ Provide capacity building on the use of 2006 IPCC methodologies in the AFOLU sector, complementary to the activities carried out under UNDP-GEF SLM project (see Table 2). The capacity building exercise shall also address the development of advanced Tier approaches, so the stakeholders can replicate the same approach in other inventory categories in the future.
Component 2: Strengthening the national greenhouse gas inventory process		

Carrying out the activities defined under output 2.1 with support from a national consultant	USD 51,100	Output 2.1 – Company/contractor for carrying out the activities under output 2.1 and lead the development of the activities: ▪ Analysis of the existing legal framework, competences, staffing and budgets as they relate to climate MRV of the key entities involved in the MRV system, including all entities identified in the stakeholder engagement plan of the CBIT project. This analysis will aim at defining detailed roles and responsibilities of all entities involved/to be involved in the national MRV system based on their current competences. ▪ Develop case studies on successful non-Annex I countries implementing climate change MRV systems. These case studies shall identify the roles and responsibilities of national stakeholders involved in the MRV and the legal framework in place to enable the functioning of the MRV system. ▪ Based on the case studies and the analysis of competences, develop a proposal for an enhanced institutional architecture for the climate change MRV of Mauritius, which will need to respond to the information requirements of the enhanced transparency framework (GHG emission inventories, mitigation, support and NDC tracking). The institutional architecture shall clearly define the roles and responsibilities of each entity involved in the MRV system. ▪ Develop a roadmap for the implementation of the enhanced institutional architecture, if appropriate.
Component 3: Mainstreaming the national greenhouse gas inventory to enhance transparency and support policymaking		
There are no contractors under this outcome		

Annex 7: Stakeholder Engagement Plan

Introduction

The main objective of this project is to improve the accuracy and strengthen the national greenhouse gas inventory to ensure proper and transparent reporting such as on NDC implementation under the Paris Agreement. The project is structured around four main components, which have been elaborated in a number of outcomes and outputs to accomplish the objective of the project. By completing these three components, Mauritius will enhance its capacities to meet the requirements of the Paris Agreement and improve the transparency framework in the country. Additionally, gender equality will be a main focal point throughout the project to ensure the empowerment of women and equality during decision-making processes. Further details on the promotion of women in the project activities is defined in Annex 8: Gender Analysis and Gender Action Plan.

Policies and Regulations

The Stakeholder Engagement Plan (SEP) is prepared according to the GEF Policy reporting requirements, which demands an overview of the effective engagement of the various stakeholders over the project delivery. The CBIT project will maintain dialogue with the relevant national government ministries agencies, civil society organizations, private sector, and other identified stakeholders according to Table A7.1 below.

Project Stakeholders

This Stakeholder Engagement Plan is established to ensure continued meaningful participation of all the relevant stakeholders during the project, ranging from national governmental ministries and agencies, private sector, and academia, while additionally guaranteeing the input and engagement of women's organisations to improve gender equality. During the participatory events with stakeholders, views can be shared on all relevant subjects in the decision-making process. By conducting the process in a collaborative manner with frequent stakeholder engagement and ensuring the inclusion of gender equality during the process, all stakeholders can participate and contribute to the implementation of the project. This ensures their views and inputs are received and taken into consideration. Table A7.1 provides a summary of the relevant stakeholders, their current responsibilities, and their role in the project.

Stakeholder participation by project component area

Component 1: Improving the accuracy and localisation of the national greenhouse gas inventory

The first component of the GEF project revolves around the improvement of the accuracy and localisation of the national greenhouse gas inventory of Mauritius. This represents the starting point for most of the involved stakeholders, both governmental and the private sector and therefore requires clear definitions of the roles and responsibilities of each stakeholder. It will involve the participation of all the sectors in Mauritius which emit greenhouse gasses such as energy industries, transport, manufacturing, and construction. The Climate Change Division under the Ministry of Environment, Solid Waste Management and Climate Change will be the Executing Entity throughout the project and will be responsible to enhance stakeholder ownership and maintain their engagement for the project duration and for the post project period. Clear responsibilities of each individual stakeholder need to be defined to ensure improved greenhouse gas data collection. Additionally, it is vital to

consider gender equality in the inventory process to ensure that each stakeholder considers the empowerment of woman in the decision-making process and to promote their leadership at all levels.

Component 2: Strengthening the national greenhouse gas inventory process

The second component focusses on strengthening the greenhouse gas inventory process to ensure broader transparency and reporting requirements under the Paris Agreement. During this process, the project will have to work in conjunction with relevant government bodies to map existing mandates, staffing and budgets related to MRV. Additionally, it will work with approximately 50 data suppliers to develop an improved workbook for each data supplier to streamline the inventory data collection process. Therefore, it is essential that each stakeholder is actively involved in consultation meetings to express their needs and suggest improvements to the data collection process to maximise the benefits from the learning process. This participation will take place in the form of meetings and trainings to provide guidance to stakeholders on the proper use of the system and uploading services. It is imperative that during these trainings and meetings, gender equal decision making is a critical element to increase the understanding of all the involved participants and to understand the different needs linked to gender.

Component 3: Mainstreaming the national greenhouse gas inventory to enhance transparency and support policy-making

Component 3 of the GEF project is aimed at mainstreaming the national greenhouse gas inventory to enhance transparency and policy-making. To achieve this, the project will upgrade the online portal which functions as a source of climate change information for research, students, NGOs, the private sector, and the general public. It will work together with stakeholders to ensure this online portal connects with all these different public bodies, both men and women. Furthermore, training will be provided to the approximately 50 data suppliers on the use of the data collection workbooks and on the uploading service that will be used for submission of the completed workbooks. During these trainings, gender equality will be a pivotal talking point.

Stakeholder Engagement Program

Throughout the project the engagement with the stakeholders will take place via structured meetings, interviews, workshops, and consultations. Considering the current situation with the Covid-19 outbreak, the initial engagements with the stakeholders may take place virtually, which will also be the case for the arranged workshops. The Executing Entity will continue to monitor the situation and hold consultation throughout the project in which form the engagement with the stakeholders will take place.

The project manager will be responsible for monitoring and supporting ongoing stakeholder involvement during project implementation. The exchange of information with stakeholders will be performed using a dedicated electronic platform (such as Dropbox or SharePoint) and through e-mail. The project will track participation in project events on an ongoing basis in order to monitor stakeholder participation.

The implementation of the stakeholder engagement program will be in conjunction with the Gender Action Plan to ensure gender equality integration in all respects of the project, including during the interactions with the various stakeholders.

The following table describes each of the major stakeholders, their current responsibilities and duties and their role in the project.

Table A7.1. Project Stakeholders

Type of stakeholder	Name of stakeholder	Current responsibilities and duties	Role of the stakeholder in the project
National Government Ministries and Agencies	Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC)	MoESWMCC serves as the UNFCCC Focal Point. It coordinates Mauritius's actions on climate change, including the NDC, the National Communications and the BURs, through its Climate Change Division (CCD). The CCD contains nine (9) staff members, consisting of seven Environment Officers, one Divisional Environment Officer and one person attached to the CCD under the Service to Mauritius Scheme. the entity responsible for coordinating the national GHG inventory process. The Climate Change Division (CCD) operates an online Climate Change Information Centre (CCIC)[36], which was established by the Climate Change Division in 2013 as a source of climate change information for researchers, students, NGOs, the private sector, and the general public.	CCD under the MoESWMCC will coordinate the project implementation process with the support of the PMU. As the Executing Entity of the BUR-1, NDC-2 and UNEP-GEF NAMAs project, CCD will play a key role in coordinating the 'ecosystem' of MRV-related projects and ensuring that the GEF project maximises synergies with them. The MoESWMCC will then be involved in all outputs of the project.
National Government Ministries and Agencies	Ministry of Energy and Public Utilities	The main activities of the Ministry revolve around the formulation of policies and strategies in the energy, water and wastewater sectors and the establishment of a responsive legal framework to govern the development of these sectors. It aims to ensure energy and water security, safe disposal of wastewater and peaceful use of nuclear technology and ionizing sources. The EEMA, CEB, MARENA, WMA and URA all fall under the aegis of the Ministry of Energy and Public Utilities.	The Ministry of Energy and Public Utilities will work with the Project Management Unit and all energy stakeholders in the development of outputs 1.1 – 1.3. The Ministry will have a key role in the implementation of the project, as it is the chair of the energy technical committee and Part of the Project Board /Steering Committee. See section VII on governance arrangements for more information on the tasks envisaged for the Steering Committee.
National Government Ministries and Agencies	Ministry of Agro-Industry and Food Security	The Ministry of Agro-Industry and Food Security works towards the further development of agriculture and the promotion of	The Ministry of Agro-Industry and Food Security will work with the Project Management Unit and all energy stakeholders in the development of outputs 1.4 – 1.6. The Ministry will have a key role

[36] http://environment.govmu.org/English/Climate_Change/Pages/CCIC.aspx

Type of stakeholder	Name of stakeholder	Current responsibilities and duties	Role of the stakeholder in the project
		agroindustry focussing on safety, supply, quality, innovation, and new technology. The Forestry Service, FAREI and MCIA all operate under the aegis of the Ministry of Agro-Industry and Food Security.	in the implementation of the project, as it is the chair of the AFOLU technical committee and Part of the Project Board /Steering Committee. See section VII on governance arrangements for more information on the tasks envisaged for the Steering Committee.
National Government Ministries and Agencies	Ministry of Finance, Economic Planning and Development	The Ministry of Finance, Economic Planning and Development is responsible for formulating the Economic Development Policies and for the Economic Management of the Affairs of Government. Furthermore, it is responsible for the financial soundness of Government's economic policy and for the proper control of revenue and expenditure. The Ministry of Finance is the GEF Operational Focal Point and the National Designated Authority of the country in the GCF.	The Ministry of Finance, Economic Planning and Development will be represented in the project board of the Project Board /Steering Committee. The Ministry will oversee the activities of the project and its complementarities with the project pipeline in the GEF and GCF. The technical staff at the ministry will be targeted for the capacity building exercises with the CBIT.
National Government Ministries and Agencies	Statistics Mauritius	Statistics Mauritius is the statistical agency of Mauritius, responsible for the collection, compilation, analysis, and dissemination of official statistical data. Statistics Mauritius has a key role in the development of the national GHG emission inventory, working closely with the CCD to secure access to data and to check the consistency of different datasets. Statistics Mauritius is part of all working groups for the development of the inventory.	Due to its key role in the national GHG emissions inventory, Statistics Mauritius will be directly involved in several outputs of the project, including but not limited to outputs 1.3, 2.1, 2.2 and 3.2. For the same reason, Statistics Mauritius will be targeted for all capacity building activities of the project. 34 Statistics Mauritius will also explore initial requirements for the streamlined inventory data collection process (Output 2.2) and required design elements for the enhanced CCIC, including potential links with the SEIS Indicator Reporting Information System (IRIS) under Output 3.2.
National Government Ministries and Agencies	Mauritius Renewable Energy Agency (MARENA)	MARENA is a corporate body owned by the Government of Mauritius, which operates under the aegis of the Ministry of Energy and Public Utilities (MEPA). It was set up in January 2016 to oversee the development of renewable energy in Mauritius and ensure transition to a sustainable lifestyle through the country's energy demand being increasingly met by renewable energy to support sectoral developments in-keeping with international commitments.	MARENA will work with the with the CEB to develop a real-time weighted-average grid emission factor from the thermal power stations, bagasse plants, hydro-power plants, and wind and solar farms, which will be tracked on a second-by-second basis. This will support the implementation of Output 1.2. The MRV roles and responsibilities of new institutions such as MARENA and the Utilities Regulatory Authority (both established in 2016) also need to be considered under output 2.1
National Government	National Land Transport	The NLTA is a department operating under the aegis of the	The NLTA will work with the Project Management Unit to design a systematic survey programme for

Type of stakeholder	Name of stakeholder	Current responsibilities and duties	Role of the stakeholder in the project
Ministries and Agencies	Authority (NLTA) under the aegis of the Ministry of Land Transport and Light Rail	Ministry of Land Transport and Light Rail. It was established under the Road Traffic Act in 1980 and has, as its main responsibilities, the registration and licensing of motor vehicles; the regulation and control of road transport; monitoring public transport; maintaining statistics relating to motor vehicles; and planning of new transport services. The NLTA was the Chair of the 2017 National GHG Inventory Transport Sub-TWG. It maintains a digital vehicle database that contains information on types of vehicles (including light-duty and heavy-duty split into fuel-types), the age of vehicles, and the use of catalyst and fuel-injection technology.	the land transport sub-sector (private road vehicles, buses, the Metro Express). This programme will be implemented under Output 1.3 to generate Tier 2 activity data and policy-relevant socio-economic, gender and demographic data. This outcome will generate a detailed set of transport activity data for Tier 2 estimations in the nation GHG inventory.
Academia	University of Mauritius	UoM is the national university of Mauritius. The Department of Chemical and Environmental Engineering has expertise and experience in estimating fuel emission factors, as well as monitoring smoke-stack emissions (the National Air Pollution Monitoring Unit, now part of MCIA, used to be housed in the University).	UoM will design a testing action plan and GEF-supported budget for development of Tier 2 emission factors (for Output 1.1), and will work with CEB, MCIA and IPPs to develop a plan of action for calculating Tier 3 emission factors for 8 thermal power plants (for Output 1.2).
National Government Ministries and Agencies	Ministry of Gender Equality and Family Welfare	The Ministry serves as the lead institution responsible for the oversight, coordination, monitoring and evaluation of gender mainstreaming policies, strategies, and programmes at national level. It is working with the UNEP-GEF NAMAs project to develop a Gender Action Plan (GAP) for the NDC.	The Gender Unit of the Ministry will work with the NLTA to ensure that the systematic survey programme for the land transport sub-sector (Output 1.3) captures appropriate information about differentiated gender use, needs and challenges (e.g., with regard to the use of public transport) and is coordinated with NDC GAP needs.
National Government Ministries and Agencies	Central Electricity Board (CEB)	CEB is a parastatal body wholly owned by the Government of Mauritius and operates under the aegis of the Ministry of Energy and Public Utilities. CEB produces around 40% of the country's total power requirements from its 4 thermal power stations and 8 hydroelectric plants, the remaining 60% being purchased from Independent Power	CEB will work with the Project Management Unit, the IPPs, MCIA and UoM to develop a data collection and site visit programme for the calculation of Tier 3 emission factors for CEB's 4 thermal power stations, as well as explore options for an appropriate data and institutional framework (in conjunction with MARENA) for the real-time grid emission factor. Both activities will be implemented under Output 1.2.

Type of stakeholder	Name of stakeholder	Current responsibilities and duties	Role of the stakeholder in the project
		Producers. Currently, it is the sole organisation responsible for the transmission, distribution, and supply of electricity to the population. CEB was the Chair of the 2017 National GHG Inventory Energy Industries Sub-TWG.	The project will work with CEB data relating to real-time power injections into the grid from the thermal power stations, bagasse plants, hydro-power plants, and wind and solar farms, to develop a real-time weighted-average grid emission factor, in conjunction with the Mauritius Renewable Energy Agency (MARENA), which will be tracked on a second-by-second basis.
National Government Ministries and Agencies	Air Pollution Monitoring Unit of the Mauritius Cane Industry Authority (MCIA)	MCIA is a government body under the aegis of the Ministry of Agro-Industry and Food Security. Its role is to promote the development of the sugarcane sector and its clusters through policy measures, creating an enabling environment, research and development, and technology transfer. MCIA supports the use of bagasse as a fuel for electricity generation: 3 power plants currently use bagasse in combination with coal and one uses solely bagasse. MCIA houses the National Air Pollution Monitoring Unit.	MCIA will work with the Project Management Unit, UoM and relevant IPPs to develop a data collection and site visit programme for the calculation of Tier 3 emission factors for the 3 thermal power stations that use coal/bagasse in combination. MCIA's National Air Pollution Monitoring Unit will also develop an action plan and budget for all those power stations that will require the installation of temporary monitoring equipment. This will support the implementation of Output 1.2.
National Government Ministries and Agencies	Forestry Service (FS)	FS is a department under the aegis of the Ministry of Agro-Industry and Food Security. Its principal responsibility is to manage publicly owned forestland (22,000 ha), to ensure sustainable services from forest (ecosystem, leisure, timber, etc.) and to undertake periodic forest inventories. Together with FAREI, FS was the Chair of the 2017 National GHG Inventory AFOLU Sub-TWG.	FS will work with Mauritius Chamber of Agriculture, which represents private forests, and private landowners to develop a programme of site visits to privately-owned forestland and will make internal preparations for developing allometric equations, root-to-shoot ratios, and carbon density factors, potentially stratified across different ecological zones. This will inform the implementation of Output 1.5 and Output 1.6.
National Government Ministries and Agencies	Food and Agricultural Research and Extension Institute (FAREI)	FAREI is a parastatal under the Ministry of Agro-Industry and Food Security. Its core responsibilities are to conduct research in non-sugar crops and livestock, and to provide agricultural extension services to farmers. Together with the FS, FAREI was the Chair of the 2017 National GHG Inventory AFOLU Sub-TWG.	FAREI will develop a detailed action plan and budget for calculation of enteric fermentation emission factors, including – as necessary – negotiated access to farms in order to undertake measurements on livestock. This will inform subsequent implementation of Output 1.4. Furthermore, the project will assist the FAREI in constructing an empirically calibrated statistical model that evaluates the relationships between feed input characteristics, animal characteristics and methane production. It will develop a Tier 2 livestock enteric fermentation factor (a factor for converting the gross energy in cows' diet to methane) for dairy cows to use in Mauritius's GHG inventory.

Type of stakeholder	Name of stakeholder	Current responsibilities and duties	Role of the stakeholder in the project
National Government Ministries and Agencies	Utility Regulatory Authority (URA)	The Utility Regulatory Authority (URA) is an independent body set up by the Government of Mauritius which falls under the aegis of the Ministry of Energy and Public Utilities. It works towards regulating the utility services, namely electricity, water, and wastewater.	An additional measure being considered is to include a recurring national budget line item to cover the costs of continuous MRV activities, including ongoing maintenance and improvement of the national GHG inventory. The MRV roles and responsibilities of new institutions such as MARENA and the Utilities Regulatory Authority (both established in 2016) also need to be considered under output 2.1.
National Government Ministries and Agencies	Central Informatics Bureau (CIB)	The Central Informatics Bureau operates under the aegis of the Ministry of Information Technology, Communication, and Innovation. Its main function is to promote e-Governance through the provision of project management, consultancy and advisory services to Ministries and Departments for the successful implementation of e-government projects and on ICT matters.	The GEF project will work with the CIB, the CCD, and the CISD to upgrade the CCIC by modernising the website and add improvements to the structure of the website and enhance search functionality under output 3.2.
National Government Ministries and Agencies	Central Information Systems Division (CISD)	The Central Information Systems Division (CISD) was created in 1971 and operates under the aegis of the Ministry of Information Technology, Communication, and Innovation. CISD is mainly concerned with the operational aspects of ICT projects.	The GEF project will work with the CISD, the CCD, and the CIB to upgrade the CCIC by modernising the website and add improvements to the structure of the website and enhance search functionality under output 3.2.
National Government Ministries and Agencies	Government Online Centre (GOC)	The Government Online Centre (GOC) is the centralized data center to provide Government services to citizen, businesspersons, government officers and non-citizens abroad. It is operational since May 2005 and is managed by the National Computer Board (NCB).	The GEF project will work with the GOC to upgrade the CCIC. It serves as an external portal for the general public to access climate information for Mauritius. By modernising the website and by adding improvements to the structure of the website and enhance functionality the implementation of output 3.2 will be realised.
National Government Ministries and Agencies	Ministry of Industrial Development, SMEs & Cooperatives	The Ministry of Development, SMEs & Cooperatives aims to act as a facilitator and catalyst for the development of a resilient, vibrant, and competitive manufacturing sector. It works towards an innovation-led industrial sector. The Ministry is involved in the national GHG emission inventory and is part of the energy other sector sub-working group for the development of the inventory.	The Ministry regularly works with the national inventory, providing data and supporting the development of calculations. As part of one of the energies working groups of the inventory, the Ministry will be targeted for the capacity building exercises under output 1.1.

Type of stakeholder	Name of stakeholder	Current responsibilities and duties	Role of the stakeholder in the project
National Government Ministries and Agencies	Energy Efficiency Management Office (EEMO)	The Energy Efficiency Management Office was set up in 2011 to promote awareness for the efficient use of energy as a means to reduce carbon emissions and protect the environment. It implements strategies and programmes for the efficient use of energy, establish links with regional and international institutions and participate in programmes pertaining to the efficient use of energy. EEMO operates under the aegis of the Ministry of Energy and Public Utilities.	The Energy Efficiency Management Office will specifically contribute to outputs 1.1 and 1.2, regarding the development of Tier 2 and Tier 3 emission factors for the energy sector. These updated emission factors will be essential for assessing mitigation efforts for energy efficiency interventions in industry and building, and electricity tariff-setting. The EEMO will be targeted for the capacity building activities.
Private sector	Business Mauritius	Business Mauritius is an independent association that represents 1,200 local businesses and sectoral chambers of commerce. Business Mauritius is active in the energy and environmental areas, coordinating corporate social responsibility (CSR) activities, a Board member of Statistics Mauritius and MARENA, and a participant in the Third National Communication.	Business Mauritius will support the outputs under component 1 when needed, to develop the site visit programme and facilitate the coordination between stakeholders, when needed.
Private sector	Independent Power Producers (IPPs)	12 IPPs operate in Mauritius, supplying 60% of the country's electricity. Five of these IPPs operate plants that use fossil fuel (coal) or a combination of coal and bagasse. The following stakeholder companies are part of Mauritius' IPPs: -Alteo Ltd powerplant has already developed a coal CO_2 emission factor for its plant using its Online Continuous Emission Monitoring Systems (OEMCSs). -Terragen Ltd group has 2 x 35 MW thermal power plants, which produces around 370 GWh of electricity annually from bagasse and coal (401 GWh in 2014). -Omnicane Limited, incorporated in 1926, is a leader of the modern sugarcane industry born of Mauritius's centuries-old sugar industry. The primary activity of Omnicane consists in the cultivation of sugarcane and the	5 IPPs, including Alteo Ltd, Terragen Ltd, and Omnicane will work with the project preparation team, MCIA and UoM to develop a data collection and site visit programme for the calculation of Tier 3 emission factors for the 5 IPP fossil fuel thermal power plants. This will inform the implementation of Output 1.2.

Type of stakeholder	Name of stakeholder	Current responsibilities and duties	Role of the stakeholder in the project
		production of refined sugar, bioethanol, thermal energy, and electricity.	
Private sector	Mauritius Chamber of Agriculture (MCA)	The MCA is the oldest private sector institution representing the Mauritian agricultural community. Its membership comprises about a hundred companies/producer groups/individuals, which represent practically all the agricultural producers of Mauritius. It represents the private forests of landowners and works to formulate policies and strategies while exchanging ideas and views.	Mauritius Chamber of Agriculture will work together with the Forestry Service to develop a programme of site visits to privately-owned forestland and will make internal preparations for developing allometric equations, root-to-shoot ratios, and carbon density factors, potentially stratified across different ecological zones. This will inform the implementation of Output 1.6.

A number of interviews were maintained during the PPG to collect stakeholder´s feedback. The following are the brief minutes of the meetings maintained:

Meeting with the Ministry of Environment, Solid Waste Management and Climate Change (Climate Change Division)

- Tuesday 17 March 2020 – 13:00 – 15:30
- UNDP CO – online meeting

Meeting with the Ministry of Energy and Public Utilities and Ministry of Land Transport and Light Rail

- Thursday 16 April 2020 – 13:00 – 15:00
- UNDP CO/Zoom meeting

Meeting with the Ministry of Agro-Industry and Food Security

- Friday 17 April 2020 – 14:00 – 16:00
- UNDP CO/Zoom meeting

Meeting with the Ministry of Finance, Economic Planning and Development

- Monday 20 April 2020 – 13:00 – 14:00
- UNDP CO/Zoom meeting

Meeting with the Ministry of Industrial Development, SMEs and Cooperatives

- Monday 20 April 2020 – 15:00 – 16:00
- UNDP CO/Zoom meeting

Meeting with the IT stakeholders and Statistics Mauritius

- Tuesday 21 April 2020 – 13:00 – 15:00
- UNDP CO/Zoom meeting

Meeting with private sector and CSO

- Wednesday 22 April 2020 – 13:00 – 15:00
- UNDP CO/Zoom meeting

A validation meeting was held on 18 September 2020 to present a consolidated version of the Project Document to the main climate change stakeholders involved in the CBIT project preparation. The stakeholders validated the content of the ProDoc. Some changes were introduced in the CBIT project, four technical committees were introduced in the project organigram instead of two, and the Forestry Service is now the lead of output 1.5.

The list of participants to the validation meeting are shown in the table below.

Table A7.2. Validation Meeting Participants

Sn	Name	Designation	Organisation
1.	Ms S. Meeheelaul	Ag. Deputy Director of Environment (Chairperson)	Ministry of Environment, Solid Waste Management and Climate Change
2.	Mr S. Ramchurn	Head of Environment Unit (Co-Chair)	UNDP
3.	Ms A. Kawol	Ag. Divisional Environment Officer (Climate Change Division)	Ministry of Environment, Solid Waste Management and Climate Change
4.	Ms R. Ramsurn	Lead Analyst	Ministry of Finance, Economic Development and Planning
5.	Mrs S. Soobron	Divisional Environment Officer (Policy & Planning Division)	Ministry of Environment, Solid Waste Management and Climate Change
6.	Mrs V. Kanhye	Environment Officer	
7.	Mr J. Oh Seng	Environment Officer	
8.	Mr M. Sardoo	Environment Officer	
9.	Mrs B. A. Golamally	Environment Officer	
10.	Mrs R. Teemul	Environment Officer	
11.	Ms M. Gopall	STM Intern	
12.	Mrs L. Sooriah	Coordinator	Ministry of Gender Equality & Family Welfare
13.	Mr A. Tackoory	Assistant Permanent Secretary	
14.	Mrs U. Beegun-Ramduny	Lead Analyst	Ministry of Finance, Economic Planning and Development
15.	Mr A Bochowa	Analyst	
16.	Mr Y. Jokhun	Analyst	
17.	Mr H. Multra	Engineer/Senior Engineer	Ministry of Energy & Public Utilities
18.	Ms K. Appadoo	Lecturer in Laws	University of Mauritius
19.	Dr K. Fowdar	Research & Development Officer	MARENA
20.	Dr C. Bokhoree	Associate Professor	University of Technology, Mauritius
21.	Mrs D. Mewa Hurdowar	Statistician	Statistics Mauritius
22.	Mr L. K. Dindoyal	Senior Statistical Officer	
23.	Mrs C. Cyparsade	Assistant Conservator of Forests	Forestry Service
24.	Mr S. Sookhraz	Senior Environmental Affairs Officer	Central Electricity Board
25.	Mr Rajiv Ramlugon	Group Chief Sustainability Officer	Omnicane Ltd
26.	Mr Y. Jahazeeah	Safety, Health, Environment and Quality Manager	Omnicane Thermal Energy Operations (Barraque) Ltd

Sn	Name	Designation	Organisation
27.	Mr S. Nekitsing	Project Engineer	Alteo Ltd
28.	Mr M. A. Atawoo	Principal Research Scientist	Food and Agricultural Research & Extension Institute (FAREI)
29.	Mr A Kessoony	114 esearch Scientist/ SRS (AP Division)	
30.	Mr A. K. S. Awotar	Ag. Chief Vehicle Examiner	National Land Transport Authority (NLTA)
31.	Mr K. Ramkurrun	Engineer/Senior Engineer (Energy Efficiency)	Energy Efficiency Management Office
32.	Mr R. Ram	Controlleur de Gestion	Terragen Ltd
33.	Mr A. Sewloll	Quality, Safety and Environment Coordinator	
34.	Mr M. Z. C. Purahoo	System Analyst	Central Information System Division (CISD)
35.	Mr A. Ramguth	Assistant System Analyst	
36.	Mr R. Mudaliar	Programme Manager	Central Informatics Bureau
37.	Mr S. Koonjal	Senior Technical Officer	Mauritius Sugarcane Industry Research Institute (MSIRI) / Mauritius Cane Industry Authority (MCIA)
38.	Mrs A. Pompom	Analyst	Mauritius Chamber of Agriculture
39.	Mr V. Beezadhur	System Administrator	National Computer Board (NCB) / Government Online Centre (GOC)
40.	Mr Y. Dabeea	Commercial Analyst	State Trading Corporation
41.	Mr JLM Ortega	Consultant	Gauss International Consulting SL
42.	Ms V Arroyave	Programme Associate	UNDP
43.	Ms A. Heeramun	PPG Project Manager	

Annex 8: Gender Analysis and Gender Action Plan

8.1 Gender Analysis

Introduction

This gender assessment provides an overview of the situation in Mauritius, identifying gender issues that are relevant to the project, and examining gender-mainstreaming opportunities so that the project is designed conform to the 2018 guidance from the GEF on gender equality. [37]

Gender equality and women's empowerment will be addressed throughout the project cycle in the following ways:

- The project will monitor the share of women and men who are direct project beneficiaries, and it will also monitor the nature of these benefits.
- Gender-sensitive targets and activities will be monitored in project reporting, both in annual reports and PIRs and in the mid-term evaluation and the terminal evaluation.
- The project will take into account the *Gender Responsive National Communications Toolkit* developed by the Global Support Programme through UNDP and in collaboration with UNEP and the GEF.

Gender inequality is one of the main indicators of socioeconomic inequality and is played out along political, social, and cultural dimensions. It is closely linked to poverty and other development challenges which is deeply rooted in social norms and economic conditions with a greater impact on the poor, particularly on women and young people.

Gender Analysis (GA) is at the core of gender mainstreaming. It seeks to identify differences between men and women and understand their relationships. It illuminates root causes of gender-based differences towards developing practical and strategic actions to address any gaps leading to them. GA also takes into account different knowledge, interest and needs of men and women in identifying opportunities and barriers towards implementing appropriate actions in addressing them.

Through the years, several indices have been developed to quantify the concept of gender inequality. The United Nations Development Programme uses the Gender Inequality Index (GII) and Gender Development Index (GDI).[38] The GII is a composite measure that shows inequality in achievement between women and men in reproductive health, empowerment and the labour market while measuring achievement in human development in three areas: health, education, and command over economic resources. The GDI considers the gender gaps on human development between men and women.

Mauritius has a GII of 0.369 as of 2018 and ranks 66 out of 189 countries assessed. The GDI value as of 2013 is 0.974, which has ranked Mauritius as 66[39].

The Global Gender Gap Index (GGGI) of the World Economic Forum examines the gap between men and women in four categories: economic participation and opportunity, educational attainment, health and survival and political empowerment.[40] Out of 153 countries, Mauritius is ranked at 115 based on the GGGI 2020 results given below:

[37] GEF (2018), *GEF Policy on Gender Equality.*
[38] United Nations Development Programme. Human Development Report. http://hdr.undp.org/en/content/table-4-gender-inequality-index.
[39] http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf
[40] World Economic Forum. The Global Gender Gap Report 2014 Country Profiles. http://reports.weforum.org/global-gender-gap-report-2014/economies/#economy=ETH http://www3.weforum.org/docs/GGGR14/GGGR_CountryProfiles.pdf.

Description	Score	Rank
Economic participation and opportunity	0.596	116
Educational attainment	0.992	74
Health and survival	0.980	1
Political empowerment	0.094	124
Overall Gender Gap Index 2014	0.655	115

* Inequality = 0.00; Equality = 1.00. Source: The Global Gender Gap Report 2020

The Government has taken the following actions towards gender quality:

- Mauritius has ratified the Convention for the Elimination of All Forms of Discriminations Against Women (CEDAW)
- Mauritius is party to the 1997 SADC Declaration on Gender
- Mauritius is party to the 1998 Addendum on the Prevention and Eradication of Violence against Women and Children,
- Mauritius has signed the African Union Declaration on Gender Equality in 2004
- Mauritius has signed the Commonwealth Plan of Action on Gender Equality 2005-2015.
- Mauritius has signed and ratified the Protocol on the Rights of Women of the African Charter on Human and People's Rights in 2005. [41]

Legal and policy framework in Mauritius

The legal and policy frameworks listed below provide an overview and analysis of how existing strategies, policies and plans in Mauritius take into account the gender differentiated impacts and how they seek to tackle gender gaps. The section also provides an analysis of how considerations related to climate change have been included in national gender policies and plans.

The Constitution of Mauritius

The Constitution of Mauritius provides equal rights for men and women as it stipulates that "in Mauritius there have existed and shall continue to exist without discrimination by reason of race, place of origin, political opinions, colour, creed or sex… The Constitution not only grants equality to women but empowers the State to adopt measures in favour of women. Consequently, men and women must participate equitably in the national development process"[42].

Code Civil Mauricien

The Code Civil Mauritian provides for the same rights for men and women regarding accession and inheritance of land and property[43]. Women can hold titles to land on the same basis as men. Women have the right to buy, own and sell land at par with men. Both men and women can also inherit land from their parents and relatives.

[41] http://www.unesco.org/education/edurights/media/docs/7526a4d03a2047d7db44ad3f63c982f80d75501e.pdf
[42] Ibid.
[43] Ibid.

National Gender Policy Framework (NGPF) (2008)[44]

Fully conscious that gender equality and equity must be central to all development models, the Government of Mauritius adopted the National Gender Policy Framework which embodies a vision of empowering women and recognizes that gender is a cross-cutting issue. It also argues that adopting and incorporating a gender approach in all developmental issues remains a prerequisite to attain full human development.

The vision of the NGPF is to have "*A society in which all girls and boys, women and men live together in dignity, safety, mutual respect, harmony and social justice; thrive in an enabling environment in which they are able to achieve their full potential, in full enjoyment of their human rights; are equal partners in taking decisions to shape economic, social and cultural development, in determining the values that guide and sustain such development and in equally enjoying its benefits".*

The effective implementation of the NGPF requires that each Ministry should develop its own sector specific gender policy; draw on the policy framework for revising/developing sectoral strategies and ensure coherence among policies; and mainstream gender in programme design, performance indicators and budgetary allocations.

Government Programme 2020-2024

The Government of Mauritius has a clear vision for the future it is working towards which is about '*a society where gender equality is promoted to ensure a fair and adequate representation of all genders as well as the human and social development of women in Mauritius*'. The programme stipulates how gender equality will be integrated in their vision in the following sections:

Building the Economy of the future - The Entrepreneurs and workforce of the future

66. *'Government will ensure that the country has an adequate workforce with the new skills required to drive the future economy. More incentives will be given to foreign talents, including the diaspora and women to join the workforce.'*

A Peaceful, Safe and Secure Mauritius

136. *'Government will be relentless in its fight against all kinds of violence, including domestic violence.'*

137. *'A high level committee chaired by the Prime Minister will formulate a new strategy to eliminate gender-based violence. The legal framework will be strengthened, and a new national sensitization campaign implemented.'*

138. *'Victims of domestic violence and their dependent children will be provided with access to a wider range of help and support, including shelters, professional counselling and legal assistance.'*

Strengthening Democracy and Governance

169. *'The philosophy of equity and 'chances égales pour tous', will continue to be upheld to ensure merit-based recruitment and selection.'*

174. *'It will also strengthen governance of parastatal institutions by ensuring, among others, adequate and appropriate gender representation on their Board of Directors.'*

181. *'Government will pursue its initiative to bring an electoral reform that will ensure political and social stability in the country and higher women participation.'*

[44] http://www.unesco.org/education/edurights/media/docs/7526a4d03a2047d7db44ad3f63c982f80d75501e.pdf

Mauritius's 2009 – 2025 Long-Term Energy Strategy

In the 2009 – 2025 Long-Term Energy Strategy. there is one chapter on gender participation in the energy sector. Chapter 11 outlines the strategy to ensure gender equity in respect of access to energy and in particular the need to address issues which tend to prejudice women in general.
It acknowledges that energy is critical for sustainable development and poverty reduction and is an essential element for the attainment of the Millennium Development Goals (MDGs). It has an important role in women's lives as regards their domestic responsibilities as well as their entrepreneurship, social and community activities. Women in vulnerable situation or living in poverty are most likely to be affected by disconnection of electricity for their incapacity to settle their electricity charges within the prescribed time. Therefore, gender needs to be integrated in the energy project cycle.

In line with this, the strategy of Mauritius focusses on the following aspects:

- *establishment of disaggregated data on impact of energy strategies on women needs energy usage and technologies which are reflected in the different energy needs;*
- *assessment of women access to energy through a comprehensive demand side analysis on energy needs for the poor to support their livelihood, including the long-term basic energy needs of women;*
- *a proper assessment and integration of gender needs in the energy project cycle;*
- *capacity building programmes to enable women to participate in the energy sector through partnerships and networks among grassroots women, NGOs, and energy policymakers at the national and international levels;*
- *to stagger payment of electricity charges or to facilitate access to electricity for vulnerable groups;*
- *new policies for connecting and disconnecting electricity supply including the modalities for payments to take into account the needs of women from the vulnerable groups, who have irregular income flows;*
- *participation of women to contribute significantly to the adoption of less polluting fuels and technologies, particularly renewable energy resources such as wind and solar power. Moreover, the decisive role of women in household and business, as consumers and energy entrepreneurs as well as managers, can to a greater extent achieve energy savings and energy efficiency objectives;*
- *electricity supply to public places to increase safety for women; and*
- *equal chances for women to participate actively in SIPP projects through information and awareness campaigns, access to technical information and incentive schemes. 11.2.4 The Ministry of Women's Rights, Child Development and Family Welfare will carry out Information, Education and Communication programmes for women so that women are fully familiar with the efficient usage of energy.*

Marshall Plan Against Poverty (2016)

An important development is the government preparation of 'Vision 2030', aimed at transforming Mauritius into a high-income country by 2030, which supports the 2030 Agenda for Sustainable Development and the SIDS Accelerated Modalities of Action (SAMOA) Pathway. As part of that process, through UNDP support, the Marshall Plan Against Poverty was developed to support the sustainable development goals on poverty, gender equality, inclusive and sustainable growth, and inequality.

One of the goals of the plan is to devise an approach tackling the root cause of exclusion through a community-based approach to service delivery. Promoting gender equality and greater opportunities for young people are themes integrated throughout the plan. The document addresses interventions for gender inequality in the following sections:

Establish a Marshall Plan Social Contract Scheme to alleviate poverty and promote empowerment

'Monitoring indicators on education of children and economic empowerment of the household that are gender sensitive will be defined and used to monitor adherence to the social contract.'

- Institute monitoring and evaluation of social protection programmes delivered via SRM

'The SRM data, at the aggregate level as well as disaggregated by gender, localities and other characteristics can improve pro-poor policy formulation.'

- Apply social marketing tools to promote positive and constructive social behaviour such as work ethics.

'In Mauritius, behaviour such as lack of working culture, ethics and professional behavior, alcoholism and drug use, stigmatisation of people coming from certain ethnic groups or living in pockets of poverty, gender-based violence, and other behaviours deeply rooted in complex social issues, limit our country's potential to grow economically, promote social cohesion and inclusion, and eradicate poverty in all its dimensions once and for all.'

- Enhance access to training and placement opportunities for the poor

'The Women Back to Work Programme should be expanded to cover more participants from poor areas as well as to professions that could prevent a typical gender occupational segregation.'

- Promote social inclusion and cohesion through jobs

'Promote equal opportunity in all sectors by conducting periodic national sensitization campaigns (TV, press, Internet) on the benefits of diversity at the workplace, including persons of different religions, ethnicities, gender, disability status or age.'

- Use big data analytics for tracking and addressing school dropouts

'The dashboard will allow to see trends and monitor in real time where school dropouts are more prevalent, with data disaggregated by age and gender.'

Country Programme Document for Mauritius (CPD) (2017-2020)

The Government of Mauritius is working together with the UNDP to tackle the challenges related to inclusive and sustainable growth. The CPD aims to achieve this by contributing to two interrelated outcome areas to enhance inclusiveness and gender equality: public sector management and sustainable development.

The first pillar of the CPD is inclusive development and public sector efficiency in Mauritius which will prioritise social protection, gender equality and public sector efficiency to support the implementation of 'Vision 30' in achieving equitable growth and promoting an inclusive society.

In collaboration with UN-Women, UNDP will work closely with the Government of Mauritius to deepen gender policies, women's organizations, and the private sector to build and reinforce their commitment to bridging the gender gap. The programme will support the National Assembly in setting up a gender caucus and implementing a capacity-building programme with a view to increasing women's participation in decision-making, promoting mechanisms for more balanced gender representation, and increasing public and private measures to advance women's leadership. In partnership with the National Women's Council and national counterparts, UNDP will provide knowledge and technical assistance to help women become economically empowered and have a strong say in family and community decisions. UNDP will strengthen the national capacity for evidence-based gender strategies and policies through active analysis of sex-disaggregated data. The programme will upgrade mechanisms for eradicating gender-based violence through advocacy and engagement with local communities, schools, national institutions, and media, and will support institutional solutions to address and fight sexual harassment in the workplace.

The second pillar of the CPF, climate change and sustainable development, recognizes gender equality to play a vital part in sustained and sustainable inclusive economic growth. Action will be taken to integrate and measure the impact of 'green growth' on women, and environmental sustainability. An important strategy will be the implementation of social and environmental safeguards, and gendered dimensions will be integrated in all projects. The UNDP gender marker will be used to monitor expenditure and improve gender-based planning and decision-making. The aim will be to monitor the impact of the programme in relation to the sustainable development goals, the Samoa Pathway, and commitments under the intended nationally determined contribution, 2015, by improving the capacity of institutions to collect and analyse environment statistics.

National Equal Opportunity Act (2008 - 2012)

The Government of Mauritius has implemented an Equal Opportunity Act, which ensures equal opportunities for males and females to apply and get hired by both private and public institutions. The public constitution formulates the gender policy in all public institutions including MEPU/EEMO. Recruitment is carried out based on the qualification and skills, and there is no gender bias in the recruitment. Hence, recruitment is gender neutral and is based on merit.

Parliamentary Gender Caucus (PGC) (2017)

A Parliamentary Gender Caucus (PGC) has been formally set up at the level of the National Assembly in December 2016 through an amendment to the Standing Orders and Rules of the National Assembly. The Caucus saw its official launching in March 2017 and is presently receiving technical assistance by the UNDP under its Country Programme 2017-2020, Component 2- Dealing with Gender Equality Challenges. The overall vision of the Caucus is to work for the promotion and attainment of gender equality through, inter alia, recommending the carrying out of periodical gender assessments of government policies; and research on salient gender issues, as provided by Standing Order 69 of the Standing Orders and Rules of the National Assembly.

At its meeting dated 21 April 2017, the Caucus unanimously agreed to spearhead a gender audit exercise in the civil service in Mauritius with a view to establishing the baseline situation on the status of gender equality in the programming and operational dimensions of sectoral Ministries in Mauritius. The Caucus further agreed that the Audit would be carried out by the UNDP Gender Expert attached at the level of the National Assembly.

The aim of the gender audit is to examine the systems and processes within institutions that are conducive or act as impediments towards gender equity and equality1 and propose recommendations to address sectoral gaps. Overall, the objectives of the Auditing Exercise are to:

- identify the constraints and challenges which have acted as hurdles to the effective implementation of sectoral gender policies;
- assess the extent to which organisational structures are responsive to gender equity;
- take stock whether Ministries have been allocated funds for gender mainstreaming purposes; and
- assess whether Ministries possess the expertise and know-how to understand gender mainstreaming in their specific fields.

Strategic Partnership Framework (2019-2023)

The Government of Mauritius and United Nations Strategic Partnership Framework (SPF) describes six planned partnership outcomes and strategies supported by the UN system and how they will contribute to the national vision and country strategic priorities. To achieve the expected SPF outcomes and to ensure their contribution to the National Vision and Three-year Strategic Plan, the partners will employ a set of principles and approaches for integrated programming. The principles are: (1) Inclusion and equity to 'leave no one behind, (2) Human rights, gender equality and the empowerment of women, (3) Sustainability and resilience, and (4) Accountability, including the availability and use of quality data.

National Vision: Coherent social development & Inclusive society, A safer living environment

Outcome 5. Social protection and gender equality

Mauritius still faces a challenge to achieve inclusive prosperity. Bigger households with larger dependency ratios are significantly more likely to be poor, particularly those living in households with seven or more members. The incidence of poverty more than doubled among people living in female-headed households and the gender gap has increased. Poverty is concentrated among those households whose head had less than secondary education. Future, more inclusive growth will require renewed efforts to identify those who have been left behind and reach them with effective, targeted policies and measures to reduce disparities in income and access to basic services. Gender-Based Violence (GBV), particularly intimate partner violence, is a concern with tragic human and economic costs. The partnership outcome is to see stronger, rationalized social protection policies and programmes that are reaching the most vulnerable groups, working to eliminate GBV, and enhancing the role of women in public life.

Institutional arrangements and coordination mechanisms

Institutional arrangements on gender equality

The Ministry of Gender Equality and Family Welfare has adopted a Rights-based Approach to implement its policies and programmes for women's empowerment and the promotion of gender equality. The Ministry, through the Gender Unit, operates at two levels a) Policy Level and b) Programming level.

At a Policy level, the Ministry assists line Ministries to create their sectoral gender policies, provide technical assistance to all Ministries in the formulation of their Sector Gender Policies and aims as setting up Gender cells at the level of each Ministry. At a Programming level, the Ministry works toward women's empowerment and gender equality through capacity building, awareness-raising, inculcating a woman's entrepreneurship culture, and networking for advocacy and gender issues. Under the Ministry, there are two Councils namely, the National Women's Council and the National Women Entrepreneur Council.

The National Women's Council's main objective is to establish effective communication with women organizations and to ensure the coordination of groups of women. It also assists in the implementation of gender policies and in the evaluation of Government policies, related to gender. The National Women's Council also identifies and recommends to the National Committee actions and projects, aimed at women development and integration.

Coordination on Gender and climate change

The Ministry of Environment and Sustainable Development (MOESD) developed the National Environment Policy (NEP) in 2007, a year before the adoption of the National Gender Policy Framework by the Government. NEP contained gender elements and aimed among others "at taking into account social and cultural factors which encourage or discourage environmental protection, including gender-related consideration". The NEP encapsulates seven elements ranging from environmental consciousness, sustainable production and consumption, recycling, education, and the creation of linkages, and has one of its objectives (Objective 4.3. (ii)) "to ensure equitable access to environmental resources and quality for all sections of society, and in particular for poor communities as well as taking into consideration gender equity".

The NEP is being implemented through a revised National Environment Strategy (NES) and Action Plan. The NEP is not only being implemented through a revised NES but also through other programmes and action plans including the National Programme on Sustainable Consumption and Production Furthermore, it is to be noted that MOESD is a coordinating Ministry and as such, other Ministries that deal with a particular environmental issue also needs to align its programmes and projects with the NEP The NES focuses on 6 strategic issues, namely Environmental Management, Environmental Health, Quality of Life, Heritage Conservation, Individual Responsibility, and Global

Commitment. One of the strategies and policy instruments in Environmental Governance is "to introduce gender consideration in disaster preparedness".

The MOESD is fully committed to translating into action the United Nations Framework Convention on climate change. Currently, MOESD is implementing the African Adaptation Programme. It is encouraging to note the gender dimension of Climate Change is fully incorporated in awareness raising activities. Targeting & involving women as agents of change in the mitigation and adaptation programmes is noteworthy. The establishment of working relationship with the Ministry of Gender Equality and Family Welfare, in addressing the issue of the gendered impact on Climate Change is seen as strategic.

Gender analysis of various spheres of life

Women's economic participation

Women's economic participation is still significantly lower than for men. According to the 2020 Global Gender Gap report, the labour force participation rate for Mauritius is 52.7% for females and 79.7% for males [45], indicating that there are still significant differences to overcome.

Most women entrepreneurs own small and medium sized enterprises (SMEs) and are involved more in the sector representing textiles, crafts, and agricultural food items such as tea and medicinal plants. SMEs account for 45% of employment and 35% of energy consumption in Mauritius. They are an important element of the climate change mitigation equation in Mauritius. Firms owned by women mostly operate in the SME sector and thus it is important that women entrepreneurs are integrated in the greenhouse gas inventory and the mitigation efforts made to reach the Mauritius's NDC's.

Employment

Since 2019, there is a minimum wage in Mauritius, with the same rate for both men and women. However, the labour market is characterized with lower employment levels for women even though the employment rate shows an increased percentage of women's involvement (Female: 42%, Male: 64%).[46] Although there has been a change in gender division of labour that has allowed more women with opportunities to engaged in work outside home, this has not brought much changes in the domestic front as many women are still responsible for familial and child care responsibilities at home in addition to their work outside home.

The generated division in labour leads to limited access to formal and income-generating job opportunities for women. The labour-market participation rate is also relatively low for women. Women are primarily responsible for taking care of the households and the family and due to gender discrimination, deeply rooted social norms and lack of sensibilisation, they are not able to be competitive in the labour market. Women also have unequal access to land, information, and decision-making. Due to certain gender stereotypes, women are often categorized as suitable for only certain category of work, such as repetitive and manual work such as sewing in the garment sector or picking and packing products in the horticultural sector. [47]

Policies with the potential to activate female labour market participation include implementation of a special fiscal regimes favouring women's labour, affirmative action measures to discriminate in favour of women in the labour market, and public provision of childcare. [48]

[45] Global Gender Gap Report 2020, World Economic Forum
[46] MacDonald. E. 2015. Gender Profile: Mauritius - Commonwealth of Learning.
[47] http://www.oecd.org/site/tadicite/48735530.pdf
[48] http://www.ilo.org/public/portugue/region/eurpro/lisbon/pdf/equality_07.pdf

Occupation and industries

Women in Mauritius have access to equal opportunities in several spheres as par their male counterparts and have benefited from them. For example, equal opportunity law that provides free and compulsory education to both female and male until age 16,[49] equal employment opportunity to both female and male applicants based on merit and equal access to legal services, are some of the opportunities and benefits that women and men equally enjoy. Women who are in gainful employment have control over their own income.

However, access to resources and opportunities have not brought equal benefits for men and women in all aspects and thus less control over the resources. Women tend to benefit less from these access and opportunities due to existing gender division of labour at home, familial and care-giving responsibilities as well as societal perceptions of men and women based on masculine and feminine divide (e.g., general perception that energy/engineering sector has harsh working conditions, so it is generally for males). Such perceptions are also contributing to a rather slow change leading to weak gender equal outcomes and less benefits for women. Although there are laws enacted to enforce equal opportunities for both men and women, in practice this has not been translated to the extent that women enjoy equal benefits to men.

Gender pay gap

Although women have equal access to employment based on merit and enjoy equal pay, not all of them enjoy equal earnings. The average monthly income tends to be lower for women than for men, with estimated monthly earnings being Rs 18,600 for females and 24,400 for men. This results in women being more likely than men to live in poverty and poor households being more likely to be headed by women. In 2012, the share of women in relative poverty stood at 10.5 percent (66,700) against 9.0 percent (56,000) for males. For female-headed households, however, poverty increased from 13 percent in 2007 to 18 percent in 2012, increasing the gap relative to male-headed households. [50]

Although women in Mauritius are involved in paid employment outside home in both public and private sectors, they tend to be less in number and hold lower positions compared to men in both sectors and particularly in the environmental/natural resources management sector. Since last few years, there has been an increase in recruitment of women as wage labourers in plantation industries such as sugarcane. Nonetheless, a report by Ministry of Agro Industry and Food Security shows, more women are recruited as casual labourers with lower wages compared to men. For instance, while a male permanent worker earns Mauritian Rupees 648.31, a female permanent worker earns only 541.53. Similarly, while a seasonal/casual male labourer receives 559.57, a female counterpart receives only 467.41, and while a male labourer earns 410.19 through a contractor, a female labourer earns only 326.45.[51]

Furthermore, according to women representatives from the inception workshop, women are often expected to take care of household responsibilities in addition to their paid work outside home (e.g., childcare responsibility, expectation to arrive home early from work). This inhibits their opportunities to promotion (e.g., to higher positions) and move ahead in their career.

Women's political participation

[49] Ministry of Education and Scientific Research. 2004. The Development of Education: National Report of Mauritius.
[50] 2012 Poverty Analysis Report, Statistics Mauritius, October 2015
[51] Ministry of Agro Industry and Food Security. 2015. Strategic Review of Rose Belle Sugar Estate Board.

After the last general election in 2019, the total percentage of woman MPs is 20%, with 14 women MPs out of the total 70. Although this is an increase since the previous general election in Mauritius in 2014, when out of the total of 24 cabinet Ministers only three women were elected, these figures clearly show the low participation of women in politics.[52] MDG 3 stands for gender equality and empowering women and in particular, targets 3.3 stands for the proportion of seats held by women in national parliament, which has not been achieved by Mauritius. [53]

As a response to the low participation of women in politics, Mauritius introduced a new gender law quota in 2012, aimed at ensuring that one third of the local election candidates are women. The increase in women's representation rose from 6.4 percent to 26.2 percent; as a result of the Local Government Act of 2011. The representation of women in the Government is the following:[54]

- 330 women or 26.2 percent in the Local Government (out of 1260 seats)[55]
- 33 women or 36.6 percent won seats (out of 90 councillors in municimal councils)
- 297 women or 25.4 percent won seats (out of 1170 village council seats)[56]

As displayed in Figure 3, of the elections in 2014, there are 8 women in the Parliament, out of 69 seats, representing a total of 11.6% of Women and leaving Mauritius at 144 place.[57]

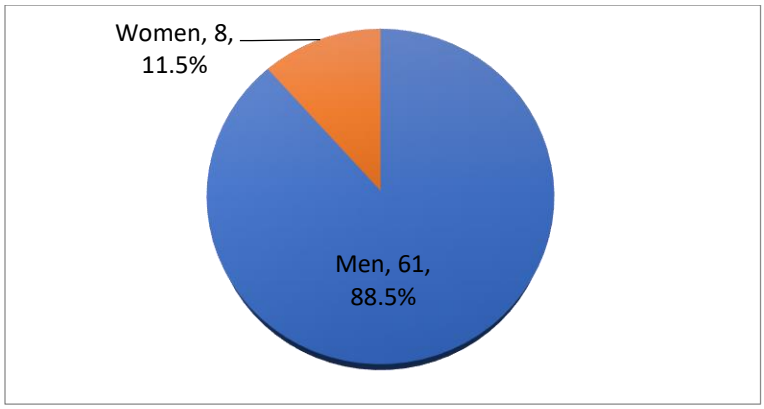


Figure 3: *Members of Parliament by Gender. Source:* Women in Parliament, World Classification[58]

Although efforts were made to increase the low participation of women in politics, this meant that still 88.4% of parliament was occupied by men. Furthermore, women in ministerial positions are only 8.7% and men at 91.3%, which strongly effects the influence women can have on political decisions. The years with female or male head of state in the last 50 years is 3.1 years with a female head of state and 46.9 years with a male head of state. [59]

Mauritian laws and policies being gender friendly have not been translated into reality because men still outnumber women as top decision makers, particularly in the environment/natural resources management sector. The

[52] http://www.ipsnews.net/2012/01/mauritius-women-find-a-political-voice-locally/
[53]http://www.mu.undp.org/content/dam/mauritius_and_seychelles/docs/Procurement/Government-Report/Millenium%20Development%20Goals%20Final%20National%20Report%202015%20pdf.pdf
[54] http://www.sardc.net/en/southern-african-news-features/mauritius-gender-quota-law-a-small-but-positive-step-forward/
[55] After the December 2012 elections
[56] http://genderlinks.org.za/programme-web-menu/a-press-releases/yes-we-can-mauritius-quadruples-the-level-of-women-in-local-government-2012-12-14/
[57] http://genderlinks.org.za/programme-web-menu/a-press-releases/yes-we-can-mauritius-quadruples-the-level-of-women-in-local-government-2012-12-14/
[58] http://www.ipu.org/wmn-e/classif.htm
[59] Global Gender Gap Report 2020, World Economic Forum

representation of women in the natural science/engineering field is low as women tend to enter more social sector fields (e.g., education, home economics) when they enter college and thus are less represented in the environmental/natural resources management sector. Top positions are also often held by men in both government and private sectors. In 2015, only one company was chaired by a woman out of 100 top companies in the Republic of Mauritius[60]. Moreover, women are also underrepresented in parliament (12%) and corporate boards (5.6%)[61]

Women's health

According to statistics, women outnumber men and live on average seven years longer than men (Female: 78, Male: 71).[62] However, the impacts of climate changes will have a more detrimental impact on women, if gender equality if not addressed on time. The disproportionate impact on women's nutrition and health can be contributed to their limited access to and control over services. Women have negligible participation in decision-making and are not involved in the distribution of environmental management benefits. Consequently, women are less able to confront vulnerabilities associated with climate change. The inequalities are multifaceted, due to tradition and cultural barriers, gender insensitivities, or how development service agents go about creating awareness, assistance, and feedback amongst the development community for more responsive actions.

Gender-based violence (GBV)

Mauritius still has a significant problem concerning gender-based violence (GBV). Out of 2,301 cased of domestic violence recorded in 2014, at the level of the Ministry of Gender Equality and Family Welfare, 90% of the victims were women.

Gender division of labour

Mauritian laws and policies being gender friendly have not been translated into reality because men still outnumber women as top decision makers, particularly in the environment/natural resources management sector. While there is no gender discrimination in decision making at planning and policy level, since there are less women holding top positions in both government and the private sector, their decision-making role and power is also limited. Those who are part of decision-making bodies tend to be offered nominal positions with little decision-making power or influence. This can mean that women often hold positions as tokens or fronts for men.

Furthermore, not all equal opportunities have brought equal benefits for men and women. Women tend to benefit less from these opportunities due to existing gender division of labour at home, familial and care-giving responsibilities as well as societal perceptions of men and women based on masculine and feminine divide (e.g., perception that forest sector is the domain for males and not for females as it consists of work that is dangerous or hard and can only be performed by males who are physically strong). Such perceptions are also contributing to a rather slow change leading to weak gender equal outcomes and less benefits for women. Although there are laws enacted to enforce equal opportunities for both men and women, in practice this has not been translated to the extent that women enjoy equal benefits to men.

Similarly, although women have equal opportunities to employment based on merit and enjoy equal pay, not all of them enjoy equal earnings. A report by Ministry of Gender Equality and Family Welfare shows earnings of women

[60] MacDonald. E. 2015. Gender Profile: Mauritius - Commonwealth of Learning.

[61] Project Identification Form for Mainstreaming Sustainable Land Management and Biodiversity Conservation in the Republic of Mauritius, 2018.

[62] Ministry of Gender Equality and Family Welfare. 2016. Gender Statistics 2016.

to be lower than that of men. While women earned on average 70% of what men warned in occupational category of managers, professionals, and associate professionals, they earned around half of what men earned in elementary occupations.[63]

Gender decision making

Even though women in Mauritius have access to membership to associations and cooperatives, these associations are mostly managed by men and thus women tend to feel less ownership with limited participation in decision making. This has resulted in women being under-represented in decision making at the higher sphere of society. The number of female ministers was only 2 out of 33 and the number of female mayors was 1 out of 5 in 2018. Additionally, the percentage of legislators, senior officials and managers in Mauritius is only 32.1% female and 67.9% male. Firms with a female majority ownership is 4.90% while male ownership stands at 95.1% in 2020. [64] These figures present a substantial challenge for gender equality in Mauritius.

Recommendations

Presented below is a list of recommendations that are tailored towards contributing to strengthening the gender equality in Mauritius's greenhouse gas inventories and for the MRV process. It describes strategies and policy measures that can support environment protection and sustainable development from a gender perspective.

Strengthening national capacities on mainstreaming gender equality

- Promote a participatory approach to ensure the participation of women in policy development and decision-making processes.
- Fully integrate gender in all projects and programs as well as towards proper training on gender mainstreaming.
- Ensure active participation and equal decision-making roles in relation to plans and activities
- Ensure that gender is embedded in all existing and future policies, frameworks, and legislation.
- Identification of the issues and challenges that hinder men, women in accessing all levels of policy and decision-making processes;
- Promote policy by addressing gender equality in all policy dialogues with government institutions, donor agencies and civil society organizations
- Share good practices, projects and programme experiences and lessons learnt in promoting gender equality

Engendering greenhouse gas (GHG) inventory processes

- Identify constraints, opportunities, and entry points for promoting gender equality
- Ensure that the gender dimension is included in all research and findings are disseminated and used for policy development
- The involvement of women's organizations in the design, will assist in the identification of relevant gender issues within the country's social context, and implementation and monitoring of gender aspects
- Actively engage local stakeholders in the design, implementation, and monitoring
- Adopting gender mainstreaming at policy level
- Demonstration of the need for gender-disaggregated data and indicators to establish a baseline in which to measure improvements and identify areas of focus

[63] Ministry of Gender Equality and Family Welfare. 2016. Gender Statistics 2016.
[64] Global Gender Gap Report 2020, World Economic Forum

- Assessment of the gender-related activities in responding to the expanding threat of climate change on the gender roles and responsibilities, resource use and management, and decision making raised
- Provide a conducive environment whereby a culture of equal respect of men and women prevails
- Ensure that all programme activities have a gender perspective
  Ensure that data collection is sex disaggregated and used as baseline for assessing gender gaps

Developing a gender responsive MRV Framework

- Include assessment of progress on achieving gender equality results in the performance measurement framework
- Ensure that MRV reflects national commitments to gender equality
- Ensure that the gender dimension is included in all research and findings are disseminated and used for policy development and mitigation programmes
- Adopt a code of conduct to protect women against all forms of discrimination in the performance of their duties
- Assessment of the gender-related activities in responding to the expanding threat of climate change on the gender roles and responsibilities, resource use and management, and decision making
- Allocate financial resources from a gender perspective

Increased gender awareness-raising training

- Community level awareness raising at all levels;
- Staff capacity building and training of relevant stakeholders;
- Staff capacity building on gender and climate change analysis, planning, budgeting and mainstreaming;
- Design and implement awareness and knowledge management programs for women, men, and youth
- Implementation of public awareness and sensitisation programmes on the effects of climate change
- Guide Ministries on gender analysis, gender impact assessment and gender mainstreaming.
- Promote knowledge and understanding of gender related issues as well as the linkages between gender and the environment
- Conduct a strong advocacy campaign on environment, sustainable development and their gender dimensions among policy makers, stakeholders, NGOs, Statistics Mauritius, and the public at large.
- Ensure that induction courses for new recruits include a gender component.
- Conduct periodic gender audit and gender sensitive assessment exercises that would enable effective monitoring and evaluation of policies and programmes.

8.2 Gender Action Plan

Background

The Gender Action Plan (GAP) ensures gender mainstreaming through (i) equal opportunities for men, women, and youth with access to project benefits; (ii) active consultation with and participation of women and underrepresented groups; (iii) collection of gender disaggregated data/information; and (iv) increased representation of women and underrepresented group in decision-making bodies.

In particular, UNDP Mauritius has a national target of ensuring project benefits reach a minimum of 40% of the underrepresented groups (men, women and/or youth) for all its projects. This is similar to the government of Mauritius national target of 33% minimum women/men representation in local councils. Thus, the formulation of a Gender Action Plan was necessary to ensure the project provides equitable opportunities and benefits for both gender and youth groups and that inequality is not perpetuated in project's activities and outcomes.

This Gender Action plan provides suggested entry points for gender-responsive actions to be taken under each of the Activity areas of the project. In addition, specific indicators are also proposed to measure and track progress on these actions at the activity level. This can be incorporated into the detailed M&E plan which will be developed at the start of implementation and provides concrete recommendations on how to ensure gender (including disaggregated data) continues to be collected and measured throughout implementation.

Implementation plan

The establishment of a gender-responsive transparency framework is vital to ensure that the different needs, challenges and priorities of women and men are addressed. Failure to adopt a gendered approach would result in overlooking the above-described differences between men and women inadvertently reinforcing existing gender inequalities and women's increased vulnerability to climate change. It is of critical importance that the leadership of women in decision-making processes is promoted in order to achieve and sustain the full, equal, and meaningful participation of women in climate action. Involving a wide range of actors across government, the private sector, civil society organisations and particularly women's organisations is important to facilitate the sharing of knowledge on the state of gender and climate change.

Objective	Action	Indicator
Component 1: Engendering the national greenhouse gas (GHG) inventory processes		
The need for gender-disaggregated data and indicators to ensure inclusion of gender issues in the GHG inventory processes.	Create a "how-to" checklist on how to engender the inventory process and policy development Establish a gender baseline in which to measure improvements and identify areas of focus Ensure that data collection is sex disaggregated Ensuring that addressing gender equality is not seen as a separate task, but instead mainstreaming it in the overall vision of that Ministry Share good practices, projects and programme experiences and lessons learnt in promoting gender equality	Percentage of men and women participants in the GHG inventory activities Number of communications outputs on gender mainstreaming Examples of gender gaps during the inventory process Levels of gender-inclusion in all existing and future policies, frameworks, and legislation Use the National Women's Council (NWC) to identify the number of involved women participants
Component 2: Developing a gender responsive MRV Framework		
Ensure that MRV reflects national commitments to gender equality	Use the Gender Budget Statement as an accountability document to monitor the disbursement of the GRB allocated funding to redress sectoral gender gaps	Number of gender sensitive indicators formulated. Ensuring at least 50% of people involved in MRV activities are women

Objective	Action	Indicator
	Formulate gender sensitive indicators for MRV purposes Consider gender-focused NGOs for its possible inclusion in the MRV architecture under output 2.1. Promote gender mainstreaming in technical training for MRV Workshop on streamlining gender in MRV activities	
Component 3: Increased gender awareness-raising training		
Design and implement awareness and knowledge management programs on the issues of gender inequality	Governmental staff will be required to take the UN course on gender and environment Design and implement awareness and knowledge management programs for women, men, and youth	Integrate gender disaggregated indicators in the project framework Number of available national gender experts Ensuring at least 50% of beneficiaries are women

Budget

All Ministries have been allocated a budget of Rs. 200,000 to implement Gender Responsive Budgeting (GRB). However, the GRB is yet to be fully implemented in an efficient manner for longer term outcomes.

Annex 9: Procurement plan

The procurement plan will be updated throughout the duration of the project at least annually by including contracts previously awarded. All procurement plans, their updates or modifications shall be published on the website of UNDP.

The procurement plan shall follow the guidelines and requirements established in the Public Procurement Act of 2006 and its amendments (latest amendment on 06January 2014).

General Information

Project Name: Strengthening the national greenhouse gas inventory of the Republic of Mauritius to improve climate reporting and transparency	
Country: Mauritius **GEF Grant Amount: US$ 1,269,850** **Date of First Procurement Plan: Quarter 1/Year 1**	

A. Process Thresholds, Review and Procurement Plan

1. Project Procurement methods

The choice of procurement method will be guided for the following statement from the Public Procurement Act:

(…)

(1) Subject to section (2), the choice of procurement methods available to a public body shall be -

(a) for the procurement of goods, other services and works, by -

(i) open advertised bidding;

(ii) restricted bidding;

(iii) request for sealed quotations;

(iv) direct procurement;

(v) community or end-user participation; or

(vi) departmental execution; and

(b) for the procurement of consultancy services, by -

(i) request for proposals on the basis of –

(A) quality and cost;

(B) quality alone;

(C) quality and fixed budget; or

(D) least cost and acceptable quality; or

(ii) direct procurement.

(2)

(a) Except in the cases referred to in paragraph (d), procurement shall, in the case of goods, other services or works, be made by means of open advertised bidding, to which equal access shall be provided

to all eligible and qualified bidders without discrimination.

(b) Open advertised bidding proceedings may include a prequalification stage, or post qualification procedures, before selection of the winning bidder.

(c) Open advertised bidding proceedings shall be carried out in a single stage or in two stages in the cases referred to in section 29 of the Public Procurement Act.

(d) A method of procurement referred to in subsection (1) (a) (ii) to (vi) may be used only if the public body has reason to believe that open advertised bidding -

(i) will not be efficient or practical for the procurement in question; or

(ii) will be too costly to apply given the value of the procurement.

(e) Where a public body uses a method of procurement other than open advertised bidding or, in the case of the procurement of consultancy services, a method other than one specified in subsection (1)(b)(i), it shall note in the record of the procurement proceedings the ground for the choice of the procurement method.

Following this statement from the Public Procurement Act, procurement will be made by open advertised bidding in the case of goods, other services and works, and by request for proposals in the case of consultancy services. In case other procurement methods are applied, the ground for the choice of the procurement method should be documented and justified.

2. Goods and Works Contracts Estimated: 48,350 US$

General Description	Contract Value (US$)	Procurement Method	Prequalification of Bidders (y/n)	Advertisement Date (quarter/year)	Implementation start date (quarter/year)
Purchase of IT equipment	3,050	Open advertised bidding	No	Y1Q1	Y1Q2
Provision of conference and catering services for trainings and workshops	10,000	Open advertised bidding	No	Y1Q1	Y1Q2
Provision of travel expenses to attend relevant workshops. Travel and DSA	4,000	Open advertised bidding	No	Y1Q1	Y1Q2
Communication, Printing, and production of documents	3,100	Open advertised bidding	No	Y1Q1	Y1Q2
Provision of conference and catering services for trainings and workshops	4,000	Open advertised bidding		Y1Q3	Y2Q1
Provision of travel expenses to attend relevant workshops. Travel and DSA	1,000	Open advertised bidding	No	Y1Q3	Y2Q1
Communication, Printing, and production of documents	2,600	Open advertised bidding	No	Y1Q3	Y2Q1
Provision of conference and catering services for trainings and workshops	8,000	Open advertised bidding		Y2Q3	Y3Q1
Provision of travel expenses to attend relevant workshops. Travel and DSA	1,000	Open advertised bidding	No	Y2Q3	Y3Q1

General Description	Contract Value (US$)	Procurement Method	Prequalification of Bidders (y/n)	Advertisement Date (quarter/year)	Implementation start date (quarter/year)
Communication, Printing, and production of documents	2,350	Open advertised bidding	No	Y2Q3	Y3Q1
Provision of conference and catering services for trainings and workshops	5,000	Open advertised bidding		Y3Q3	Y4Q1
Provision of travel expenses to attend relevant workshops. Travel and DSA	1,000	Open advertised bidding	No	Y3Q3	Y4Q1
Communication, Printing, and production of documents	3,850	Open advertised bidding	No	Y3Q3	Y4Q1

3. Consulting Services Contracts Estimated: 1,205,500 US$

General Description	Contract Value (US$)	Procurement Method	Prequalification of Bidders (y/n)	Advertisement Date (quarter/year)	Implementation start Date (quarter/year)
International consultants					
Specialist on climate change MRV systems for output 2.1 (30 days in Y1, Y2 & Y3; 550 USD/day)	16,500	Request for Proposal	No	Y1Q2	Y1Q4
Independent consultant for terminal evaluation (15,000 USD; lumpsum)	15,000	Request for Proposal	No	Y3Q4	Y4Q2
National Consultants					
Specialist on GHG emissions from the energy sector for output 1.1. Development of Tier 2 emission factors for key fuels (150 days split in four years; 250 USD/day)	37,500	Request for Proposal	No	Y1Q1	Y1Q2
Specialist on GHG emissions from electricity production for output 1.2 Development of Tier 3 emission factors for thermal power plants (150 days split in four years; 250 USD/day)	37,500	Request for Proposal	No	Y1Q1	Y1Q2
Specialist on GHG emissions from transport for output 1.3 Development of Tier 2 activity data for land transport sector (150 days split in four years; 250 USD/day)	37,500	Request for Proposal	No	Y1Q1	Y1Q2
Specialist on GHG emissions from the agriculture sector for output 1.4 Development of Tier 2 enteric fermentation emission factors for livestock (200 days split in four years; 250 USD/day)	50,000	Request for Proposal	No	Y1Q1	Y1Q2
Specialist on GHG emissions from the Forestry and Land Use sector for output 1.6 Forest inventory of forestland and non-forest tree cover (250 days split in four years; 250 USD/day)	62,500	Request for Proposal	No	Y1Q1	Y1Q2
National consultant to support project coordination, M&E and developments under all outputs (26 months split in four years; 3,500 USD/month)	91,000	Request for Proposal	No	Y1Q1	Y1Q2

General Description	**Contract Value (US$)**	**Procurement Method**	**Prequalification of Bidders** (y/n)	**Advertisement Date** (quarter/year)	**Implementation start Date** (quarter/year)
Gender specialist for component 1 (6 weeks split in four years; 800 USD/week)	4,800	Request for Proposal	No	Y1Q1	Y1Q2
Specialist on climate change MRV systems for output 2.1 (45 days split in Y1, Y2 & Y3; 250 USD/day)	11,250	Request for Proposal	No	Y1Q2	Y1Q3
Specialist on GHG emission inventories with experience in Mauritius for output 2.2 (165 days split in Y1, Y2 &Y3; 250 USD/day)	41,250	Request for Proposal	No	Y1Q2	Y1Q3
National consultant to support project coordination, M&E and developments under output 2.1. Development of an IT -based system (6 months split in Y1 & Y2; USD 3,500/month)	21,000	Request for Proposal	No	Y1Q2	Y1Q3
Local gender specialist under component 2 (2 weeks split in years Y2&Y3; 800 USD/week)	1,600	Request for Proposal	No	Y2Q1	Y2Q3
Specialist on GHG emission inventories with experience in Mauritius for output 3.1 (40 days split in Y3 & Y4; 250 USD/day)	10,000	Request for Proposal	No	Y2Q4	Y3Q1
National consultant to support project coordination, M&E and developments under output 3.1. targeted training (66 days split in Y3 & Y4;; 250 USD/day)	16,500	Request for Proposal	No	Y2Q4	Y3Q1
IT specialist for output 3.2 (80 days split in Y3 & Y4; 250 USD/day)	20,000	Request for Proposal	No	Y2Q4	Y3Q1
National consultant for terminal evaluation (6,000 USD; lumpsum)	6,000	Request for Proposal	No	Y3Q4	Y4Q1
National consultant for biennial evaluation (2,000 USD; lumpsum)	2,000	Request for Proposal	No	Y2Q1	Y2Q3
National consultant to support project coordination and M&E (4 months split in four years; 3,500 USD/month)	14,000	Request for Proposal	No	Y1Q1	Y1Q2
Support for Project Manager salary (6 months split in four years; 3,500 USD/month)	21,000	Request for Proposal	No	Y1Q1	Y1Q2

General Description	Contract Value (US$)	Procurement Method	Prequalification of Bidders (y/n)	Advertisement Date (quarter/year)	Implementation start Date (quarter/year)
Support for Project Assistant salary (36 months split in four years; 1,800 USD/month)	64,800	Request for Proposal	No	Y1Q1	Y1Q2
Contractual Services-Companies					
Contractual Services-Companies for carrying out the activities under output 1.1. Y1 &Y2	60,000	Request for Proposal	No	Y1Q1	Y1Q2
Contractual Services-Companies for carrying out the activities under output 1.2. Y1 &Y2	60,000	Request for Proposal	No	Y1Q1	Y1Q2
Contractual Services-Companies for carrying out the activities under output 1.3. Y2, Y3 &Y2	210,000	Request for Proposal	No	Y1Q4	Y2Q2
Contractual Services-Companies for carrying out the activities under output 1.4. Y1 & Y2	60,000	Request for Proposal	No	Y1Q1	Y1Q2
Contractual Services-Companies for carrying out the activities under output 1.5. Y2, Y3 &Y2	150,000	Request for Proposal	No	Y1Q4	Y2Q2
Contractual Services-Companies for carrying out the activities under output 1.6. Y1 & Y2	84,000	Request for Proposal	No	Y1Q1	Y1Q2

The 16,000 USD budgeted under professional services [18] are not included in the procurement plan.

Annex 10: Co-financing letters

The co-finance letters are attached separately in the pdf “co-finance_CBIT_Mauritius.pdf”

Annex 11: GEF Core indicators

Core Indicator 11	**Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment**					***(Number)***
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		Female	48	60	30	60
		Male	72	60	30	60
		Total	120	120	60	120

Annex 12: GEF 7 Taxonomy

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

	☒ **Stakeholder Engagement Plan**		
☒**Gender Equality**			
	☒**Gender Mainstreaming**		
		☐Beneficiaries	
		☐Women groups	
		☒Sex-disaggregated indicators	
		☒Gender-sensitive indicators	
	☒**Gender results areas**		
		☐ Access and control over natural resources	
		☒Participation and leadership	
		☐Access to benefits and services	
		☐Capacity development	
		☐Awareness raising	
		☐Knowledge generation	
☐**Focal Areas/Theme**			
	☐**Integrated Programs**		
		☐ Commodity Supply Chains ([65] Good Growth Partnership)	
			☐ Sustainable Commodities Production
			☐Deforestation-free Sourcing
			☐Financial Screening Tools
			☐High Conservation Value Forests
			☐High Carbon Stocks Forests
			☐Soybean Supply Chain
			☐Oil Palm Supply Chain
			☐Beef Supply Chain
			☐Smallholder Farmers
			☐Adaptive Management
		☐ Food Security in Sub-Sahara Africa	
			☐Resilience (climate and shocks)
			☐Sustainable Production Systems
			☐Agroecosystems
			☐Land and Soil Health
			☐Diversified Farming
			☐ Integrated Land and Water Management
			☐Smallholder Farming
			☐Small and Medium Enterprises
			☐Crop Genetic Diversity
			☐Food Value Chains
			☐Gender Dimensions
			☐Multi-stakeholder Platforms
		☐ Food Systems, Land Use and Restoration	
			☐Sustainable Food Systems
			☐Landscape Restoration
			☐ Sustainable Commodity Production
			☐ Comprehensive Land Use Planning
			☐Integrated Landscapes
			☐Food Value Chains
			☐Deforestation-free Sourcing
			☐Smallholder Farmers
		☐Sustainable Cities	

			☐Integrated urban planning
			☐Urban sustainability framework
			☐Transport and Mobility
			☐Buildings
			☐Municipal waste management
			☐Green space
			☐Urban Biodiversity
			☐Urban Food Systems
			☐Energy efficiency
			☐Municipal Financing
			☐ Global Platform for Sustainable Cities
			☐Urban Resilience
	☐**Biodiversity**		
		☐Protected Areas and Landscapes	
			☐Terrestrial Protected Areas
			☐ Coastal and Marine Protected Areas
			☐Productive Landscapes
			☐Productive Seascapes
			☐ Community Based Natural Resource Management
		☐Mainstreaming	
			☐ Extractive Industries (oil, gas, mining)
			☐ Forestry (Including HCVF and REDD+)
			☐Tourism
			☐Agriculture & agrobiodiversity
			☐Fisheries
			☐Infrastructure
			☐ Certification (National Standards)
			☐ Certification (International Standards)
		☐Species	
			☐Illegal Wildlife Trade
			☐Threatened Species
			☐ Wildlife for Sustainable Development
			☐Crop Wild Relatives
			☐Plant Genetic Resources
			☐Animal Genetic Resources
			☐Livestock Wild Relatives
			☐Invasive Alien Species (IAS)
		☐Biomes	
			☐Mangroves
			☐Coral Reefs
			☐Sea Grasses
			☐Wetlands
			☐Rivers
			☐Lakes
			☐Tropical Rain Forests
			☐Tropical Dry Forests
			☐Temperate Forests
			☐Grasslands
			☐Paramo
			☐Desert
		☐Financial and Accounting	
			☐Payment for Ecosystem Services
			☐Natural Capital Assessment and Accounting

			☐Conservation Trust Funds
			☐Conservation Finance
		☐ Supplementary Protocol to the CBD	
			☐Biosafety
			☐ Access to Genetic Resources Benefit Sharing
	☐**Forests**		
		☐Forest and Landscape Restoration	
			☐REDD/REDD+
		☐Forest	
			☐Amazon
			☐Congo
			☐Drylands
	☐**Land Degradation**		
		☐Sustainable Land Management	
			☐ Restoration and Rehabilitation of Degraded Lands
			☐Ecosystem Approach
			☐ Integrated and Cross-sectoral approach
			☐Community-Based NRM
			☐Sustainable Livelihoods
			☐Income Generating Activities
			☐Sustainable Agriculture
			☐ Sustainable Pasture Management
			☐ Sustainable Forest/Woodland Management
			☐ Improved Soil and Water Management Techniques
			☐Sustainable Fire Management
			☐ Drought Mitigation/Early Warning
		☐Land Degradation Neutrality	
			☐Land Productivity
			☐ Land Cover and Land cover change
			☐ Carbon stocks above or below ground
		☐Food Security	
	☐**International Waters**		
		☐Ship	
		☐Coastal	
		☐Freshwater	
			☐Aquifer
			☐River Basin
			☐Lake Basin
		☐Learning	
		☐Fisheries	
		☐Persistent toxic substances	
		☐SIDS : Small Island Dev States	
		☐Targeted Research	
		☐Pollution	
			☐Persistent toxic substances
			☐Plastics
			☐ Nutrient pollution from all sectors except wastewater
			☐ Nutrient pollution from Wastewater

		☐ Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		☐ Strategic Action Plan Implementation	
		☐ Areas Beyond National Jurisdiction	
		☐ Large Marine Ecosystems	
		☐ Private Sector	
		☐ Aquaculture	
		☐ Marine Protected Area	
		☐ Biomes	
			☐ Mangrove
			☐ Coral Reefs
			☐ Seagrasses
			☐ Polar Ecosystems
			☐ Constructed Wetlands
	☐ **Chemicals and Waste**		
		☐ Mercury	
		☐ Artisanal and Scale Gold Mining	
		☐ Coal Fired Power Plants	
		☐ Coal Fired Industrial Boilers	
		☐ Cement	
		☐ Non-Ferrous Metals Production	
		☐ Ozone	
		☐ Persistent Organic Pollutants	
		☐ Unintentional Persistent Organic Pollutants	
		☐ Sound Management of chemicals and Waste	
		☐ Waste Management	
			☐ Hazardous Waste Management
			☐ Industrial Waste
			☐ e-Waste
		☐ Emissions	
		☐ Disposal	
		☐ New Persistent Organic Pollutants	
		☐ Polychlorinated Biphenyls	
		☐ Plastics	
		☐ Eco-Efficiency	
		☐ Pesticides	
		☐ DDT - Vector Management	
		☐ DDT - Other	
		☐ Industrial Emissions	
		☐ Open Burning	
		☐ Best Available Technology / Best Environmental Practices	
		☐ Green Chemistry	
	☒ **Climate Change**		
		☒ **Climate Change Adaptation**	
			☐ Climate Finance
			☐ Least Developed Countries
			☐ Small Island Developing States
			☐ Disaster Risk Management
			☐ Sea-level rise
			☐ Climate Resilience
			☐ Climate information
			☐ Ecosystem-based Adaptation
			☐ Adaptation Tech Transfer
			☐ National Adaptation Programme of Action
			☐ National Adaptation Plan

			☐Mainstreaming Adaptation
			☐Private Sector
			☐Innovation
			☐Complementarity
			☐Community-based Adaptation
			☐Livelihoods
		☒**Climate Change Mitigation**	
			☐Agriculture, Forestry, and other Land Use
			☐Energy Efficiency
			☐Sustainable Urban Systems and Transport
			☐Technology Transfer
			☐Renewable Energy
			☐Financing
			☒Enabling Activities
		☐**Technology Transfer**	
			☐Poznan Strategic Programme on Technology Transfer
			☐ Climate Technology Centre & Network (CTCN)
			☐Endogenous technology
			☐Technology Needs Assessment
			☐Adaptation Tech Transfer
		☒**United Nations Framework on Climate Change**	
			☒ Nationally Determined Contribution

Annex 13. Partners Capacity Assessment Tool and HACT Assessment

13.1 Partners Capacity Assessment Tool

Partner Capacity Assessment Tool: Step 4: Capacity Assessment Conclusions		
Return to PCAT Overview page	Return to Capacity Assessment Scoping	
Purpose: This worksheet is designed to capture the results of the Capacity Assessments completed and the resulting mitigation strategies for the risk levels identified. Risk mitigation strategies can include capacity building and/or enhanced monitoring and assurance activities. These activities should be included in the Project Document and the associated Project Budget. When completed, attach this worksheet to the Project Document.		
Responsibility & Timing: This Capacity Assessment Conclusion page is automatically generated based on the results of the assessments completed in the PCAT. It should be reviewed by the Project Developer for completeness and accuracy and attached to the Project Document. If changes need to be made to this Conclusion page, they should be done on the relevant Capacity Assessment Worksheet (i.e., Programme-Project Mgt, Construction Assess, On-Granting Assess, PBPA Proposal Due Diligence, Private Sector Due Diligence, etc) so that the corrections will be captured in the relevant assessments and automatically displayed here.		
Background Information (carried forward from 'Partner Pre-requisites' worksheet)		
Region	Africa	Comments: (Optional)
Office	Mauritius	The project will follow NIM process and as has been the practice with all donor funded nationally executed projects it will be implemented by the Project Management Unit responsible for 100% the total budget. The Ministry of Ministry of Environment, Solid Waste Management and Climate Change will serve as the Implementing Partner for the strengthening the national greenhouse gas inventory of the Republic of Mauritius to improve climate reporting and transparency project and will provide the technical, administrative and logistics support to the Project Management Unit in delivering key results of the project.
Programme Start	01-ago-20	
Programme End	30-jun-24	
Partner Name	Ministry of Environment, Solid Waste Management and Climate Change	
Partner budget for this Project (USD)	1,269,850	

Capacity Assessment Conclusions for this IP					
Automatically Generated					
Capacity Assessment Component	**Overall Risk Assessment for this Component**	**Risk Mitigation Strategies (i.e. capacity building actions and/or enhanced monitoring and assurance activities)**	**Describe the capacity building actions and/or enhanced monitoring and assurance activities that will be included in the Project Document**	**Estimated budget required for these activities (include in the Project Budget) ($US)**	**Comments (Optional)**
Conclusion on Programmatic Assessment	**Low Risk**	Capacity building actions	To add details on Capacity building activities to be carried out	$ -	0
Conclusion on HACT Micro-Assessment (manually enter here based on results of HACT Micro-Assessment completed by independent Third-Party Service Provider)	Manually Enter	Manually Enter	Manually Enter	Manually Enter	Manually Enter
			Total	$ -	
Comments on Overall Capacity Assessments for this IP: (Optional)					

13.2 HACT Assessment

The table below summarizes the results and main internal control gaps found during application of the micro assessment questionnaire. The full HACT Framework Micro Assessment Report is submitted in a separate file along the ProDoc and the CEO Endorsement Request.

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner				
Tested subject area (see subsequent pages for details of each subject area summarized below)				
	Total number of risk points	**Total number of applicable questions**	**Overall risk assessment**	**Comments**
1. Implementing partner:	**4.0**	**4**	**1.0**	Low Risk
2. Funds flow:	**4.0**	**4**	**1.0**	Low Risk
3. Organizational structure and staffing:	**11.0**	**10**	**1.0**	Low Risk
4. Accounting policies and procedures:	**42.0**	**41**	**1.0**	Low Risk
5. Internal audit:	**9.0**	**5**	**2.0**	Medium Risk
6. Financial audit:	**8.0**	**7**	**1.0**	Low Risk
7. Reporting and monitoring:	**8.0**	**8**	**1.0**	Low Risk
8. Information systems:	**5.0**	**5**	**1.0**	Low Risk
9. Procurement:	**36.0**	**34**	**1.0**	Low Risk
Total:	**127.0**	**118**	**1.0**	Divide the total number of risk points by the total number of applicable questions in the subject matter section.

Annex 14. UNDP Project Quality Assurance Report

PROJECT QA ASSESSMENT: DESIGN AND APPRAISAL

OVERALL PROJECT

EXEMPLARY (5) ◎◎◎◎◎	HIGHLY SATISFACTORY (4) ◎◎◎◎○	SATISFACTORY (3) ◎◎◎○○	NEEDS IMPROVEMENT (2) ◎◎○○○	INADEQUATE (1) ◎○○○○
At least four criteria are rated Exemplary, and all criteria are rated High or Exemplary.	All criteria are rated Satisfactory or higher, and at least four criteria are rated High or Exemplary.	At least six criteria are rated Satisfactory or higher, and only one may be rated Needs Improvement. The Principled criterion must be rated Satisfactory or above.	At least three criteria are rated Satisfactory or higher, and only four criteria may be rated Needs Improvement.	One or more criteria are rated Inadequate, or five or more criteria are rated Needs Improvement.

DECISION

- **APPROVE** – the project is of sufficient quality to be approved in its current form**.** Any management actions must be addressed in a timely manner.
- **APPROVE WITH QUALIFICATIONS** – the project has issues that must be addressed before the project document can be approved. Any management actions must be addressed in a timely manner.
- **DISAPPROVE** – the project has significant issues that should prevent the project from being approved as drafted.

RATING CRITERIA

For all questions, select the option that best reflects the project

STRATEGIC

1. Does the project specify how it will contribute to higher level change through linkage to the programme's Theory of Change? • **3:** The project is clearly linked to the programme's theory of change. It has an explicit change pathway that explains how the project will contribute to outcome level change and why the project's strategy will likely lead to this change. This analysis is backed by credible evidence of what works effectively in this context and includes assumptions and risks. • **2:** The project is clearly linked to the programme's theory of change. It has a change pathway that explains how the project will contribute to outcome-level change and why the project strategy will likely lead to this change. • **1:** The project document may describe in generic terms how the project will contribute to development results, without an explicit link to the programme's theory of change. **Note: Projects not contributing to a programme must have a project-specific Theory of Change. See alternative question under the lightbulb for these cases.*	3 / 2 / 1 **Evidence** The project is clearly linked to Output 1 under Pillar 2 of the CPD. The project's theory of change (Section II) shows a clear pathway to strengthen plans and policies to improve and enhance transparency on climate change reporting.
2. Is the project aligned with the UNDP Strategic Plan?	3 / 2 / 1 **Evidence** The project responds to the need for accelerated transformation for sustainable development and adopts signature solution 2 on strengthening inclusive and accountable governance

• **3:** The project responds to at least one of the development settings as specified in the Strategic Plan[66] and adapts at least one Signature Solution[67]. The project's RRF includes all the relevant SP output indicators. *(all must be true)* • **2:** The project responds to at least one of the development settings as specified in the Strategic Plan[4]. The project's RRF includes at least one SP output indicator, if relevant. *(both must be true)* • **1:** The project responds to a partner's identified need, but this need falls outside of the UNDP Strategic Plan. Also select this option if none of the relevant SP indicators are included in the RRF.		
3. Is the project linked to the programme outputs? (i.e., UNDAF Results Group Workplan/CPD, RPD or Strategic Plan IRRF for global projects/strategic interventions not part of a programme)	**Yes**	**No**
RELEVANT		
4. Does the project target groups left furthest behind? • **3:** The target groups are clearly specified, prioritising discriminated, and marginalized groups left furthest behind, identified through a rigorous process based on evidence. • **2:** The target groups are clearly specified, prioritizing groups left furthest behind. • **1:** The target groups are not clearly specified. *Note: Management Action must be taken for a score of 1. *Projects that build institutional capacity should still identify targeted groups to justify support*	3 1 **Evidence** Target groups have been clearly identified during the consultation meetings and their roles defined in the stakeholder engagement plan.	2
5. Have knowledge, good practices, and past lessons learned of UNDP and others informed the project design? • **3:** Knowledge and lessons learned backed by credible evidence from sources such as evaluation, corporate policies/strategies, and/or monitoring have been explicitly used, with appropriate referencing, to justify the approach used by the project. • **2:** The project design mentions knowledge and lessons learned backed by evidence/sources but have not been used to justify the approach selected. • **1:** There is little, or no mention of knowledge and lessons learned informing the project design. Any references made are anecdotal and not backed by evidence. *Note: Management Action or strong management justification must be given for a score of 1	3 1 **Evidence** Lessons learned from other similar projects were gathered and obtained during consultation meetings and have helped to inform the project design. These are referenced in Section I of the Development Challenge and in Section III (Results and Partnerships) under Baseline projects.	2
6. Does UNDP have a clear advantage to engage in the role envisioned by the project vis-à-vis national/regional/global partners and other actors? • **3:** An analysis has been conducted on the role of other partners in the area where the project intends to work, and credible evidence supports the proposed engagement of UNDP and partners through the project, including identification of potential funding partners. It is clear how results achieved by partners will complement the project's intended results and a communication strategy is in place to communicate results and raise visibility vis-à-vis key partners. Options for south-south and triangular cooperation have been considered, as appropriate. *(all must be true)* • **2:** Some analysis has been conducted on the role of other partners in the area where the project intends to work, and relatively limited evidence supports the proposed engagement of and division of labour between UNDP and partners through the project, with unclear funding and communications strategies or plans.	3 1 **Evidence** The IP is the UNFCC focal point, and the project is on a focal area directly linked to UNDP's mission. How the results achieved by partners will complement the project's intervention is described in Section III (Results and Partnerships) under Baseline projects. The Stakeholder Engagement Plan also defines the	2

[66] The three development settings in UNDP's 2018-2021 Strategic Plan are: a) Eradicate poverty in all its forms and dimensions; b) Accelerate structural transformations for sustainable development; and c) Build resilience to shocks and crises

[67] The six Signature Solutions of UNDP's 2018-2021 Strategic Plan are: a) Keeping people out of poverty; b) Strengthen effective, inclusive and accountable governance; c) Enhance national prevention and recovery capacities for resilient societies; d) Promote nature based solutions for a sustainable planet; e) Close the energy gap; and f) Strengthen gender equality and the empowerment of women and girls.

• **1:** No clear analysis has been conducted on the role of other partners in the area that the project intends to work. There is risk that the project overlaps and/or does not coordinate with partners' interventions in this area. Options for south-south and triangular cooperation have not been considered, despite its potential relevance. *Note: Management Action or strong management justification must be given for a score of 1	communication strategy to be used for communicating results and raise visibility. Options for South-South Cooperation and d triangulation have also been defined.
PRINCIPLED	
7. Does the project apply a human rights-based approach? • **3:** The project is guided by human rights and incorporates the principles of accountability, meaningful participation, and non-discrimination in the project's strategy. The project upholds the relevant international and national laws and standards. Any potential adverse impacts on enjoyment of human rights were rigorously identified and assessed as relevant, with appropriate mitigation and management measures incorporated into project design and budget. *(all must be true)* • **2:** The project is guided by human rights by prioritizing accountability, meaningful participation, and non-discrimination. Potential adverse impacts on enjoyment of human rights were identified and assessed as relevant, and appropriate mitigation and management measures incorporated into the project design and budget. *(both must be true)* • **1:** No evidence that the project is guided by human rights. Limited or no evidence that potential adverse impacts on enjoyment of human rights were considered. *Note: Management action or strong management justification must be given for a score of 1	3 | 2 | 1 **Evidence** The project is guided by human rights by prioritizing accountability and meaningful and non-discriminatory participation. No potential adverse impact on enjoyment of rights is foreseen. This project was exempt of the SESP screening process.
8. Does the project use gender analysis in the project design? • **3:** A participatory gender analysis has been conducted and results from this gender analysis inform the development challenge, strategy and expected results sections of the project document. Outputs and indicators of the results framework include explicit references to gender equality, and specific indicators measure and monitor results to ensure women are fully benefitting from the project. *(all must be true)* • **2:** A basic gender analysis has been carried out and results from this analysis are scattered (i.e., fragmented and not consistent) across the development challenge and strategy sections of the project document. The results framework may include some gender sensitive outputs and/or activities but gender inequalities are not consistently integrated across each output. *(all must be true)* • **1:** The project design may or may not mention information and/or data on the differential impact of the project's development situation on gender relations, women, and men, but the gender inequalities have not been clearly identified and reflected in the project document. *Note: Management Action or strong management justification must be given for a score of 1	3 | 2 | 1 **Evidence** A basic gender analysis has been carried out (Annex 8) and a gender action plan developed. Some of the project outputs namely Output 1.3 aims to mainstream gender in the survey to be carried out.
9. Did the project support the resilience and sustainability of societies and/or ecosystems? • **3:** Credible evidence that the project addresses sustainability and resilience dimensions of development challenges, which are integrated in the project strategy and design. The project reflects the interconnections between the social, economic, and environmental dimensions of sustainable development. Relevant shocks, hazards and adverse social and environmental impacts have been identified and rigorously assessed with appropriate management and mitigation measures incorporated into project design and budget. *(all must be true)*. • **2:** The project design integrates sustainability and resilience dimensions of development challenges. Relevant shocks, hazards and adverse social and environmental impacts have been identified and assessed, and relevant management and mitigation measures incorporated into project design and budget. *(both must be true)* • **1:** Sustainability and resilience dimensions and impacts were not adequately considered. *Note: Management action or strong management justification must be given for a score of 1	3 | 2 | 1 **Evidence** The project aims to put in place a sustainable and transparency system of the measurement, verification and recording of GHG emissions by putting in place the necessary policy, institutional frameworks and building local capacity in this field. No adverse environmental and social impacts have been identified and new risks

	related to the COVID-19 pandemic are accounted for.
10. Has the Social and Environmental Screening Procedure (SESP) been conducted to identify potential social and environmental impacts and risks? The SESP is not required for projects in which UNDP is Administrative Agent only and/or projects comprised solely of reports, coordination of events, trainings, workshops, meetings, conferences and/or communication materials and information dissemination. [if yes, upload the completed checklist. If SESP is not required, provide the reason for the exemption in the evidence section.]	Yes / No SESP Not Required
MANAGEMENT & MONITORING	
11. Does the project have a strong results framework? • **3:** The project's selection of outputs and activities are at an appropriate level. Outputs are accompanied by SMART, results-oriented indicators that measure the key expected development changes, each with credible data sources and populated baselines and targets, including gender sensitive, target group focused, sex-disaggregated indicators where appropriate. *(all must be true)* • **2:** The project's selection of outputs and activities are at an appropriate level. Outputs are accompanied by SMART, results-oriented indicators, but baselines, targets and data sources may not yet be fully specified. Some use of target group focused, sex-disaggregated indicators, as appropriate. *(all must be true)* • **1:** The project's selection of outputs and activities are not at an appropriate level; outputs are not accompanied by SMART, results-oriented indicators that measure the expected change and have not been populated with baselines and targets; data sources are not specified, and/or no gender sensitive, sex-disaggregation of indicators. *(if any is true)* *Note: Management Action or strong management justification must be given for a score of 1	3 / 2 / 1 **Evidence** The project result framework as defined in section V defines outputs with SMART, results-oriented indicators that measure the key expected development changes, each with credible data sources and populated baselines and targets, including gender sensitive, target group focused, sex-disaggregated indicators where appropriate.
12. Is the project's governance mechanism clearly defined in the project document, including composition of the project board? • **3:** The project's governance mechanism is fully defined. Individuals have been specified for each position in the governance mechanism (especially all members of the project board.) Project Board members have agreed on their roles and responsibilities as specified in the terms of reference. The ToR of the project board has been attached to the project document. *(all must be true)*. • **2:** The project's governance mechanism is defined; specific institutions are noted as holding key governance roles, but individuals may not have been specified yet. The project document lists the most important responsibilities of the project board, project director/manager and quality assurance roles. *(all must be true)* • **1:** The project's governance mechanism is loosely defined in the project document, only mentioning key roles that will need to be filled later. No information on the responsibilities of key positions in the governance mechanism is provided. *Note: Management Action or strong management justification must be given for a score of 1	3 / 2 / 1 **Evidence** The project's governance mechanism is fully defined. Individuals have been specified for each position in the governance mechanism (especially all members of the project board.) Project Board members have agreed on their roles and responsibilities as specified in the terms of reference. The ToR of the project board has been attached to the project document.
13. Have the project risks been identified with clear plans stated to manage and mitigate each risk? • **3:** Project risks related to the achievement of results are fully described in the project risk log, based on comprehensive analysis drawing on the programme's theory of change, Social and Environmental Standards and screening, situation analysis, capacity assessments and other analysis such as funding potential and reputational risk. Risks have been identified through a consultative process with key internal and external stakeholders. Clear and complete plan in place to manage and mitigate each risk, reflected in project budgeting and monitoring plans. *(both must be true)*	3 / 2 / 1 **Evidence** Risks identified through a consultative approach, are fully described in the Risk Register (Annex 5) and draws on the theory of change. New risks such as the

• **2:** Project risks related to the achievement of results are identified in the initial project risk log based on a minimum level of analysis and consultation, with mitigation measures identified for each risk. • **1:** Some risks may be identified in the initial project risk log, but no evidence of consultation or analysis and no clear risk mitigation measures identified. This option is also selected if risks are not clearly identified and/or no initial risk log is included with the project document. *Note: Management Action must be taken for a score of 1	COVID 19 pandemic have also been included.

EFFICIENT

14. Have specific measures for ensuring cost-efficient use of resources been explicitly mentioned as part of the project design? This can include, for example: i) using the theory of change analysis to explore different options of achieving the maximum results with the resources available; ii) using a portfolio management approach to improve cost effectiveness through synergies with other interventions; iii) through joint operations (e.g., monitoring or procurement) with other partners; iv) sharing resources or coordinating delivery with other projects, v) using innovative approaches and technologies to reduce the cost of service delivery or other types of interventions. *(Note: Evidence of at least one measure must be provided to answer yes for this question)*	Yes (3)	No (1)

15. Is the budget justified and supported with valid estimates? • **3:** The project's budget is at the activity level with funding sources and is specified for the duration of the project period in a multi-year budget. Realistic resource mobilisation plans are in place to fill unfunded components. Costs are supported with valid estimates using benchmarks from similar projects or activities. Cost implications from inflation and foreign exchange exposure have been estimated and incorporated in the budget. Adequate costs for monitoring, evaluation, communications, and security have been incorporated. • **2:** The project's budget is at the activity level with funding sources, when possible, and is specified for the duration of the project in a multi-year budget, but no funding plan is in place. Costs are supported with valid estimates based on prevailing rates. • **1:** The project's budget is not specified at the activity level, and/or may not be captured in a multi-year budget.	3	2
	1	
	Evidence Budget is activity level with funding sources identified and covers the duration of the project. There are no unfunded components and costs are supported by valid estimates by benchmarking with other similar projects and adjusted from inflation, foreign exchange rate fluctuations. Monitoring and evaluation and communications costs have been budgeted.	

16. Is the Country Office/Regional Hub/Global Project fully recovering the costs involved with project implementation? • **3:** The budget fully covers all project costs that are attributable to the project, including programme management and development effectiveness services related to strategic country programme planning, quality assurance, pipeline development, policy advocacy services, finance, procurement, human resources, administration, issuance of contracts, security, travel, assets, general services, information and communications based on full costing in accordance with prevailing UNDP policies (i.e., UPL, LPL.) • **2:** The budget covers significant project costs that are attributable to the project based on prevailing UNDP policies (i.e., UPL, LPL) as relevant. • **1:** The budget does not adequately cover project costs that are attributable to the project, and UNDP is cross subsidizing the project. *Note: Management Action must be given for a score of 1. The budget must be revised to fully reflect the costs of implementation before the project commences.	3	2
	1	
	Evidence No Execution support is being provided by UNDP on this project.	

EFFECTIVE

17. Have targeted groups been engaged in the design of the project?	3	2
	1	

• 3: Credible evidence that all targeted groups, prioritising discriminated and marginalized populations that will be involved in or affected by the project, have been actively engaged in the design of the project. The project has an explicit strategy to identify, engage and ensure the meaningful participation of target groups as stakeholders throughout the project, including through monitoring and decision-making (e.g., representation on the project board, inclusion in samples for evaluations, etc.) • 2: Some evidence that key targeted groups have been consulted in the design of the project. • 1: No evidence of engagement with targeted groups during project design.	**Evidence** There are no discriminated and marginalized populations that will be inclined in or affected by the project.	
18. Does the project plan for adaptation and course correction if regular monitoring activities, evaluation, and lesson learned demonstrate there are better approaches to achieve the intended results and/or circumstances change during implementation?	Yes (3)	No (1)
19. The gender marker for all project outputs are scored at GEN2 or GEN3, indicating that gender has been fully mainstreamed into all project outputs at a minimum. *Note: Management Action or strong management justification must be given for a score of "no"	Yes (3)	No (1)
	Evidence The project has a GEN 2 gender marker.	
SUSTAINABILITY & NATIONAL OWNERSHIP		
20. Have national/regional/global partners led, or proactively engaged in, the design of the project? • **3:** National partners (or regional/global partners for regional and global projects) have full ownership of the project and led the process of the development of the project jointly with UNDP. • **2:** The project has been developed by UNDP in close consultation with national/regional/global partners. • **1:** The project has been developed by UNDP with limited or no engagement with national partners.	3	2
	1	
	Evidence National partners have full ownership of the project, chair the project board, and have informed the design process.	
21. Are key institutions and systems identified, and is there a strategy for strengthening specific/ comprehensive capacities based on capacity assessments conducted? • **3:** The project has a strategy for strengthening specific capacities of national institutions and/or actors based on a completed capacity assessment. This strategy includes an approach to regularly monitor national capacities using clear indicators and rigorous methods of data collection and adjust the strategy to strengthen national capacities accordingly. • **2:** A capacity assessment has been completed. There are plans to develop a strategy to strengthen specific capacities of national institutions and/or actors based on the results of the capacity assessment. • **1:** Capacity assessments have not been carried out.	3	2
	1	
	Evidence Being a Capacity Building project, the aim of the project is to strengthen national capacities, monitor it and a capacity assessment has been completed.	
22. Is there is a clear strategy embedded in the project specifying how the project will use national systems (i.e., procurement, monitoring, evaluations, etc.,) to the extent possible?	Yes (3)	No (1)
23. Is there a clear transition arrangement/ phase-out plan developed with key stakeholders in order to sustain or scale up results (including resource mobilisation and communications strategy)?	Yes (3)	No (1)

Annex 15. Knowledge Management Approach

The CBIT project will build from the results of the projects previously developed and under implementation in the country. The PMU of the CBIT project will work under the MoESWMCC, which serves as the UNFCCC Focal Point and coordinates Mauritius's actions on climate change and oversee directly or indirectly all climate change projects implemented in Mauritius. The involvement of the MoESWMCC in the project will allow the information flow between projects. The complementarity and coordination between projects are further specified in table 5 in pages 46-50 of the CEO endorsement request.

The core focus of transparency is the exchange of climate change-related information and knowledge. At the country level, this includes enhanced coordination among existing databases of ministries, agencies, and individual projects, collect and manage climate change data. Within Mauritius, this project adopts three core knowledge management approaches.

First, under Output 2.2, the project will establish an IT system for simplifying and streamlining the inventory data collection process. This IT system, that will be built from existent systems and managed by the CCD in collaboration with Mauritius Statistics, will serve as a coordination medium between data providers, data aggregators, and inventory compilers. It will also act as a back-end archiving system maintaining disaggregated wealth of country level information. Provision of training for all stakeholders involved in the inventory will ensure that a cadre of trained experts will manage the knowledge sharing process and sustain this in the future as well.

Second, under output 3.2., the online Climate Change Information Centre (CCIC) will be enhanced to act as a centralized information center related to climate change, aiming at improving the transparency of the climate change action of the country and the awareness of its citizens related to climate change risks and impacts.

Third, under output 4.2, the project will promote a knowledge-sharing culture through information dissemination activities and through sharing lessons learned at the regional and international level. The whole project will be documented to share good practices with third countries implementing climate change MRV systems.

The implementation of these three approaches will enable Mauritius to enhance its climate-related knowledge management, particularly related to the preparation of the national GHG emissions inventory. The current ad hoc and rather informal process will be updated through the implementation of an IT system that will serve as a coordination mechanism and a back-end archiving system, complemented by the enhancement of the CCIC as a climate change centralized information center. All the data used for the preparation of the inventory in the IT system will be stored systematically, ensuring the sustainability of the inventory, and allowing future potential recalculations. Furthermore, the capacity building exercises developed within the CBIT will be document in manuals to make sure they can be used beyond project implementation. This will allow future government staff to improve their skills and carry out the corresponding capacity building exercises. Additionally, the CCIC will be consider for its use as a repository of capacity building exercises developed in the country, easing the capacitation of future governmental staff.

Finally, the project will undertake systematic documentation of project guidance, approaches, technical documentation, curricula, and other knowledge products.

There will be a two-way flow of information between this project and other GEF-funded projects (locally and globally). The project will provide information on a regular basis to GEF-funded global initiatives, such as the Global Support Programme for National Communications and Biennial Update Reports and the CBIT Global Coordination Platform and subsequent initiatives in these areas. The project will also identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation through lessons learned.

The table below provides an overview of key knowledge products by project component, including the timeline for their delivery.

Key Knowledge Products		***Timeline***
Project Component 1	• Work plans for the development of tier 2/tier 3 emission factors • Documentation of tier 2/tier 3 emission factors • Workshop reports for the capacity building exercises developed under component 1	Work plans : Y1 Documentation: Y3 Capacity building: Y1-Y4
Project Component 2	• Proposal of MRV system • IT system (set of Excel workbooks for inventory compilation) in place	*MRV system:* Y2-3 IT system: Y3
Project Component 3	• Workshop reports for the capacity building exercises developed under component 3 • Meeting minutes for the coordination of the CCIC improvement	*Workshop reports: Y4* *Meeting minutes: Y1*
Project component 4: M&E	• Inception report, Project Implementation Reports, terminal evaluation • Reports on training participation by gender and gender mainstreaming in other activities, including website usage.	*M&E reports:* see Section 9 of the CEO endorsement request and Annex 3 of the accompanying UNDP ProDoc
Project Management	• Final Report, summary of achievements • Lessons learnt from the CBIT project in Mauritius	*Report/summary:* Y4 Report on Lessons Learnt: Y4

The implementation of the CBIT project will bring best practices on the development of advanced Tier emission factors, essential for achieving national specific emission inventories. The process of development of emission factors and the results will be documented in a knowledge management product on lessons learnt, which could be used as a reference by third countries. The emission factors developed will be also uploaded into the IPCC emission factor database, allowing its use by countries with similar emitting characteristics. To present opportunities for replication in other countries, the project will codify good practices and facilitate dissemination through global ongoing South-South and global platforms, such as the CBIT Global Platform, the UN South-South Galaxy knowledge sharing platform, and PANORAMA[68].

In addition, to bring the voice of Mauritius to global and regional fora, the project will explore opportunities for meaningful participation in specific events where UNDP could support engagement with the global development discourse on transparency-related issues. The project will furthermore provide opportunities for regional cooperation with countries that are implementing CBIT initiatives in geopolitical, social, and environmental contexts relevant to

[68] https://panorama.solutions/en

Annex 16. GEF budget

Expenditure Category	Detailed Description	Component (USDeq.)						Total (USDeq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)[1]
		Component 1	*Component 2*	*Component 3*	*Sub-Total*	*M&E*	*PMC*		
		Sub-component 1.1	*Sub-component 2.1*	*Sub-component 3.1*					
Goods	Information Technology equipment				-		3,050	3,050	*MoESWMCC*
Contractual Services – Individual	Support for Project Manager (6 months; 3,500 USD/month) and Project Assistant (36 months; 1,800 USD/month) salaries; The cost of the technical work is distributed among technical components while PM work is budgeted and will be charged to PMU cost.				-		85,800	85,800	*MoESWMCC*
Contractual Services – Company	One contract by output for carrying out the technical activities defined (see activities defined in section IV and/or annex 6. Overview of technical consultancies)	564,200			564,200			564,200	*MoESWMCC*
Contractual Services – Company	One contract for carrying out the technical activities defined for output 2.1 (see activities defined in section IV and/or annex 6. Overview of technical consultancies)		51,100		51,100			51,100	*MoESWMCC*
International Consultants	International independent consultant for terminal evaluation (21,000 USD; lumpsum)				-	21,000		21,000	*MoESWMCC*

Local Consultants	Specialist on GHG emissions from the energy sector for output 1.1. Development of Tier 2 emission factors for key fuels (150 days; 250 USD/day) Specialist on GHG emissions from electricity production for output 1.2 Development of Tier 3 emission factors for thermal power plants (150 days; 250 USD/day) Specialist on GHG emissions from transport for output 1.3 Development of Tier 2 activity data for land transport sector (150 days; 250 USD/day) Specialist on GHG emissions from the agriculture sector for output 1.4 Development of Tier 2 enteric fermentation emission factors for livestock (200 days; 250 USD/day) Specialist on GHG emissions from the Forestry and Land Use sector for output 1.6 Forest inventory of forestland and non-forest tree cover (250 days; 250 USD/day) National consultant to support project coordination, coordination of stakeholders for the development of advanced tiers in outputs 1.1-1.6; assistance in data collection; quality assurance of the reports and relevant results; ensure that the results are in line with national circumstances; assist the project manager in project implementation and in the development of project reports; biennial evaluation. (26 months; 3,500 USD/month) Gender specialist (6 weeks; 800 USD/week)	320,800			320,800			320,800	*MoESWMCC*

Expenditure Category	Detailed Description	Component (USDeq.)						Total (USDeq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)[1]
		Component 1	*Component 2*	*Component 3*	*Sub-Total*	*M&E*	*PMC*		
		Sub-component 1.1	*Sub-component 2.1*	*Sub-component 3.1*					
Local Consultants	Specialist on climate change MRV systems for output 2.1 (45 days; 250 USD/day) Specialist on GHG emission inventories with experience in Mauritius for output 2.2 (165 days; 250 USD/day) National consultant to support project coordination, coordination of stakeholders for the development of advanced tiers in outputs 2.1-2.2; assistance in data collection; quality assurance of the reports and relevant results; ensure that the results are in line with national circumstances; assist the project manager in project implementation and in the development of project reports; biennial evaluation. (6 months; USD 3,500/month) Local gender specialist (2 weeks; USD 800/week)		75,100		75,100			75,100	*MoESWMCC*

Expenditure Category	Detailed Description	Component (USDeq.)						Total (USDeq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)[1]
		Component 1	*Component 2*	*Component 3*	*Sub-Total*	*M&E*	*PMC*		
		Sub-component 1.1	*Sub-component 2.1*	*Sub-component 3.1*					
Local Consultants	Specialist on GHG emission inventories with experience in Mauritius for output 3.1 (40 days; 250 USD/day) National consultant to support project coordination, coordination of stakeholders for the development of advanced tiers in outputs 3.1-3.2; assistance in data collection; quality assurance of the reports and relevant results; ensure that the results are in line with national circumstances; assist the project manager in project implementation and in the development of project reports; biennial evaluation (66 days; 250 USD/day). IT specialist for output 3.2 (180 days; 250 USD/day)			71,500	71,500			71,500	*MoESWMCC*
Local Consultants	National consultant for biennial evaluation (8,000 USD; lumpsum) National consultant to support project coordination, terminal evaluation, monitoring activities, and supporting the development of dissemination products (4 months; 2,000 USD/month)				-	16,000		16,000	*MoESWMCC*

Expenditure Category	Detailed Description	Component (USDeq.)						Total (USDeq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)[1]
		Component 1	*Component 2*	*Component 3*	*Sub-Total*	*M&E*	*PMC*		
		Sub-component 1.1	*Sub-component 2.1*	*Sub-component 3.1*					
Trainings, Workshops, Meetings	Meetings for discussing the methodological approach to follow under each output. Validation meetings. Capacity building workshops on 2006 IPCC methodologies and on the development of advanced Tier approaches	14,000			14,000			14,000	*MoESWMCC*
Trainings, Workshops, Meetings	Meetings for discussing the methodological approach to follow and coordination meeting under each output. Validation meetings		5,000		5,000			5,000	*MoESWMCC*
Trainings, Workshops, Meetings	Meetings for discussing the methodological approach to follow and coordination meeting under each output. Validation meetings			6,000	6,000			6,000	*MoESWMCC*
Trainings, Workshops, Meetings	Project inception workshop and validation workshop				-	3,000		3,000	*MoESWMCC*
	…				-			-	*MoESWMCC*
Travel	Travel expenses to attend relevant workshops.	4,000			4,000			4,000	*MoESWMCC*
Travel	Travel expenses to attend relevant workshops. Travel and DSA of international consultant		3,400		3,400			3,400	*MoESWMCC*

Expenditure Category	Detailed Description	Component (USDeq.)						Total (USDeq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)[1]
		Component 1	*Component 2*	*Component 3*	*Sub-Total*	*M&E*	*PMC*		
		Sub-component 1.1	*Sub-component 2.1*	*Sub-component 3.1*					
Other Operating Costs	Production of printed Project information sheets and other outreach material	7,000			7,000			7,000	*MoESWMCC*
Other Operating Costs	Production of printed Project information sheets and other outreach material			2,500	2,500			2,500	*MoESWMCC*
Other Operating Costs	Production of printed Project information sheets and other outreach material				-	400		400	*MoESWMCC*
Other Operating Costs	Financial audits as per UNDP and GEF requirements				-		16,000	16,000	*MoESWMCC*
Grand Total		**910,000**	**134,600**	**80,000**	**1,124,600**	**40,400**	**104,850**	**1,269,850**	