

GCCA+

THE GLOBAL CLIMATE CHANGE ALLIANCE PLUS INITIATIVE



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Case Study Nr. 8 – Mauritius

IMPACT AND SUSTAINABILITY STUDY MAURITIUS

GLOBAL CLIMATE CHANGE FOR MAURITIUS

CRIS CODE: DCI-ENV/2009/O21-552

MARCH 2021

www.gcca.eu

List of Acronyms

AFD:	French Agency for Development
BC:	Building Control
BESS:	Battery Energy Storage System
CC:	Climate Change
CCIC:	Climate Change Information Centre
CDM:	Clean Development Mechanism
CEB:	Central Electricity Board
CER:	Certified Emission Reductions
DCI:	Development Cooperation Instrument
EE:	Energy Efficiency
EEMO:	Energy Efficiency Management Office
ENV:	Environment
EU:	European Union
EUD:	European Delegation
FA:	Financing Agreement
GBS:	General Budget Support
GCC:	Global Climate Change
GCCA:	Global Climate Change Alliance
GEF:	Global Environment Facility
CGF:	Green Climate Fund
GHG:	Greenhouse Gas
GoM:	Government of Mauritius
INDC:	Intended Nationally Determined Contributions
IPPs:	Independent Power Producers
KPIs:	Key Performance Indicators
LFG:	Landfillgas
LTNES:	Long Term National Energy Strategy
MCB:	Mauritius Commercial Bank
MEPU:	Ministry of Energy and Public Utilities
MESD:	Ministry of Environment and Sustainable Development
MFED:	Ministry of Finance and Economic Development
MID:	Maurice Ile Durable
MoFEE:	Ministry of Finance and Economic Empowerment
MPI:	Ministry of Public Infrastructure
MSDG:	Medium-Scale Distributed Generation
M&E:	Monitoring and Evaluation
NAO:	National Authorising Office
NERP:	National Economic Reform Programme
PSED:	Promoting Sustainable and Equitable Development
PV:	Photovoltaic
RE:	Renewable Energy
SBM:	State Bank of Mauritius
SDGs:	Sustainable Development Goals
SEA:	Swedish Environmental Agency
SIDS:	Small Island Developing States
SSDG:	Small-Scale Distributed Generation
SUNREF:	Sustainable Use of Natural Resources and Energy Finance
TA:	Technical Assistance

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TAPS: Technical and Administrative Provisions

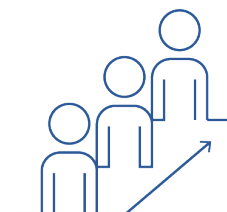
UNDP: United Nations Development Programme

UNFCCC: United Nations Framework Convention on Climate Change

VRE: Variable Renewable Energy

I. Project Details and Outputs Delivered

<p>PROJECT TITLE:</p> <p>General Budget Support – Global Climate Change for Mauritius (GBS-GCC)</p> <p>CRIS CODE: DCI-ENV/2009/021-552</p>		
AAP YEAR: 2009	DURATION: 60 months ¹ starting with the signature of the FA ²	DATE OF COMPLETION: 03/2013
TOTAL PROJECT COST: 3,000,000 EUR		<p>GCCA ALLOCATION : 3,000,000 EUR</p> <ul style="list-style-type: none"> ▪ Budget Support: 2,800,000 EUR³ ▪ Complementary Support (TA): 200,000 EUR
<p>AID MODALITY:</p> <p>Direct non-targeted General Budget Support, with complementary Technical Assistance</p>		<p>MANAGEMENT ARRANGEMENTS:</p> <ul style="list-style-type: none"> ▪ Financing Agreement with the Gov. of Mauritius (GoM) ▪ Centralised management for the Budget Support component ▪ Partially decentralised management for the TA component
<p>GEOGRAPHICAL COVERAGE:</p> <p>The project mainly operates at central government level.</p>		
<p>MAIN STAKEHOLDERS AND BENEFICIARIES:</p> <p>The Ministry of Finance and Economic Empowerment (MoFEE) is the Contracting Authority (NAO)</p> <p>The main implementing partners:</p> <ul style="list-style-type: none"> ▪ Maurice Île Durable (MID) Commission ▪ Ministry of Environment and Sustainable Development (MESD) ▪ Ministry of Energy and Public Utilities (MEPU) - related to disbursement condition 1 ▪ Ministry of Public Infrastructure (MPI) – related to disbursement condition 2 <p>Indirect beneficiaries: population of Mauritius</p>		
<p>GCCA PRIORITY AREA(S):</p> <p>Mainstreaming climate change into poverty reduction and other development strategies.</p>		



¹ With an operational implementation phase of 36 months and a closure phase of 24 months

² The Financing Agreement was signed in March 2010

³ Disbursed in two fixed tranches: 1.4 M€ in May 2011 and another 1.4M€ in November 2012

MAIN SECTOR(S):

Energy (mainly energy efficiency), Overall development & poverty reduction⁴

OVERALL OBJECTIVE⁵:

To complement the GBS programme PSED (Promoting Sustainable and Equitable Development) in contributing to the sustainable economic development of Mauritius by maintaining the support to the ten-year economic reform programme⁶ being implemented by the GoM, which includes the 'Maurice Île Durable' project. (Source: FA/TAPS – Financing Agreement/Technical and Administrative Provisions)

SPECIFIC OBJECTIVE(S):

To encourage consistency between the economic reform programme and sustainable development, with a focus on mitigating negative impacts on the environment. (Source: FA/TAPS)

EXPECTED RESULTS:

The section on "expected results and activities" in the project's TAPS, basically presents a repetition of the objectives (as described above): *"complementing the PSED programme while putting emphasis on sustainable development and preservation of the environment"*.

By complementing and reinforcing existing support, it was expected that the GBS-GCC would strengthen donors' complementarities and coordination, especially with the Environment Aid Programme of the French Development Agency (AFD). *Therefore, "regular and structured policy dialogue will be held to ensure that the expected results are achieved, in coordination with other stakeholders and donors involved in this sector"*.

Further to the dedicated description in the FA/TAPS, the conditions for disbursement of funding, specific to budget support programmes, provide an indication of "expected results". In the case of the GBS-GCC, three general and two specific conditions were agreed upon. Two of the general conditions are irrelevant for the

⁴ With emphasis on overall economic development. Poverty reduction as such is not a major issue in Mauritius. Mauritius is classified as an upper middle-income economy and poverty is limited to and concentrated in certain geographical areas. Nevertheless, the moderate but increasing levels of inequality represent a challenge for the country's government.

⁵ Guiding context: The GBS-GCC project was designed as a complementary action to the ongoing EU-funded GBS programme "Promoting Sustainable and Equitable Development" (PSED) which supported the implementation of Mauritius' National Economic Reform Programme (NERP). The specific contribution and role of the GBS-GCC project was *to enhance the sustainable development dimension of the NERP, with a particular focus on energy efficiency. In terms of climate action, the GBS-GCC's main contribution falls under CC mitigation by limiting GHG emissions, at the time not a GCCA priority area.*

In terms of contributions to national policy implementation, essential under the budget support modality, the GBS-GCC mainly supported the implementation of the Long Term National Energy Strategy (LTNES) and of the national programme "Maurice Île Durable" (MID), both integral elements of the NERP. The selection of LTNES and MID had been agreed upon in the absence of a national CC strategy, which would have been the expected policy framework for GCCA support. As such, the specific conditions for disbursement of the GBS-GCC funds became aligned with measures envisaged under the LTNES and directed the GBS-GCC support towards the *establishment of an enabling institutional and regulatory framework conducive to energy efficiency and conservation measures.*

The implementation of the "Maurice Île Durable – MID" project, launched in 2008, was mainly supported by the AFD (French Agency for Development) through a loan of 125 M€ and by the Government of Mauritius through a dedicated fund of 30M€. The main objective of the MID concept was to make Mauritius a world model of sustainable development, particularly in the context of SIDS (Small Island Developing States). *The initial thrust was to minimize Mauritius' dependency on fossil fuels through increased utilization of renewable energy and a more efficient use of energy in general.* After the initial years, the MID concept became soon *broadened* to include all aspects of development, i.e. economic, social and environmental aspects as these are considered pivotal in the quest for a sustainable Mauritius. Specific measures targeted under the MID project in its first years of implementation included: (1) Setting up a dedicated Fund (mentioned above) under the aegis of the Ministry of Energy and Public Utilities; (2) Conducting a study to chart out a new grid code for Independent Power Producers (IPPs) to supply renewable energy and to allow small IPPs to feed into the grid of the regulating institution; (3) Proclamation of a Utility Regulatory Authority Act; (4) Introduction of an Energy Efficiency Bill, including the establishment of an Energy Efficiency Unit mandated to develop guidelines, strategies and policies to improve energy efficiency; and (5) Review of the building codes and regulations and the adoption of a New Building Control Act that incorporates components for sustainable building.

⁶ By "the 10-year economic reform programme" reference is made to the National Economic Reform Programme (NERP)

purpose of the I&S assessment related to GCCA-supported climate action; it concerns the conditions related to (1) macroeconomic stability of the country and (2) public finance management.

The third general condition is:

- Satisfactory progress in the implementation of the economic reform programme, including high level structured policy dialogue on a regular basis covering key sectors and with key stakeholders.

The two specific conditions (both priority elements of the LTNES) are:

- An Energy Efficiency Bill approved by Cabinet for introduction in the National Assembly.
- A new Building Control Bill, that includes requirements for sustainable building, approved by Cabinet for introduction in the National Assembly.

It is due to highlight that the above specific conditions have been the subject of lengthy discussions during programme development. While the EU defended a more comprehensive and CC-oriented set of conditions, the Ministry of Finance and Economic Development (MFED/NAO) preferred not to include additional conditions in the programme, and favoured addressing elements of the existing MID Roadmap.

OUTPUTS DELIVERED⁷:

- Energy Efficiency Bill approved by Cabinet and by the National Assembly (2010).
- Energy Efficiency Management Office (EEMO) established under the Ministry of Energy and Public Utilities (MEPU)
- A new Building Control Bill approved by the Cabinet and by the National Assembly (2011)
- An 'Observatoire de l'Energie à Maurice' created in 2012 (for measuring and monitoring the impact of GoM's energy efficiency programmes)
- A Climate Change division set up at the Ministry of Environment and Sustainable Development (2010)
- A green taxation system for motor cars based on CO2 emissions established
- Energy audits for public buildings conducted
- System of incentives on tariff for small clean power producers established
- CC working group under the MID framework established and operational to provide recommendations on CC mainstreaming of the MID strategy under development
- Under the TA support:
 - ♦ A Policy Document on Sustainable Buildings developed (part of the new Building Control Bill)
 - ♦ Guidelines for Sustainable Building Design developed (part of the new Building Control Bill)
 - ♦ A new Building Rating System established (incl software)
 - ♦ A manual on the use of the Rating System
 - ♦ Sustainable Buildings Unit within the Ministry of Public Infrastructure established



⁷ Apart from the outputs listed, reports also mentioned the establishment of a wind farm and a landfill gas project, both generating renewable energy. However, EUD comments and interviews during the field phase revealed that the level of contribution of the GBS-GCC project to these initiatives was very limited and certainly not justifying their integration in the list of "outputs delivered".

II. Analysis of impact

2.1. Impact expected as per logframe objectives and their indicators

Defining the impact expected or even an adequate reference framework against which to assess generated impact is a challenge in the case of the GBS-GCC project:

- As is the case for most projects that are implemented under the budget support modality, the GBS-GCC project has no logical framework. Its objectives - as described in the FA/TAPS and presented above – do not fit into an intervention logic aiming at clear developmental changes and at generating impact in selected areas. In addition, there are no indicators associated to the objectives.
- The disbursement conditions which in theory could be used as a reference for assessing the achievement of expected impact, do not provide an adequate alternative to indicators in the case of the present project. As for the specific conditions, they are both referring to outputs, or – at the most - indicators at expected result level. The general condition “Satisfactory progress in the implementation of the economic reform programme, including high level structured policy dialogue on a regular basis covering key sectors and with key stakeholders” is too vague (what is “satisfactory progress”?) and insufficiently linked to the objective of the GBS-GCC whose specific role is limited to enhancing the sustainability dimension of the economic reform programme.

Available reports include some information on decisions and directions that were taken during implementation. These decisions and directions can provide an **alternative framework** for defining the project’s “expected impact” and hence for assessing the achievement of the objectives:

- The specific contribution and added value of the GBS-GCC programme would be to enhance the sustainable development dimension of the NERP, with a *particular focus on energy efficiency and thus contribute to CC mitigation by limiting GHG emissions* (at the time not a GCCA priority area).
- In terms of contributions to national policy implementation, essential under the budget support modality, the GBS-GCC would support the implementation of the *Long Term National Energy Strategy (LTNES)* and of the “*Maurice Île Durable*” (*MID*) roadmap, both integral elements of the NERP.

The **best alternative reference framework** for analysing impact generated by the GBS-GCC project would therefore consist in a selected set of objectives and indicators from both the MID Roadmap and the LTNES.

2.2. Direct and indirect impact as reported in the available documents (desk phase)

Like for most budget support projects, little information is available on implementation progress and outputs, while issues related to impact are hardly covered. Basically, the available information is limited to the fulfilment of the specific conditions for disbursement of funding, being the Cabinet approval of two Bills, one on Energy Efficiency and another one on Sustainable Buildings. Still, the reports of the **Global GCCA Evaluation (Topper, 2014)** and of the **Review of EU Experiences with Budget Support in the Fields of Environment and Climate Change (Bird and Ferrandes, 2014)**, provide some indications on incipient impact based on outputs that are delivered. These are:

IN RELATION TO THE ADOPTION OF THE TWO BILLS THAT WERE APPROVED BY CABINET:

Both Bills that were developed with support of the GBS-GCC project were passed by the country’s National Assembly. The Energy Efficiency (EE) Act was adopted in April 2011 and the Building Control (BC) Act in June 2012. Both Acts are being implemented and generating impact.

- As for the Energy Efficiency Act, a dedicated structure, namely the Energy Efficiency Management Office (EEMO), was established under the Ministry of Energy and Public Utilities (MEPU). At the time of the evaluation (2014), the EEMO was found operational with quarterly Board meetings and three staff members in place. The recruitment of a Director was however delayed due to a lack of qualified candidates. The 2014

budget foresaw recruitment of four additional staff members (2 engineers and 2 technical officers) which would considerably enhance the office's implementing capacity. These budgetary provisions point towards a political will to effectively start implementing the EE Act. In 2014, EEMO's activities focused on the collection of basic data on energy, the organisational development of the Energy Observatory and the development and conduct of awareness-raising campaigns.

The Energy Observatory, one of the expected outcomes of the LTNES, was being established for the future measuring and monitoring of the impact of GoM's energy efficiency programmes in the various sectors over time, as a basis for further policy and decision-making processes. In this context, plans existed to subject large energy-consuming industries that are benefiting from preferential tariffs to compulsory energy audits. To get this operational, a database of auditors was under preparation. During the development of this database, the country's shortage of qualified (certified) energy auditors became apparent. This issue was addressed through capacity building supported by the SIDS-DOCK project and by AFD.

As a spin-off of the GBS-GCC project, the GoM had invested in awareness-raising of the general public on energy efficiency. For example, 'Energy Efficiency Awareness Campaigns' were organised in 2012 and 2014. They were conducted by the Ministry of Energy and Public Utilities, with GEF/UNDP support, to sensitize the public on issues regarding energy efficiency in buildings, transport and other sectors.

Further in 2014, the GoM launched a National Energy Efficiency programme, building on the outputs of the GBS-GCC project. This programme received support from AFD, UNDP and the EU (a 1.7M EUR grant under the SE4All programme).

Impact of the GBS-GCC project is expected to be further enhanced through the so-called green loans, to be made available with AFD support and allowing for investments in energy efficiency by public and private sector actors (60 M EUR).

- Regarding the Building Control Act, a Sustainable Buildings Unit was set up and made operational within the Ministry of Public Infrastructure (MPI). In 2014, the Unit was staffed with a number of specialists in the Architects Division having a certain degree of expertise in sustainable building, acquired through capacity building provided under the TA component of the GBS-GCC. A Sustainable Building Policy was developed but yet to be officially adopted. This adoption would potentially enhance the impact of the technical assistance that was provided and of the outputs that were produced with the GCC-GBS funding.

The 'Building Control Act' component of the project was considered to be particularly successful. Several of the recommendations⁸ made by the technical assistance were (in 2014) already being implemented by the MPI. For example, a first school - taking the (6) main recommendations regarding sustainable buildings into consideration - was under construction.

While the direct benefits in terms of energy efficiency and hence climate change mitigation were, in the view of the evaluation mission (2014), rather limited, its benefits in terms of sustainable development were significant. As the Building Control Act⁹ focuses as much on functionality, safety and reducing the impact of buildings on human health and the environment as on increased energy efficiency, the benefits of the action are much broader than the climate mitigation benefits. In other words, while the Building Act addresses relevant safety and functionality requirements, energy saving is only a minor element. Nonetheless, the Act appeared to have signalled the start of an increasing awareness of the need for energy efficiency action by public and private actors. An illustration of this tendency was provided by the Decision (2013) that all public sector and private buildings should reduce their energy consumption by 10% by 2020. Progress is verified by staff of the aforementioned Energy Efficiency Management Office, under the MEPU.

IN RELATION TO CLIMATE CHANGE OBJECTIVES, MOST RELEVANT FROM A GCCA PERSPECTIVE:

- **The GBS-GCC project did not carry a clear GCCA signature.** While its focus on energy efficiency and sustainable building provides a link to climate change, the project support could have been more climate relevant and would have added more to the current 'climate change landscape' if it would have been based

⁸ Recommendations including but going beyond the objective of energy efficiency.

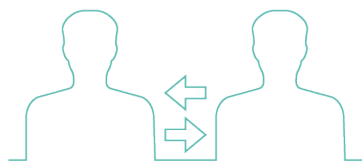
⁹ The sustainability requirements in the Building Act include (i) providing indoor air quality in the building, (ii) ensuring (A) water tightness of the building and water management within its premises; (B) waste management from the construction site; (C) noise protection so that noise levels do not affect the health of any person and allow any person to carry out his activities normally; (D) energy savings and optimum energy consumption for the proper running of the building; and (E) reduction of heat island effect in urban areas.

on a clear gap analysis in the CC sector, possibly focusing on adaptation, early warning and/or disaster risk reduction actions in support of vulnerable and poor people, as relatively unaddressed areas of intervention.

- The choice of addressing energy efficiency in relation to buildings was relevant but not the most effective in terms of reduction of GHG and CC mitigation; electricity production and transport are more polluting activities and they were not targeted by the project. The choice for energy efficiency (institutional development and EE in the building sector) was justified, by some, as being ‘a low hanging fruit’ compared to the more demanding challenges related to cleaner electricity production or transport systems¹⁰. The choice was definitely also motivated by a need to formulate an action in a relatively short time frame, reason for which strengthening of existing actions was preferred.
- Due to the limited timeframe for programme formulation and the lack of a clear CC-related institutional framework in place at the time of its implementation, the programme was not able to address key challenges in the climate change and energy sectors with regard to strategic planning and budgeting, inter-ministerial coordination and the overall coherence of national fiscal incentives that could have added value to the programme outcomes and policy dialogue¹¹.

ON POLICY DIALOGUE, BEING AN IMPORTANT ELEMENT UNDER THE BUDGET SUPPORT MODALITY (AS WELL AS FOR THE GCCA):

- Capitalising on an on-going EU GBS that supported the national economic reform programme of Mauritius, the GCCA programme has tried to assist the government to incorporate environmental and climate change mitigation considerations related to energy efficiency policy measures in its economic and social development. It is however difficult to assess whether this programme has provided a valuable entry point for an effective policy dialogue on sustainable economic development and CC strategic policy issues and to what extent the ongoing EU GBS programme could capitalise on this¹².



A GENERAL CONCLUSION FROM THE 2014 EVALUATION, RELEVANT TO IMPACT:

- *While the funding is fully in line with national policies, in particular on sustainable development, the GCC-GBS essentially reinforces ongoing support, by AFD and UNDP, in the field of energy efficiency and sustainable building programmes. Both pieces of legislation that were developed have some impact on climate change mitigation; they also foster sustainable development of Mauritius but contribute very little to poverty reduction. Effective implementation of the Building Act could, if properly supported, have more significant benefits - in terms of reduced vulnerability to climate related disasters – if it could help reduce unregulated building and construction in inappropriate areas. For the aforementioned reasons, the action is considered to have only partially achieved objectives of the GCCA programme.*

REGARDING FACTORS THAT CONTRIBUTED TO SUCCESS, THE REPORTS MENTIONED:

- A strong commitment of the authorities to sustainable development; use of the budget support modality

FACTORS THAT HAMPERED SMOOTH IMPLEMENTATION AND QUICK GENERATION OF IMPACT:

- Limited capacity of the leading implementing partners.

¹⁰ Comment from the EUD: Energy efficiency in the transport sector has been addressed by the Government through the development of a metro express (mass transport). Early 2019, the metro express was under construction and expected to be operational as from Sep 2019.

¹¹ Comment from the EUD: A dedicated policy dialogue on climate change has been set up with the Government in 2018. Also a joint monitoring framework was signed, providing Key Performance Indicators (KPIs) to monitor implementation of activities towards the achievement of the SDGs, including Action for Climate.

¹² Comment from the EUD: Mauritius' INDC, formulated in September 2015, includes mitigation measures that largely focus on energy efficiency. Therefore, we can safely say that the GCCA programme has provided an entry point to policy development related to energy efficiency.

2.3. Findings from the desk phase and specific issues to be further explored during the field phase

In the absence of a clear project intervention framework with an unambiguous indication of expected impact¹³ against which the actually generated impact can be assessed, it should be explored during the field mission whether (some of) the objectives of the MID roadmap and/or the LTNES could provide an adequate alternative framework. If feasible, this alternative should be adopted when completing boxes 2.4 and 2.5 of the field report.

When analysing impacts, it should be kept in mind that the GBS-GCC had a relatively small budget when compared to the budgets of other donor initiatives in the sector. Also, it is very likely that not all outputs listed above under section 1 are 100% attributable to the GBS-GCC project. This would be another aspect that needs to be verified during the field missions; if the list of outputs delivered happens to be incorrect, the necessary adjustments must be made.¹⁴

Though the documentation submitted by the GoM to the EU during project implementation for assessing the fulfillment of the conditions for disbursement met the Budget Support requirements and duly justified the release of funds, it did not provide a clear picture of the developmental results of the action, beyond adoption of the two bills by Cabinet. From a GCCA perspective, one would be very interested in the impact of the action in terms of increased energy efficiency, and therefore on CC mitigation. The field mission should focus on identifying such impact.

2.4. Achievement of the logframe indicators at overall and specific objectives levels (direct impact)

As pointed out in the desk-based study, the GBS-GCC project had no logical framework; and no other clear and adequate reference framework against which to assess the impact generated. The suggested alternative (section 2.1) of adopting objectives and indicators from the supported MID Roadmap and/or the LTNES did not work either. The MID Roadmap was already disbanded in 2014 with the entry of a new Government and closer analysis of the LTNES revealed that also the strategy lacked clear objectives and indicators that could be linked to impact generated by the GBS-GCC project.

Therefore, and acknowledging their weakness for the purpose, it was decided to anyhow adopt the two specific disbursement conditions as indicators. It is good to recall that these conditions were also priority elements of the LTNES, hence ensuring a direct contribution of the project to LTNES implementation.

INDICATOR	LEVEL OF ACHIEVEMENT	EXPLANATORY NOTES
<u>Disbursement Condition 1:</u> An Energy Efficiency Bill approved by Cabinet for introduction in the National Assembly	100%	<p>The Energy Efficiency Bill that was prepared with GBS-GCC project support, was approved in the National Assembly and adopted in 2011 as The Energy Efficiency Act (2011). The sections of the Act were proclaimed in two batches: sections 1 to 18 on November 18, 2011 and sections 19 to 23 on January 01, 2013.</p> <p>In 2013, the Act was amended through the integration of the Economic and Financial Measures (Miscellaneous Provisions) Act 2013. The most pertinent provisions that were thereby</p>

¹³ The specific conditions for disbursement are associated to the results level rather than to the objectives level.

¹⁴ This was done and the list of "outputs delivered", as presented in section 1, is a list that has been adjusted following the findings during the field mission.

		<p>adopted include: (i) the legal obligation for large energy consumers to implement any recommendation made by the energy audits; (ii) the introduction of new penalties for offences under the Act; (iii) the introduction of a registration system for regulated machinery, dealers and energy auditors; and (iv) the levying of fees and charges on energy appliances.</p> <p>In 2016/2017, these amendments were followed on by subsidiary legislations, notably the Energy Efficiency Regulations regarding the Registration of Energy Auditors (2016, amended in 2019); the Energy Efficiency Regulations regarding the Energy Consumers and Energy Audits (2017, amended in 2018); and the Energy Efficiency Regulations regarding the Labelling of Regulated Machinery (2017, amended in 2018).</p>
<p><u>Disbursement Condition 2:</u> A new Building Control Bill, that includes requirements for sustainable building, approved by Cabinet for introduction in the national Assembly</p>	100%	<p>The Building Control Bill that was prepared with GBS-GCC project support, was approved in the National Assembly and adopted in 2012 as The Building Control Act (2012). The Act was proclaimed in 2013. The Act includes sustainability requirements related to air quality, water management, noise management, waste management, energy savings and measures to reduce the heat island effect in urban areas.</p>

2.5. Achievement of the overall and specific objectives (direct impact, exceeding the scope of the indicators)

Referring to the introductory paragraph in section 2.4 above, it was decided to assess achievement of the objectives against the overall objective as originally stated in the FA/TAPS and against a specific objective that is slightly adjusted to reflect in more concrete terms the focus of the project support as agreed between the government and the EC during the project's inception period.

OVERALL OBJECTIVE (FA/TAPS): To complement the GBS programme PSED (Promoting Sustainable and Equitable Development) in contributing to the sustainable economic development of Mauritius by maintaining the support to the ten-year economic reform programme (= NERP) being implemented by the GoM, which includes the 'Maurice Île Durable' project.

Achievement: "1" (> 75%)

EXPLANATORY NOTE:

In absence of a national CC strategy, it was agreed between the EC and the GoM that the GBS-GCC project would support the implementation of the national programme "Maurice Île Durable" (MID) and of the Long Term National Energy Strategy (LTNES) (2009 – 2025), both integral elements of the NERP. As such, the specific conditions for disbursement of the GBS-GCC funds became aligned with measures envisaged under the LTNES and directed the project support towards the establishment of an enabling institutional and regulatory framework conducive to energy efficiency and conservation measures. As can be seen in footnote 5, this agreed focus is also fully in line with the MID framework.

While the MID programme was disbanded, the new government (2014) gave continuity to the LTNES. The latter has been at the origin of a further comprehensive sectoral planning process resulting in the adoption of the National Energy Strategy 2011-2025 and the Renewable Energy Roadmap 2030. It is thereby confirmed that several of the outputs that were delivered under the GBS-GCC project have been instrumental in furthering this planning process.

Elements of the LTNES have also been integrated in the country's overall development policy "Vision 2020" (replacing the Maurice Île Durable project) and its 3-year strategic plans.

Partly thanks to the GBS-GCC project support, the economic reform that took place in Mauritius over the last decade has not happened at the expense of the environment. In that sense, one can say that the GBS-GCC project contributed to Mauritius' sustainable economic development.

SPECIFIC OBJECTIVE (FA/TAPS): To enhance the sustainable development dimension of the NERP, with a particular focus on energy efficiency and thus contribute to CC mitigation by limiting GHG emissions in line with the Long Term National Energy Strategy (LTNES) and the "Maurice Île Durable" (MID) roadmap, which are both integral elements of the NERP.

Achievement: "2" (between 50% and 75%)

EXPLANATORY NOTE:

The GBS-GCC funds primarily resulted in progress in the development of an institutional and regulatory framework that is conducive to energy efficiency. Minor results were achieved in the areas of sustainable buildings, climate change governance and the production of renewable energy. All results are relevant to the project's specific objective as they all have a link to CC mitigation (reduction of GHG emissions) and align with the country's sustainable development objectives.

◆ ACHIEVEMENTS IN THE AREA OF ENERGY EFFICIENCY:

An Energy Efficiency Act was adopted in 2011 and since then further developed (amendments, regulations). In general, the Act has allowed the GoM to democratise its electricity sector and has promoted a higher level of involvement of the private sector, municipalities and individuals in energy production, visible on the island through the higher prevalence of photovoltaic panels on buildings.

The Energy Efficiency Management Office (EEMO), set up under the Ministry of Energy and Public Affairs (MEPU) according to Section 4 of the Energy Efficiency Act, is well established and deploys activities such as (i) updating energy-related legislations, (ii) developing tools and systems to enhance energy efficiency such as the energy audits, (iii) communication and awareness raising on energy efficiency, (iv) implementing pilot projects, etc. The EEMO also runs the Energy Observatory, established with project support. The Energy Observatory analyses and reports annually on energy use (by sector and by type of energy) and energy production (by source and by producer type).

Further, the Energy Efficiency Act has made energy audits of public buildings mandatory for statutory bodies, Government-owned or Government controlled bodies and Local authorities with an average annual energy consumption above 15 tonne of oil equivalent (toe). As of the 1st of January 2021, energy audits will also become mandatory for private sector entities with a consumption above 100 toe. As of November 2019, 27 energy auditors and 9 energy audit companies were registered with EEMO, indicating that the regulation is actually implemented.

Finally, a scheme for incentives on tariff for small clean power producers was established while the GoM has set up a number of schemes to encourage individuals, private sector, municipalities and public sector entities to produce renewable energy using solar panels and to feed into the grid.

Unfortunately, no data could be collected on the quantitative effect of the above mentioned measures on the consumption of energy, a key figure for the assessment of impact.

◆ ACHIEVEMENTS IN THE AREA OF SUSTAINABLE BUILDINGS:

A Building Control Act was adopted in 2012 and proclaimed in 2013. The Act includes a number of sustainability requirements, e.g. related to air quality, water management, noise management, waste management, energy savings and measures to reduce the heat island effect in urban areas. In practice, it is observed that the majority of the new constructions are installing energy efficient types of lighting and cooling systems. Affordable new technology available on the market and increasing electricity prices make their use also financially attractive and support compliance with the legal requirements.

Unlike for the Energy Efficiency Act, the efforts of the project to make the Act fully operational have not been very successful and have thus failed to generate any direct impact: a Policy for Sustainable Buildings was drafted but never approved by the GoM; a Building Rating System and an accompanying manual on the use of the system were developed but the system was never put in place (by lack of a dedicated unit/staff) and

the manual never approved; plans had been developed for the establishment of a Sustainable Buildings Unit within the Ministry of Public Infrastructure (MPI) and for training of the staff in the application of the new Building Rating System but none of these plans were ever implemented, as reported due to budgetary constraints.

◆ ACHIEVEMENTS IN THE AREA OF INSTITUTIONAL DEVELOPMENT FOR CC:

A Climate Change Division was set up under the Ministry of Environment, Solid Waste Management and Climate Change (previously, the Ministry of Environment and Sustainable Development). The set-up of this Division has been instrumental in the adoption of a more strategic national approach to climate change adaptation and mitigation and in addressing climate-related issues. It has also allowed Mauritius to better comply with its reporting obligations to the UNFCCC. Moreover, through proposal writing, the CC Division has been able to attract several millions of Euros for climate change related projects. More recently, the Division established a Climate Change Information Centre (CCIC) where Mauritians can get more information on climate change in general and on specific adaptation and mitigation actions that they can implement at household / community level.

The GBS-GCC project also supported the development of a green taxation system for motor cars based on their CO₂ emissions. The system was legally adopted in 2011 through the Excise Act, 2011. It makes provisions for changes in the excise duty payable on motor cars, either for the charging of a CO₂ levy either for the granting of a CO₂ rebate. Soon after adoption, misuse of the system based on fake emission documents became apparent. The system was adjusted in 2016. The fiscal measure under the adjusted system is based on the type of engine fitted in the vehicle (diesel, gasoline, hybrid, electric) and on the engine size (cc) as proxy for its CO₂ emissions. It seems that the fiscal measure has been effective as an increasing number of hybrid and electric cars are currently observed in the streets of Mauritius.

◆ ACHIEVEMENTS IN THE AREA OF PROMOTING THE PRODUCTION AND USE OF RENEWABLE ENERGY:

Over the last decade, Mauritius has implemented various projects for the production of renewable energy. Though the GBS-GCC project has not directly invested in these projects, funds were made available for the required feasibility studies and other preparatory activities. In that sense, the GBS-GCC project has facilitated the installation of a wind farm at Bras d'Eau on the Northeastern coast of the island and the Landfillgas (LFG)-to-energy project in Marie Chicose.

The Wind Farm:

Mauritius' first wind farm at Bras d'Eau counts 11 wind turbines and has a total maximum production capacity of 9.35 MW or 850 kW per turbine. It is operated by a French company, [Quadran International](#), and started generating electricity in 2016. The electricity that is generated, is directly fed into the electricity grid, made possible through a 20 years power purchase agreement with the Government of Mauritius. The wind farm is maintained and operated by a team of four staff, which includes three technicians and a manager. Monthly records indicate that the turbines have been operational during more than 99% of the time over the last 8 months.

This wind farm has demonstrated that it works and that the production is profitable. As a result, Mauritius decided to increase the production of renewable energy from wind. Currently, at least the installation of one other wind farm is being planned for Mauritius.

The Landfill gas-to-energy project: The project is located at the Marie Chicose landfill. The site's present capacity in terms of power production is 1.8GWh/month. As the LFG production exceeds the amount that can be transformed into electricity, the excess gas must be flared. The project is registered under the Clean Development Mechanism (CDM) of the Kyoto Protocol and allows Mauritius to sell CERs (Certified Emission Reductions). In 2014 and 2015, the Swedish Environmental Agency (SEA) bought CERs for an amount of 86,228 and 83,352 tonnes respectively.



So, the GoM has benefited from the LFG-to-energy project through reduced emissions of GHGs as well as financially through the sharing of revenues accrued from the sale of CERs which were split as follows: 67.5 % for the developer, 25% for the government and 7.5% for CEB.

Currently, plans are being developed to increase the height of the up to 60 m and to increase the capacity for capturing LFG and for transforming it into electricity.

◆ OVERALL:

When compared to the situation at the start of the GBS-GCC project, the overall efforts by the population of Mauritius to save energy and to use clean energy have considerably increased. The use of energy efficient lighting (mostly LED) and air-conditioning units is widespread in office (public and private) and commercial buildings. Most residences have one or more solar-powered water heating units at their rooftops. Many commercial and residential buildings started installing PV panels in order to reduce their electricity bill. Also noticeable is the growing number of hybrid and electric cars on the streets, including the taxis.

Related to the Sustainable Buildings component, despite the fact that the Sustainable Building Unit is currently not functioning and that the Building Rating System is not being applied, the majority of newer buildings in Mauritius seem to be taking sustainability in consideration. This is reflected in the greater use of energy efficient designs and technologies, contributing to energy savings.

The support and outputs of the GBS-GCC project have boosted innovations and behavioural changes in Mauritius' energy sector. The strong focus on energy efficiency and greater use of renewable energy in the project have made the Government of Mauritius undertake/attract other projects for energy efficiency and renewable energy. One such project is the development and application of the Grid-Scale Battery Energy Storage System to arrest the fluctuation inherent to the increasing share of Variable Renewable Energy (VRE) in its electricity grid with a 2MW Battery Energy Storage System (BESS) installed at the Central Electricity Board Amaury Substation. The installation was financed by the Green Climate Fund under the project "Accelerating the transformational shift to a low-carbon economy in the Republic of Mauritius".

2.6. Signs of indirect impact

No signs of indirect impact could be observed during the country visit.

2.7. Conclusions on direct and indirect impact generated by the project and discussion on factors for success and failure

The GBS-GCC project fully achieved its two indicators (disbursement conditions).

The project contributed to a sustainable economic development in Mauritius. It was partly thanks to the project support that the economic reform which took place in Mauritius over the last decade has not happened at the expense of the environment.

Most impact was generated in the energy sector. The institutional and regulatory framework for energy efficiency that was developed with project support resulted in further initiatives to promote energy efficiency and the production of renewable energy. These initiatives are organised and steered by EEMO, the institution that was established under the project and that has become an important institutional player in the energy sector.

The Building Control Act (2012), developed with project support, provides a legal framework for new buildings related to air quality, water management, noise protection, waste management, energy savings and reduction of heat island effect in urban areas. The project has however not succeeded in setting up the accompanying institutional bodies and instruments that were required to put the Act into practice. Despite this underachievement, the majority of newer buildings in Mauritius seem to be taking sustainability into consideration. This is reflected in the greater use of energy efficient designs and technologies, contributing to energy savings.

The establishment of the Climate Change Division can be assessed as highly successful and generated impact in the sense that the active and growing Climate Change Division managed to develop and attract funding for various CC projects in Mauritius. The Division has also been instrumental in helping the GoM to mainstream climate change considerations in its development strategies and plans.

As for the promotion of renewable energy through the facilitation of two pilot projects, both these projects have demonstrated their feasibility and value and plans for replication/expansion are being made.

Despite the fact that it is not easy to fully attribute some of the impacts directly to the GBS-GCC project, it is believed that the project contributed positively to the current energy sector and climate change mitigation and adaptation landscape of Mauritius since it was one of the first climate change related projects to be implemented that looked into the legal and institutional framework to improve the use of renewable energy and energy efficiency. The various follow-on projects show that Mauritius continues to push on several fronts of the energy efficiency and renewable energy landscape, e.g. through regular amendments of the Energy Efficiency Act (2011) as and when the need arises and through the implementation of the Renewable Energy Roadmap to 2030 and the Energy Strategy 2011–2025.

Evidence of changed behaviour and practices are visible in Mauritius' landscape. However, quantitative data to substantiate this statement were not collected during the field visit due to time constraints and due to the lack of clear linkages with the project support.

FACTORS CONDUCIVE TO GENERATING IMPACT:

- The budget support modality
- Strong commitment of the authorities to sustainable development

FACTORS THAT HAMPERED SMOOTH IMPLEMENTATION AND QUICK GENERATION OF IMPACT:

- Limited capacity of the leading implementing partners, in terms of qualified staff and budgetary means
- Availability of qualified professionals in the country



III. Analysis of Sustainability Levels

3.1. List of services, systems and products that were established/delivered under the project and that should have been maintained (based on the outputs delivered)

- An operational and active Energy Efficiency Management Office (EEMO) under the Ministry of Energy and Public Utilities (MEPU)
- An Energy Observatory that is monitoring and reporting on the impact of energy efficiency programmes
- An operational and active Climate Change Division under the Ministry of Environment and Sustainable Development
- The taxation system for motor cars based on CO2 emissions is applied in the country
- The system of conducting energy audits for public buildings is applied
- Tariff incentives for small clean power producers are applied
- CC working group within MID active and covering CC issues under the MID framework
- The Building Rating System still operational and effectively in use
- An operational unit for Sustainable Buildings under the Ministry of Public Infrastructure

3.2. Information and comments on sustainability aspects from the available reports (desk phase)

◆ **General Budget Support is reported to enhance national ownership and prospects for sustainability:**

It was reported that the MFED (Ministry of Finance, Economic Planning and Development) had stressed the appropriateness of the (General) Budget Support modality for several reasons, including (1) an enhanced sense of *national ownership*, not just at the level of the line Ministry but across the government; (2) an enhanced sense of *answerability and accountability* by the role played by the Parliament in monitoring the implementation; (3) an *increased pace of implementation*, as no separate project document needs to be prepared and approved; and (4) *better prospects for sustainability* as the action is fully incorporated into the state budget. For example, the staff and operational costs of the energy efficiency management office (EEMO) - created with GBS-GCC support, among others - are now incorporated in the annual budget exercise.

The evaluation mission (2014) confirmed this high degree of national ownership, created through the full integration of the action into the national planning and budgeting systems. More generally, they confirmed that the MID - and thereby the results obtained under the MID - had gained in political support during the GBS-GCC implementation. Mauritius' Budget Speech 2014, for example, had mentioned that the 2014 budget would include substantial provisions (Rs. 6 billion) for the implementation of various MID-related projects in the areas of the production and use of renewable energy, of the protection of lagoons and aquifers, of sustainable food production and the rehabilitation of nature reserves and parks, among others. The MID's original focus on reduction of dependency on fossil fuels had thereby broadened into an encompassing vision on sustainable development.

- ◆ **For the Energy Efficiency component**, it was reported that sufficient mechanisms had been put in place to sustain the project results. Political engagement and wide donor support at the time provided a conducive environment. The EE policy processes fostered by the action were continuing, confirming the GoM's continued commitment to the outcomes of the action. This commitment was also reflected in the 2013 public budget. Further, there was the decision on the introduction of an official labelling system for energy efficiency of electric appliances by December 2014. Until then, labelling had only been promoted on a voluntary basis. Similarly, large energy-consuming industries benefiting from preferential tariffs would in the future need to undergo energy audits. In 2014, these measures were not yet under implementation due to the lack of required secondary legislation (regulations), based on the Energy Efficiency Act. It was reported, however, that these regulations were then in their final stages of development and approval.

- ◆ **For the Sustainable Building component**, such political support seemed less evident.
- ◆ To consolidate results and to create sustainability, stakeholders had expressed a clear **need for continued technical assistance** in the various fields related to climate change.

3.3. Summary findings from the desk phase and specific issues to be further explored during the field phase

The evaluations carried out in 2014 were mainly positive on the prospects for sustainability. The field visit for the 2019 I&S study will reveal whether these positive assessments from 2014 still hold.

As already mentioned, the available documents were not very clear on the outputs delivered. Therefore, the list of outputs that was established during the desk phase must be verified during the field visit and adjusted where needed.

3.4. Results of the sustainability analysis (as per table)

9 items were checked for their sustainability. Information could be collected for all 9.

The sustainability scores of these 9 items are as follows:

- 6 items (67%) scored 1, meaning that they were fully sustained and expanded/improved
- 3 items (33%) scored 4, meaning that they disappeared or lost functionality

Evidence was found through direct observation for 4 items (45%); and through reporting by reliable sources for 5 items (55%).

3.5. Conclusions on the sustainability aspects and discussion on factors for success and failure

The sustainability analysis indicates generally good but mixed levels of sustainability for the different components of the GBS-GCC project.

The components related to the legal and institutional framework for energy efficiency and the establishment of the Climate Change Division were the most successful and received high sustainability scores. The legal and institutional framework for renewable energy is well established with the proclamation of the Energy Efficiency Act (2011) and the setting up of the EEMO and the Energy Observatory. Despite of initial teething problems, the EEMO has become an important institutional player in the energy sector of Mauritius. The Energy Observatory is consistently producing detailed annual Energy Observatory Reports. The setting up of the Climate Change Division has been highly successful, with the Division currently fully integrated in the Ministry of Environment, Solid Waste Management and Climate Change. The Division continues to grow in terms of staff numbers, of numbers of projects under implementation and of total project portfolio value.

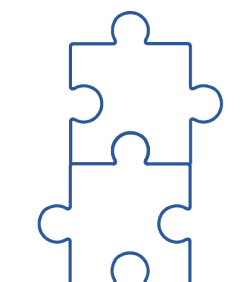
The sustainable buildings component scored relatively bad on sustainability. Despite the proclamation of the Building Control Act (2012), which contains sustainability requirements for new buildings, the policy on Sustainable Buildings was never finalised and approved by the government, the Sustainable Building Unit never became fully operational and the Building Rating System was never implemented. Budgetary constraints and a lower position in the national political agenda are reported to be the main reasons.

FACTORS ENHANCING SUSTAINABILITY:

- Availability and dedication of staff to implement and sustain outputs.
- Political commitment
- Good sense of local ownership (often induced through the budget support modality)

FACTORS HAMPERING SUSTAINABILITY:

- Financial constraints



IV. Additional elements

4.1. M&E Practice

M&E ACTIVITIES THAT HAVE TAKEN PLACE:

As with most projects that are implemented under the budget support modality, the GBS-GCC had no framework for M&E. Still, the achievement of the agreed general and specific conditions for disbursement was monitored by the implementing partners. Further, as the funds were made available to the different Government implementing agencies through their annual budgets, the Ministry of Finance, Economic Planning and Development claimed that oversight was provided by the National Assembly and the National Audit Office.

% OF BUDGET ALLOCATED TO M&E THAT HAS BEEN USED:

No budget was allocated to M&E as part of the GBS-GCC project.

ADDITIONAL M&E REPORTS THAT HAVE BEEN COLLECTED:

No additional M&E reports were available and were collected during the field phase.

4.2. Contributions to GCCA+ knowledge management and communication

PROJECT-SUPPORTED RESEARCH AND RESEARCH FINDINGS: none.

COMMUNICATION MATERIALS: none.

4.3. Opportunities for scaling up (future GCCA support activity)

- Landfill gas to energy: There is great potential in Mauritius to up-scale production of electricity from the Mare Chicose landfill. The Government of Mauritius is planning the vertical extension of the landfill from its current height of about 27m up to 60m. This could substantially increase the current Landfill Gas (LFG) production of 1,900 Nm³/hr and electricity production from the current 1.8GWh/month provided that additional LFG collection capacity and new generators are installed to make use of the increased volume of LFG produced.
- In the area of energy efficiency, there is potential to increase the use of LED-based lights for street lighting. Pilot projects implemented by EEMO in Mauritius have shown that it is possible to achieve energy savings of up to 57%.
- Awareness raising on energy efficiency and the use of renewable energy is something which is always in demand, as it generally takes a long time to convert knowledge and awareness into behavioural change. The awareness raising could be embedded in a more comprehensive support programme on energy efficiency.
- The project developed guidelines for sustainable buildings. Since the construction of the Dr. Sewraz Government School in Triolet which was built according to these guidelines, no other such sustainable public buildings have been built. Replicating the number of sustainable buildings that can be used as demonstrations, is another relevant scaling up opportunity.
- The Building Rating System which was developed with GBS-GCC project support still needs to be made operational. Though the latter was envisaged under the project, it was not achieved. So, facilitating the full implementation of the Building Rating System (institutional strengthening, training) provides another useful opportunity for support.

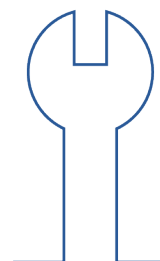
4.4. Climate Finance – evidence of funding mobilised from public and/or private local sources

Directly linked to the implementation of activities under the GBS-GCC project:

- Establishment of the Smart City Scheme and the Public Sector Entities Renewable Energy Scheme allowing the integration in the electricity grid of Small-Scale Distributed Generation (SSDG) and Medium-Scale Distributed Generation (MSDG) Photovoltaic (PV) projects by the Central Electricity Board of Mauritius.
- The Government of Mauritius finances the national Standards Bureau to undertake energy efficiency testing of imported electric and electronic appliances.

Evidence of climate finance mobilisation not directly linked to the implementation of the GBS-GCC project:

- The Central Electricity Board supports financially Small-and Medium-Scale Distributed Generation (SSDG/MSDG) Photovoltaic (PV) projects to allow the generation of solar power by small and medium scale power producers.
- Under the AFD (Agence Française de Développement) – implemented SUNREF programme, a partnership has been established with the SBM Bank and the MCB Microfinance agent to offer loans with attractive conditions for companies or individuals to install solar panels. An initial fund of 100 million EUR was provided to the banks by AFD.
- Investment by the Central Electricity Board in the installation of a 2MW Battery Energy Storage System (BESS) for grid stabilisation.
- Mauritius' financial contribution of 123.9 million USD (65%) to the implementation of the Green Climate Fund (GCF) project "Accelerating the Transformational Shift to a Low-Carbon Economy in the Republic of Mauritius" with a total cost of 191.4 million USD.



V. Sources of Information

DOCUMENTS COLLECTED AND CONSULTED FOR THE DESK PHASE ANALYSIS

- **Programming documents**
 - ♦ Financing Agreement, including TAPS and conditions for disbursement but no logframe, March 2010.
 - ♦ Technical Rider to allow the use of an amount of EUR 102,648, recovered from the budget line, September 2011.
- **Monitoring and Evaluation reports**
 - ♦ Mission Aide Mémoire: Mauritius. GCCA Global Evaluation. Egger Topper, April 2014.
 - ♦ Review of EU experience, best practices and lessons learned in the field of environment and climate change through the aid modality of budget support, chapter Mauritius, Neil Bird and Fabrice Ferrandes, November 2014.
- **Country policy documents**
 - ♦ Maurice Ile Durable: Policy, Strategy and Action Plan (2013). Ministry of Environment and Sustainable Development.
 - ♦ Mauritius Vision 2030.
 - ♦ Long-Term Energy Strategy 2009 – 2025 (2009). Port Louis, Mauritius: Ministry of Renewable Energy & Public Utilities, 52 pp.
 - ♦ Energy Strategy 2011 – 2025. Action Plan – Updated (as at 22 April 2014). Port Louis, Mauritius: Ministry of Renewable Energy & Public Utilities, 19 pp.
 - ♦ The Three Year Strategic Plan 2018/19 - 2020/21. Port Louis, Mauritius, 134 pp.
 - ♦ Renewable Energy Roadmap 2030 for the Electricity Sector (2019). Ministry of Energy and Public Utilities. 106 pp.
 - ♦ Intended Nationally Determined Contribution for the Republic of Mauritius (2015). 6 pp.

ADDITIONAL DOCUMENTS COLLECTED AND CONSULTED DURING THE FIELD PHASE:

- ♦ CEB Smart City Renewable Energy (RE) Scheme. Central Electricity Board, Mauritius.
- ♦ Mandatory Energy Audit. Frequently Asked Questions. Energy Efficiency Management Office.
- ♦ Final report of the “Africa Adaptation Programme” (2013). UNDP, 117 pp.
- ♦ The Building and Land Use Permit Plan (2017). Ministry of Local Government and Outer Islands.
- ♦ Building Control Act (2012).
- ♦ The Excise Act (Amendment Bill) (No. XVIII of 2011).
- ♦ Energy Efficiency (Labelling of Regulated Machinery) Regulations 2017.
- ♦ The Economic and Financial Measures (Miscellaneous Provisions) Act 2013.
- ♦ The Energy Observatory Report (2010 – 2017). Energy Efficiency Management Office.

RELEVANT WEBSITES:

- ♦ Ministry of Finance, Economic Planning and Development: <http://mof.govmu.org/>
- ♦ Ministry of Environment, Solid Waste Management and Climate Change: <http://environment.govmu.org/>
- ♦ Ministry of Energy and Public Utilities: <http://publicutilities.govmu.org/>
- ♦ Ministry of Public Infrastructure and Land Transport: <http://publicinfrastructure.govmu.org/>
- ♦ Energy Efficiency Management Office: <http://eemo.govmu.org/>
- ♦ Mauritius Revenue Authority: <https://www.mra.mu>
- ♦ Maurice Ile Durable: <http://mid.govmu.org/portal/sites/mid/aboutMID.htm>

CONTACTS OF STAKEHOLDERS COLLECTED DURING THE DESK PHASE

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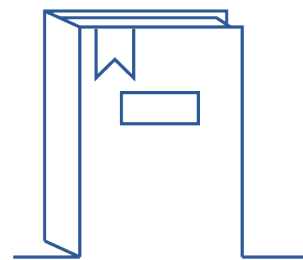
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Annex to the report: Sustainability Analysis

Nr	DESCRIPTION OF SYSTEM/SERVICE/PRODUCT TO BE SUSTAINED	SCORE	EVIDENCE	EXPLANATORY NOTES
1	An operational and active Energy Efficiency Management Office (EEMO) under the Ministry of Energy and Public Utilities	1	D	The Energy Efficiency Management Office (EEMO), under the Ministry of Energy and Public Utilities (MEPU) was found to be up and running. Staff of the EEMO were consulted during the field visit. The EEMO website was found to be operational and regularly updated with relevant information, e.g. on the various initiatives that are being implemented by EEMO. EEMO is particularly active in public awareness raising on the need to be energy efficient and in informing the public on the various options for increasing EE. The number of staff had increased from 3 at the time of its creation to 11 in 2019, comprising a Director, 3 engineers, 3 technicians and support staff.
2	An Energy Observatory that is monitoring and reporting on the impact of energy efficiency programmes	1	D	The Energy Observatory forms part of the EEMO. Annual reports of the Energy Observatory up to 2017 are available and were consulted. At the time of the visit, the 2018 report was being finalised. The reports are very detailed and provide evidence of a lot of work that has been undertaken to track energy production and consumption. The reports also make recommendations on policy issues when required.
3	An operational and active Climate Change Division under the Ministry of Environment and Sustainable Development	1	D	A meeting was organised with the staff of the Climate Change Division of the Ministry of Environment, Solid Waste Management and Climate Change, which had recently changed its name to include "Climate Change". The Division was staffed (7 persons, a Director and 6 environmental officers – an increase since the Division's establishment) and functioning. The Division has implemented a number of donor-funded projects, including the development of

				Mauritius' Third National Communication to the UNFCCC, the Africa Adaptation Programme (2010-2013), the NDC update, amongst others.
4	The taxation system for motor cars based on CO ₂ emissions is applied in the country.	1	R	A representative of the Ministry of Finance, Economic Planning and Development reported that the scheme had come into force in 2011 through the Excise Act (Amendment Bill) (No. XVIII of 2011). Soon after adoption, misuse of the system based on fake emission documents became apparent. The system was adjusted in 2016 and currently still applied. The fiscal measure under the adjusted system is based on the type of engine fitted in the vehicle (diesel, gasoline, hybrid, electric) and on the engine size (cc) as proxy for its CO ₂ emissions.
5	The system of conducting energy audits for public buildings is applied	1	R	The conduct of energy audits for public buildings is a requirement under the Energy Efficiency Act (2011). Since the 1st of January 2019, the audits have become mandatory for statutory bodies, government-owned and government controlled bodies and local authorities having an average annual energy consumption above 15 tonnes of oil equivalent (toe). The energy audits are effectively being undertaken for the public buildings as described above. As of the 1st of January 2021, energy audits will also become mandatory for private sector entities with consumption above 100 toe. As of November 2019, 27 energy auditors and 9 energy audit companies were registered with EEMO, indicating that the regulation is actually implemented.
6	Tariff incentives for small clean power producers are applied	1	R	Tariff incentives were established and various schemes are being promoted by the Government of Mauritius to get individuals, private sector, municipalities and government bodies involved in power production using photovoltaic panels. Examples of these schemes include the Smart City Scheme and the Public Sector Entities RE Scheme which allow the set up of Small-Scale Distributed Generation (SSDG) and Medium-Scale Distributed Generation (MSDG) solar photovoltaic (PV) projects by Smart Cities and Public Entities respectively and the integration of the produced solar power into the electricity grid.
7	CC working group within MID active and covering CC issues under the MID Framework	4	D	The MID Framework was disbanded in 2014 following a change in government. Therefore also the CC working group under the Framework was disbanded.

8	The Building Rating System still operational and effectively in use.	4	R	The Building Rating System and an accompanying manual on the use of the system had been developed by the TA provided under the GBS-GCC project, but the system was never put in place – reportedly by lack of a dedicated unit/staff - and the manual was never approved.
9	An operational unit for Sustainable Buildings under the Ministry of Public Infrastructure	4	R	Though plans had been developed for the establishment of a Sustainable Buildings Unit within the Ministry of Public Infrastructure (MPI) and for training of the staff in the application of the new Building Rating System, none of these plans were ever implemented, as reported due to budgetary constraints.



This **Impact and Sustainability Assessment of the Global Climate Change for Mauritius Project** (2009/O21-552) is one of the 22 case studies that were conducted to feed into the overall **EU GCCA/EU GCCA+ Impact and Sustainability Study**.

This case study report provides a summary list of outputs delivered, a detailed analysis of ex-post impact and sustainability levels as well as additional information on the project's M&E practices, on the available knowledge and communication products, on scaling-up opportunities and on ex-post climate finance mobilised from local public and private sources.

All reports are available on www.gcca.eu/resources

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