

**Guidelines:**

- This Request Submission Form should be completed by the organisation requesting technical assistance from the Climate Technology Centre & Network (CTCN) in collaboration with the National Designated Entity (NDE) of the country in question
- The Form must be signed by the NDE. Please see updated contact list of NDEs here: <http://unfccc.int/tclear/support/national-designated-entity.html>
- The Form can be submitted as a Word file containing a digital signature or as a signed and scanned PDF file in combination with an un-signed Word file
- For requests submitted by multiple countries, all the NDEs of the respective countries shall sign identical Forms before official submission to the CTCN
- NDEs have the opportunity to submit CTCN requests in collaboration with National Designated Authorities (NDAs) for the Green Climate Fund (GCF) if targeting the GCF Readiness Programme.

<b>Requesting country or countries:</b>	Mauritius
<b>Request title:</b>	<b>Pre-Feasibility Study on Seawater Intake Infrastructure for Project Samurai Blue-The Savanne Regional Model</b> (Ocean Thermal Energy Conversion “OTEC” and Deep Seawater “DSW” industries development)
<b>NDE</b>	Mrs. Sarita Meheelaul Director, Climate Change Ministry of Environment Solid Waste Management and Climate Change, Ken Lee Tower, c/r Barracks and St. George Sts, Port Louis, Mauritius Tel No. +230 2105620 Email: smeeheelaul@govmu.org
<b>Request Applicant:</b>	Mr. Frédéric Robert  The Chief Executive Officer  St Felix Smart City Ltd  Saint Felix 60422,  Mauritius  St. Felix Smart City Ltd  on behalf of all stakeholders in Project Samurai Blue-The Savanne Region Model  Tel No. +230 6226731  Email: frederic@st-felix.com

**Climate objective:**

- Adaptation to climate change
- Mitigation of climate change
- Combination of adaptation and mitigation of climate change

**Geographical scope:**

- Community level
- Sub-national
- National
- Multi-country

Located in the South of Mauritius, the Savanne District remains under-developed and lacking in economic opportunities compared to the rest of Mauritius. However, the Savanne District possesses strong potential for OTEC and DSW industries development. Project Samurai Blue-The Savanne Regional Model will install seawater intake infrastructure and an OTEC power plant as regional “core infrastructure” to catalyse Ocean Economy and Sustainability focused economic and social development at two new Smart Cities being developed side-by-side in the Savanne District (St. Felix Smart City and Agria Sustainable Smart City)

**Problem statement related to climate change (up to one page):**

**INCREASING PROBLEMS OF ENERGY SECURITY, FOOD SECURITY AND WATER SECURITY DUE TO CLIMATE CHANGE**

**1. ENERGY SECURITY: NEED FOR NEW NON-FOSSIL, ZERO EMISSIONS & BASELOAD TECHNOLOGIES**

**The share of fossil fuels in Mauritius’ generation mix remains well above Government targets.** At June 2022, 80.2% of the mix was from Heavy Fuel Oil (43.5%) and Coal (36.7%) (Source: CEB Annual Report). At 20.7% in 2022, the share of renewables in the generation mix is actually below the 22% of 2007 when Mauritius launched the Long-Term Energy Strategy 2007-2025 “LTES” (funded by EC and UNDP/UNEP) with a target of 35% renewables by 2025. LTES has been replaced with a new target of 60% renewables by 2030, however, this will be challenging to achieve without new renewable technologies. **Decarbonizing generation is also key for Mauritius to meet the mitigation target of its Nationally Determined Contributions (“NDC”).** Energy is the largest GHG emitting sector, with 78.3 % of total national GHG emissions (excluding Forestry and Other Land Use) of 5,642.2 Gg (CO<sub>2</sub>-eq) (Source: Statistics Mauritius 2022). Mauritius’ NDC targets a 40% reduction in GHG emissions by 2030 through increasing renewables to 60%, phasing out coal, and increasing energy efficiency. Mauritius’ Renewable Energy Roadmap 2030 includes solar, biomass, offshore wind, hydropower, waste-to-energy, and ocean energy as candidate renewables technologies. However, hydropower and bagasse/cane biomass are practically fully exploited, and wind resources are not strong enough to attract significant interest. Although Solar PV generation has increased, land availability/competition and intermittency present constraints. Violation of Load Duration Curve (LDC) is a key concern identified in the roadmap. **New non-fossil, zero-emission and baseload generation technology alternatives such as OTEC are key to transition Mauritius to a lower carbon economy.**

**2. WATER SECURITY: WATER STRESS AND INCREASING RISKS OF WATER SCARCITY**

**Although not specifically prone to drought, Mauritius is classified as water stressed and is challenged by seasonal water scarcity.** Rainwater flows out to the sea quickly due to steep terrain or evaporates in the tropical climate, and the ratio of recharging groundwater is small. More than 20% of the population suffer intermittent water supply under normal conditions (i.e. even during the wet season). This figure can rise to 75% during the dry season. **Due to climate change, Mauritius experiences longer dry seasons, shorter wet seasons and increased intensity of droughts as well as the salinization of groundwater due to rising sea level. Increasing scarcity of water resources presents critical risks for households and key industries such as agriculture (40% of land use**

and 30% of water use) and tourism (large water usage).

### 3. FOOD SECURITY: FOOD IMPORTS VS. DOMESTIC FOOD PRODUCTION

**Mauritius is heavily dependent on food imports making it vulnerable to global commodity and supply disruptions.** Mauritius imports 77% of its food requirements (Source: UNORG 2023). Food security is further exposed to disruption in global commodity and supply chain via import reliance for seeds, fertilisers, pesticides, technology, and equipment. Rising prices of staple foods such as bread, black lentils, powdered milk and cooking oil are straining household budgets. **Food imports and embedded transportation costs – in terms of money and carbon - impede sustainable development. Transforming food systems is key to Mauritius’ mitigation and adaptation strategies.**

*Seawater infrastructure can act as a catalyst for sustainable ocean economy development that can address diverse issues including energy security, water security, greenhouse gases emissions, economic diversification, food security, fossil fuel import bill, export earnings, and employment. Seawater infrastructure will enable introduction of ocean thermal energy conversion “OTEC”, a renewable energy technology that exploits the temperature differential between surface seawater and colder deep seawaters to generate baseload electricity. As seawaters are domestic natural resources, OTEC is a solution that addresses energy security challenges posed by a heavy (and increasing) fossil fuel import bill. Seawater infrastructure and OTEC also encourage development of synergistic technologies, including seawater cooling, desalinated water, chilled-soil smart agriculture, temperature controlled smart aquaculture, seawater pharmaceuticals/cosmetics, and seawater foods and beverages.*

**Past and on-going efforts to address the problem** (up to half a page):

#### 1. MAURITIUS OTEC AND DSW INDUSTRIES PRE-FEASIBILITY STUDY

A Mauritius OTEC and DSW industries Pre-Feasibility Study confirmed Mauritius possesses high OTEC technology potential. The Savanne District was identified as an optimal location for OTEC and DSW industries development to address energy security, water security and food security challenges. Seawater intake infrastructure is required to unlock this potential.

#### 2. INTERNATIONAL PRIVATE-SECTOR COLLABORATION FOR OTEC & DSW INDUSTRIES DEVELOPMENT

The absence of a domestic OTEC industry necessitates establishment of linkages with Japan for OTEC innovation. Since 2014, OTEC technical collaboration has taken place between Mauritius companies interested in OTEC and Japan’s OTEC industry players with the vision to replicate Japan’s “Kumejima Model” of OTEC and DSW industries development in Mauritius (“Project Samurai Blue”).

#### 2. GOVERNMENT OF MAURITIUS SUPPORT FOR PROJECT SAMURAI BLUE-SAVANNE REGIONAL MODEL

As far back as the 2007 LTES, GoM has called for OTEC consideration in line with technology developments in other countries. GoM’s strong support for Project Samurai Blue-Savanne Regional Model is evidenced by: i) Economic Development Board’s issuance of a Smart City license to St Felix Smart City (the masterplan detailed collaboration with Japan for OTEC and DSW industries development), ii) Prime Minister’s Office authorization for surveys at sea offshore of St Felix Smart City, iii) Mauritius Renewable Energy Agency (MARENA) approval of the OTEC project under the National Scheme for Emerging Projects Concepts based on Renewable Energy

Technologies; iv) GoM announcement of the OTEC project in the 2023-2024 national budget; v) MARENA's issuance of a letter of support for this application to UN CTCN; and vi) Mauritius NDE's endorsement of this application to UN CTCN.

### 3. GOVERNMENT OF JAPAN SUPPORT FOR OTEC TECHNOLOGY DEVELOPMENT & MAURITIUS DEMONSTRATION

Government of Japan (GoJ) support for OTEC technology development and international demonstration has complemented GoM support. The OTEC Roadmap of GoJ's New Energy and Industrial Technology Development Organization (NEDO) targets 50MW OTEC power plants by 2023. In line with this roadmap, NEDO provided a subsidy for a Mauritius OTEC and DSW industries Pre-feasibility study in 2022. This NEDO study – which did not assess seawater intake infrastructure - confirmed the Savanne District as having OTEC and DSW industries potential.

#### Specific technology<sup>1</sup> barriers (up to one page):

1. **INTERNATIONAL COLLABORATION REQUIRED TO OVERCOME WEAKNESSES IN HIGH-TECH INNOVATION** Mauritius, in common with other SIDS, possesses locational competitive disadvantages that impede high-tech innovation. As Mauritius does not possess seawater intake infrastructure, OTEC or DSW industries technology players, OTEC innovation in Mauritius requires international expertise and international collaboration (e.g. technology advisory and supply, knowledge development and diffusion, capacity development etc.).
2. **TECHNICAL EXPERTISE TO CONFIRM ROUTING, DESIGN AND COST OF SEAWATER INTAKE INFRASTRUCTURE** Large-diameter seawater intake pipe infrastructure must be installed to introduce OTEC and DSW industries development. An optimal site and appropriate routing/design is critical to contain capital cost. An optimal site must provide: i) short distances to access cold DSW; ii) appropriate year-round surface seawater (SSW) temperatures; and iii) land availability onshore for DSW industries development. The Mauritius OTEC and DSW industries pre-feasibility study confirmed the Savanne District to be an optimal area for Project Samurai Blue. International technical assistance is now sought for expert studies to confirm the optimal site, routing, design and cost of the seawater intake infrastructure.
3. **OTEC PHASE OF DEVELOPMENT VS. CAPITAL COSTS** The offshore oil and gas industry commonly deploys large-diameter pipes of the required specification, size and length. In recent years, deployment in seawater cooling is also advancing. Financing the high up-front capital costs of seawater intake infrastructure is itself a barrier for OTEC and DSW industries to emerge in SIDS. This challenge is accentuated by OTEC's current stage of technology development (i.e. low-MW scale). The International Renewable Energy Association (IRENA) considers the construction of up to 10MW OTEC plants using current design, manufacturing techniques is considered technically feasible. Further, the OTEC industry expects OTEC technology will deliver substantial economies of scale as OTEC plant technology is scaled-up. For Mauritius, large-scale OTEC projects are targeted for development in Mauritius in the future once OTEC technology is introduced through this first project.
4. **SIMULTANEOUS DEVELOPMENT OF MULTIPLE NEW PROJECTS** Should seawater intake infrastructure need to be financed on a purely commercial basis, a key challenge will be the need to simultaneously implement multiple new DSW secondary projects to ensure sufficient upfront demand (i.e. revenues) to support financing on a commercial basis. This is in contrast to deployment in Japan and USA where central or regional

<sup>1</sup> *“any equipment, techniques, practical knowledge and skills needed for reducing greenhouse gas emissions and adapting to climate change” (Special Report on Technology Transfer, IPCC, 2000)*

government has financed the installation of seawater intake infrastructure first, with private-sector DSW industry players crowding-in afterwards.

*The installation of seawater intake infrastructure to enable OTEC and DSW industries development has been successfully implemented in Japan and the United States (Hawaii). Seawater intake infrastructure for DSW cooling has also been demonstrated in French Overseas Territories. It is notable that such seawater intake infrastructure development has only emerged in high-income countries and territories, where central or regional government support has enabled installation of seawater intake infrastructure. Development has failed to emerge in SIDS where such technologies and development are highly relevant. The successful introduction of seawater intake infrastructure, OTEC and DSW technologies in Mauritius will permit Mauritius to leap-frog ahead in terms of ocean economy and sustainable economic and social development. In addition, successful implementation of these technologies in Mauritius by private sector players will help unlock new capital for similar projects in other SIDS.*

### Sectors:

Please indicate the main sectors related to the request:

- |  |   |   |   |
|--|---|---|---|
| <input checked="" type="checkbox"/> Coastal zones        | <input type="checkbox"/> Early Warning and Environmental Assessment | <input type="checkbox"/> Human Health           | <input checked="" type="checkbox"/> Infrastructure and Urban planning |
| <input checked="" type="checkbox"/> Marine and Fisheries | <input checked="" type="checkbox"/> Water                           | <input checked="" type="checkbox"/> Agriculture | <input type="checkbox"/> Carbon fixation                              |
| <input checked="" type="checkbox"/> Energy Efficiency    | <input type="checkbox"/> Forestry                                   | <input checked="" type="checkbox"/> Industry    | <input checked="" type="checkbox"/> Renewable energy                  |
| <input type="checkbox"/> Transport                       | <input type="checkbox"/> Waste management                           |   |   |

Please add other relevant sectors:

### Cross-sectoral enablers and approaches:

Please indicate the main cross-sectoral enablers and approaches

- |   |   |  |   |
|---|---|--|---|
| <input checked="" type="checkbox"/> Communication and awareness | <input checked="" type="checkbox"/> Economics and financial decision-making | <input type="checkbox"/> Governance and planning | <input checked="" type="checkbox"/> Community based |
| <input type="checkbox"/> Disaster risk reduction                | <input type="checkbox"/> Ecosystems and biodiversity                        | <input checked="" type="checkbox"/> Gender       |   |

### Technical assistance requested (up to one page):

Please note that CTCN facilitates technical assistance and is not a capital project financing mechanism.

#### 1. OVERALL OBJECTIVE

With the ultimate goal of implementing seawater intake infrastructure, OTEC, and DSW industries development in the Savannae District of Mauritius (Project Samurai Blue-Savanne Regional Model) via a future application to the Green Climate Fund (GCF\*), this Pre-Feasibility Study Technical Assistance request to CTCN has the following objectives:

1. To confirm seawater intake infrastructure optimal site, routing, design and installation methods, and estimate cost of installing the seawater intake infrastructure; and
2. To identify high potential new DSW industries demand (revenue), such as for cooling, aquaculture,

agriculture, and other industries

*\* The results of the requested Pre-FS will be combined with the Mauritius OTEC and DSW industries Pre-Feasibility Study completed with GoJ NEDO support, and form the basis of future proposal for GCF funding.*

## **2. EXPECTED ACTIVITY GROUPS TO BE PERFORMED BY THE TECHNICAL ASSISTANCE**

The requested seawater intake infrastructure Pre-Feasibility Study includes;

- Data collection/acquisition of most appropriate location for seawater intake infrastructure pipes;
- Technical Analysis for seawater intake infrastructure at shortlisted sites and indepth investigations for the installation method such as (1) Siting deep seawater intake infrastructure including pipes, (2) Confirming preconditions for installation (bathymetry, seawater temperature, etc.), (3) Preliminary selection of suitable method for discharged water (after power generation and secondary use);
- Survey potential DSW technology utilization demand, including identification of specific products, crops, and market and distribution potentials;
- Stakeholder meeting for raising local awareness and capacity building; and
- Project Preparation for GCF Funding.

## **3. ANTICIPATED PRODUCTS TO BE DELIVERED BY THE TECHNICAL ASSISTANCE.**

The requested seawater intake infrastructure Pre-Feasibility Study is expected to deliver the following products;

- Set of collected/ acquired data and results of site survey if any;
- Technical Analysis Reports for installation of seawater intake infrastructure at selected site and investigation about the installation method;
- Report on survey of potential DSW technology utilization demand, including identification of specific types of products, crops, as well as market and distribution potentials;
- Reports from stakeholders' meetings for raising local awareness and capacity building, and recommendation for potential engagement with stakeholders; and,
- Draft Project Concept Note for GCF Funding.

### **Expected timeframe:**

The Requested Pre-Feasibility Study is expected to be conducted in the below time frame.

#### **1. DATA COLLECTION & ACQUISITIONING:**

Initially, data collection will be conducted. Any missing datasets will have to be acquired. Based on the data collected/ acquired, further research and desktop studies will be conducted.

#### **2. TECHNICAL ANALYSIS:**

The Technical Analysis will be conducted based on the data collected/ acquired based on analytical models.

#### **3. SURVEY ON POTENTIAL DSW TECHNOLOGY UTILISATION DEMAND:**

Technology and market survey will be conducted in the middle of study, whose data will support elaboration of economic analysis

#### 4. STAKEHOLDER MEETINGS

Regular stakeholders' meetings will be held to inform and disseminate information and status such as 1) reports during initiation of the Study, 2) mid-term results, and 3) Semifinal results of survey and ideas for GCF Concept Note.

#### 5. GCF CONCEPT NOTE DEVELOPMENT

A Concept Note will be developed in the latter part of the study.

Activities	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
1. Data collection/ acquisition & modeling												
2. Technical Analysis on Seawater Intake Infrastructure												
3. Survey on Potential for Seawater Utilization												
4. Stakeholder Meeting												
5. GCF Concept Note development												

#### Anticipated gender and other co-benefits from the technical assistance:

**Seawater intake infrastructure will enable creation of new DSW industries possessing strong gender equality impact potential.** This technical assistance relates to creating a supply of deep seawater, which has cold, clean and nutrient rich properties that can be commercially exploited to create new industries and employment opportunities. New DSW industries and employment opportunities targeted for creation at the St Felix Smart City and Agria Smart City in the Savanne District include DSW-cooled smart agriculture, DSW-enabled aquaculture/mariculture and DSW cosmetics. Globally, women account for a significant proportion of the workforce in these industries. Creating new employment opportunities for local women in the Savanne District is an important outcome for all Project Samurai Blue-Savanne Regional Model stakeholders.

**In addition to gender equality outcomes, seawater intake infrastructure also possesses considerable potential to address regional inequality concerns in Mauritius.** The South of Mauritius remains under-developed and lacking in economic opportunities for local residents. Regional economic development of the South is a national strategic imperative for GoM. Seawater intake infrastructure can act as a catalyst for OTEC and DSW industries development in the South. As a completely new resource in Mauritius and indeed the Eastern and Southern Africa region, seawater intake infrastructure and DSW supply will provide the Savanne District with a unique locational competitive advantage with respect to attracting DSW industry players and future ocean industries and blue economy development.

#### Key stakeholders:

Please list the stakeholders who will be involved in the implementation of the requested CTCN technical assistance and describe their role during the implementation (for example, government agencies and ministries, academic institutions and universities, private sector, community organizations, civil society, etc.).

Stakeholders	Role to support the implementation of the technical
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	<b>assistance</b>
<p>Ministry of Environment Solid Waste Management and Climate Change (“MOESWMCC”)</p> <p>Ken Lee Tower, c/r Barracks and St. George Sts, Port Louis, Mauritius</p>	<ul style="list-style-type: none"> <li>• MOESWMCC, as NDE, endorses the request for UN CTCN technical assistance.</li> <li>• MOESWMCC shall also be consulted on all matters related to Environmental and Social Risk Assessment, Environmental permitting and approvals, community engagement etc.</li> </ul>
<p>Mauritius Renewable Energy Association (“MARENA”)</p>	<ul style="list-style-type: none"> <li>• MARENA is a GoM agency operating under the aegis of the Ministry of Energy and Public Utilities responsible to promote renewable energy and create an environment conducive to the development of renewable energy.</li> <li>• MARENA shall be consulted on all matters related to introduction of OTEC electricity generation introduction.</li> <li>• MARENA has already approved the OTEC project under the National Scheme for Emerging Projects Concepts based on Renewable Energy Technologies.</li> <li>• In furtherance of collaboration to introduce OTEC technology, MARENA has also issued a Letter of Support for the request for UN CTCN technical assistance.</li> </ul>
<p>Central Electricity Board (“CEB”)</p>	<ul style="list-style-type: none"> <li>• CEB will be the off-taker of OTEC electricity under a Power Purchase Agreement.</li> <li>• CEB, via MARENA, will be consulted on all matters related to OTEC electricity generation, grid connection etc.</li> </ul>
<p>Central Water Authority (“CWA”)</p>	<ul style="list-style-type: none"> <li>• CWA is a proposed offtaker of Desalinated Water production under water supply agreement.</li> </ul>
<p>Economic Development Board (“EDB”)</p>	<ul style="list-style-type: none"> <li>• EDB is a government agency mandated to provide institutional support for strategic economic planning and facilitate investment in the country.</li> <li>• EDB is the central contact point with GoM across the stakeholder ministries and institutions.</li> <li>• EDB manages the Smart City incentive scheme at the national level. EDB has already issued Smart City approval to the St Felix Smart City and is also expected to approve the Agria Smart City later this year. EDB will need to be consulted on a potential future application for a Project Samurai Blue-Savanne Regional Model smart city certificate.</li> <li>• EDB will coordinate with GoM stakeholders ministries and institutions to request access to existing bathymetry maps and ocean data sets that will be the subject of technical analysis under this UN CTCN technical assistance request. Such ministries and institutions include: <ul style="list-style-type: none"> <li>i. Mauritius Hydrographic Services</li> <li>ii. Mauritius Oceanographic Institute</li> <li>iii. Mauritius Meteorological Services</li> </ul> </li> </ul>
<p>Prime Minister’s Office (“PMO”),</p>	<ul style="list-style-type: none"> <li>• PMO has issued Authorisation for Surveys at Sea in relation to with seawater intake infrastructure offshore</li> </ul>

<p>Department of Continental Shelf, Maritime Zones Administration &amp; Exploration (“PMO DCSMZAE”)</p>	<p>of the SFSC.</p> <ul style="list-style-type: none"> <li>• PMO will chair meetings with representatives from GoM stakeholder ministries and institutions to facilitate common understanding and vision to support introduction of seawater intake, OTEC and DSW technologies in Mauritius.</li> <li>• PMO will also be consulted on any future application for a concession.</li> </ul>
<p>Ministry of Finance, Economic Planning and Development (“MOF”)</p>	<ul style="list-style-type: none"> <li>• MOF announced the OTEC project in the 2023-2024 national budget.</li> <li>• MOF, as GCF NDA, shall need to be consulted for any future application to GCF.</li> </ul>
<p>St Felix Smart City Ltd (“Applicant”) on behalf of all stakeholders in Project Samurai Blue- The Savanne Region Model)</p> <p>c/o The Chief Executive Officer</p> <p>St. Felix Smart City Ltd</p> <p>Saint Felix 60422,</p> <p>Mauritius</p>	<ul style="list-style-type: none"> <li>• SFSC is the Applicant, on behalf of all stakeholders in Project Samurai Blue- The Savanne Regional Model, for this UN CTCN technical assistance request.</li> <li>• SFSC is the landowner and developer of the St Felix Smart City, an ocean economy themed smart city in the Savanne District.</li> <li>• SFSC has been collaborating with Japanese OTEC technology partners since 2014 to develop OTEC and DSW industries at SFSC and has allocated land within SFSC for future development of OTEC and DSW industries.</li> <li>• SFSC will coordinate other Savanne Regional Model stakeholders including but not limited to:             <ol style="list-style-type: none"> <li>i. Rogers Group (promoter of the Agria Smart City)</li> <li>ii. Savanne Region District Council</li> <li>iii. Local universities and research institutions</li> <li>iv. Local NGOs and communities</li> </ol> </li> </ul>

**Alignment with national priorities** (up to 2000 characters including spaces):

Please describe how the technical assistance is consistent with national climate priorities such as: Nationally Determined Contribution, national development plans, poverty reduction plans, technology needs assessments, Low Emission Development Strategies, Nationally Appropriate Mitigation Actions, Technology Action Plans, National Adaptation Plans, sectorial strategies and plans, etc.

1. **GREENHOUSE GAS (“GHG”) NATIONALLY DETERMINED CONTRIBUTIONS (“NDC”).** Seawater intake infrastructure will enable OTEC and DSW-cooling to support decarbonization of energy generation, which is critical to meet Mauritius’ NDC targets of 40% reduction in emissions by 2030. The introduction of OTEC and localization of research and development will support future development OTEC projects at larger scale. OTEC technology is in line with the **Mauritius’ Renewable Energy Roadmap 2030**.
2. **MAURITIUS’S NATIONAL CLIMATE CHANGE ADAPTATION POLICY FRAMEWORK (“NCCAPF”) PRIORITY ADAPTATION ACTIONS FOR WATER SECTOR.** Mauritius’s NCCAPF priority adaptation actions for the water sector include: i) water resource management; ii) rainwater harvesting; and iii) desalination plants. Seawater Intake Infrastructure and OTEC will permit new and low-marginal cost desalinated water production and supply to heavy users in the Savanne District including numerous hotels, a textile factory and agricultural estates.
3. **MAURITIUS’S NATIONAL CLIMATE CHANGE ADAPTATION POLICY FRAMEWORK (“NCCAPF”) PRIORITY ADAPTATION ACTIONS FOR AGRICULTURE SECTOR.** Mauritius’s NCCAPF priority adaptation actions for the agriculture sector include: i) efficient irrigation techniques development (investment in water infrastructure to support irrigation) and ii) develop and promote climate smart agricultural practices. Seawater Intake

Infrastructure will provide new water support for irrigation and also support chilled-soil smart agriculture development in the South of Mauritius, permitting improved year-round cultivation of existing crops and the growing of new crops (e.g. winter crop varieties) and improving agricultural practices, output and food security.

*More broadly, technical assistance will also impact other national strategic priorities including sustainable economic development, economic diversification, reducing regional inequality, technological innovation and creation of high-quality jobs.*

Reference document (please include date of document)	Extract (please include chapter, page number, etc.).
Nationally Determined Contribution (NDC)	"Energy: The production of 60% of energy needs from green sources by 2030, the total phasing out of the use of coal before 2030, increasing energy efficiency by 10 % based on the 2019 figures". (P8) and as the reference documents of this "Renewable Energy Roadmap 2030 for the Electricity Sector (P42 "8.1.4 Ocean Thermal Energy")" is referred.
Technology Needs Assessment	"3.2.4 Energy Sector"(P29-35) states the introduction of renewable to energy generation is key to GHG emissions reduction.  Also "Studies on: Biomass, biogas, trigeneration, Ocean Energy" have been emphasized (P74).
National Adaptation Plans	National Climate Change Adaptation Framework (water resources: P7-9)
Nationally Appropriate Mitigation Actions	-
Add others here as relevant	Renewable Energy Roadmap 2030 for the Electricity Sector (P42 "8.1.4 Ocean Thermal Energy")

**Development of the request** (up to 2000 characters including spaces):

Please describe how the request was developed at the national level and the process used by the NDE to approve the request before submitting it (who initiated the process, who were the stakeholders involved and what were their roles?) and describe any consultations or other meetings that took place to develop and select this request, etc.

GoM policies guide development of the Blue Economy and renewable energy in Mauritius. Since 2014, GoM stakeholders concerned with national development, energy, the blue economy, research and innovation, the environment and climate change have been consulted by the Promoters.

GoM stakeholders understand that Mauritius possesses high potential for OTEC and DSW-led ocean industries development, and that these technologies are highly relevant to Mauritius's national climate policies, GHG NDCs and NCCAPF. GoM stakeholders are supportive of seawater intake infrastructure, OTEC and DSW technologies innovation in Mauritius, for the localization of research and development, and for future implementation of these technologies at larger scale in Mauritius.

Following completion of the Mauritius OTEC and DSW industries pre-feasibility study, the Prime Minister's Office, Department of Continental Shelf, Maritime Zones Administration & Exploration ("PMO DCSMZAE") convened an

all-stakeholder meeting in June 2023 attended by representatives from across stakeholder Ministries and Institutions. The aim of the meeting was to establish a common understanding of the project vision as well as the multi-stakeholder consensus required to support development of Project Samurai Blue-The Savanne Regional Model.

Subsequent to the all-stakeholder meeting, MARENA approved the OTEC project under the National Scheme for Emerging Projects Concepts based on Renewable Energy Technologies. The Ministry of Finance, Economic Planning and Development (“MOF”) also announced the launch of the OTEC project in the 2023-2024 national budget.

On top of GoM support, continued international support and collaboration with technical and development partners is required for such technological innovation to be successfully implemented in Mauritius. Accordingly, the GoM, through the National Designated Entity, hereby endorses this application for UN CTCN for technical assistance.

**Background documents and other information relevant for the request:**

- Update of the Nationally Determined Contribution of the Republic of Mauritius (2021)
- National Climate Change Adaptation Policy Framework (NCCAPF)
- Republic of Mauritius Long-Term Energy Strategy 2007 – 2025
- Renewable Energy Roadmap 2030 for the Electricity Sector
- National Greenhouse Gas (GHG) Inventory in 2016
- Assessment and identification of technology needs and best practices for reducing the GHG emitting potential of the energy sector in Mauritius

**OPTIONAL: Linkages to Green Climate Fund Readiness and Preparatory Support**

The CTCN is collaborating with the GCF in order to facilitate access to environmentally sound technologies that address climate change and its effects, including through the provision of readiness and preparatory support delivered directly to countries through their GCF NDA. These actions are in line with the guidance of the GCF Board (Decision B.14/02) and the UNFCCC, particularly paragraphs 4 and 7 of 14/CP.22 that addresses Linkages between the Technology and the Financial Mechanisms<sup>2</sup>.

The CTCN is therefore implementing some of its technical assistance using GCF readiness funds accessed via the country’s NDA. Any application for GCF support, including the amount of support provided, is subject to the terms and conditions of the GCF and should be developed in conjunction with the NDA.

Please indicate whether this request has been identified as preliminarily eligible by the NDA to be considered for readiness support from the GCF.

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<sup>2</sup> Please see:

[https://unfccc.int/files/meetings/marrakech\\_nov\\_2016/application/pdf/auv\\_cop22\\_i8b\\_tm\\_fm.pdf](https://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/auv_cop22_i8b_tm_fm.pdf)

**Initial engagement:** The GCF NDA of the requesting country has been engaged in the design of this request and the NDA will be involved in the further process leading to an official agreement for accessing GCF readiness support.

**Advanced engagement (preferred):** The GCF NDA of the requesting country has been directly involved in the design of this request and is a co-signer of this request, the signature indicating provisional agreement to use readiness national funds to support the implementation of the technical assistance.

NDA name: Mr. Visvanaden Soondram

Date:

Signature:

**Monitoring and impact of the assistance:**

By signing this request, I affirm that processes are in place in the country to monitor and evaluate the technical assistance provided by the CTCN. I understand that these processes will be explicitly identified in the CTCN Response Plan and that they will be used in the country to monitor the implementation of the technical assistance following standard CTCN procedures.

I understand that, after the completion of the requested assistance, I shall support CTCN efforts to measure the success and effects of the support provided, including its short, medium and long-term impacts in the country.

**Signature:**

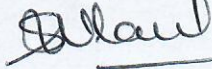
NDE name:

Mrs. Sarita Meeheelaul

Date:

22/11/2024

Signature:



**THE COMPLETED FORM SHALL BE SENT TO THE [CTCN@UNEP.ORG](mailto:CTCN@UNEP.ORG)**

The CTCN is available to answer all questions and provide guidance on the application process.