Request for Proposals

for

Mauritius NDC Registry Platform



Table of Contents

Table of Contents ii

Disclaimer 4

Abbreviations, Acronyms, and Definitions 5

1 Introduction 6

1.1 About UNEP DTU Partnership 6

1.2 About this Request for Proposal 6

1.3 Submitting Proposals 6

1.4 Accepting Proposals 7

1.5 Contracting Schedule 7

2 Proposal Preparation Guidelines 8

3 Project Overview 9

3.1 Background 9

3.2 Opportunity 9

3.3 Vision Statement 10

4 Statement of Work 11

4.1 Communication 11

4.2 Design, Development, and Implementation Methods 11

4.3 Evaluation and Monitoring 11

4.4 Change Management 11

4.5 Product Acceptance 12

4.6 Support and Maintenance 12

5 Technical Requirements 14

5.1 Hosting Environment 14

5.2 User Classes 14

5.3 Operating Environment 15

5.4 Design and Implementation Constraints 15

5.5 Major Features 15

5.6 Interface requirements 17

5.7 Nonfunctional requirements 17

5.8 Scope of Releases 17

6 Deliverables 19

7 Schedule Estimates 19

8 Contracts and Licenses 20

9 Proposal Evaluation Criteria 20

10 Supporting documents 21

10.1 SAMPLE HARDENING GUIDE FOR Microsoft SQL server 21

10.2 SAMPLE HARDENING GUIDE FOR Windows 2012 R2 21

# Disclaimer

This RFP is not an offer to contract. Issuance of this RFP and the receipt of responses by UNEP DTU Partnership do not commit UNEP DTU Partnership to award a contract to any bidder.

# Abbreviations, Acronyms, and Definitions

|  |  |
| --- | --- |
| **BTRs** | **Biennial Transparency Reports**  Reports to be submitted every two years to the UNFCCC by signatories (parties) to the Paris Agreement, accounting on progress in implementing the agreement, namely the achievement of nationally determined contributions and the provision of financial, technology, and capacity-building support to developing countries. |
| **BURs** | **Biennial Update Reports**  Reports to be regularly submitted by non-Annex I Parties (mainly developing countries) to the UNFCCC, which contain updates on national inventories of GHG emissions, information on climate change mitigation actions, and support needed and received to implement the convention. |
| **GHG** | **Greenhouse gas**  A gas in the atmosphere that is the fundamental cause of the greenhouse effect, thus being responsible for a global increase in average temperatures, a phenomenon also known as global warming. |
| **NAMAs** | **Nationally appropriate mitigation actions**  Refers to any action that contributes to reduce GHG emissions in developing countries and is prepared as part of a national government initiative. NAMAs can be defined at the national level or at the individual action level. |
| **NatComs** | **National Communications**  Reports to be regularly submitted by developed countries (annex I parties) to the UNFCCC, which contain information on activities performed by national governments to act on climate change domestically and support developing countries in their own efforts. |
| **NDCs** | **Nationally determined contributions**  Public communications from all Parties to the convention to the UNFCCC Secretariat in which countries outline the steps they will take to address climate change domestically, which reflect the country’s ambition for reducing emissions, considering its domestic circumstances and capabilities. |
| **MRV** | **Measurement, reporting, and verification**  Is a term used to describe all measures taken by countries to collect data on emissions of greenhouse gases, mitigation actions, and support, and to compile this information in reports and inventories, which are submitted to UNFCCC and subjected to some form of international review or analysis. |
| **PA** | **Paris Agreement**  A legally binding agreement among countries that are parties to the UNFCCC, established at COP21 in Paris in 2015, in which countries agreed on, among other issues, a long-term goal of keeping the increase in global average temperature to well below 2°C above pre-industrial levels. |
| **UNFCCC** | **United Nations Framework Convention on Climate Change**  Is an international environmental treaty established in Rio de Janeiro in 1992 with the goal of stabilizing greenhouse gas emissions at a level that prevents dangerous anthropogenic interference with the planet’s climate system. |
|  |  |
|  |  |

# Introduction

## About UNEP DTU Partnership

UNEP DTU Partnership is a leading international research and advisory institution on energy, climate, and sustainable development. Established in October 1990, the Partnership is based on a tripartite Memorandum of Understanding (MoU) between the Danish Ministry of Foreign Affairs, the Risø National Laboratory, and UN Environment (formerly UNEP). Since 1st January 2012, UNEP DTU Partnership is part of the Department of Management Engineering at Technical University of Denmark (DTU).

As a UN Environment collaborating centre, UNEP DTU Partnership is an active participant in the planning and implementation of UN Environment’s Climate Change Strategy and Energy Programme. Through in-depth research, policy analysis, and capacity building activities, the Partnership assists developing countries in transitioning towards lower carbon development paths, and supports the integration of climate resilience in national development.

## About this Request for Proposal

UNEP DTU Partnership in collaboration with Mauritius’ Ministry of Environment, Solid Waste Management and Climate Change is issuing this RFP for services of software development for Mauritius’ NDC Registry Platform. Companies and freelance developers are invited to respond to this RFP. UNEP DTU Partnership will compare the competitive advantages of the proposals received. Proposals will be evaluated in terms of quality, delivery schedule, price, project management, risk management, and satisfaction of the technical requirements set forth in this RFP. Specific evaluation criteria are defined in section 9. Proposal Evaluation Criteria.

## Submitting Proposals

The costs of preparing a proposal are the sole responsibility of bidding suppliers. All proposals and supporting documentation submitted with the proposal become the property of UNEP DTU Partnership. Proposals must be prepared according to section 2. Proposal Preparation Guidelines.

Questions regarding this RFP should be submitted by email to Talat Munshi, tamu@dtu.dk. Inquiries received until 23/04/2021 midnight (CET), will be addressed by 27/04/2021, and UNEP DTU Partnership will publish all questions and respective answers in UNEP DTU’s website at [www.unepdtu.org](file:///\\dtu-storage.win.dtu.dk\anacar\Documents\Transparency%20Platform\www.unepdtu.org).

Submit your proposal in soft copy form via email to canu@dtu.dk. All proposals must be received in the required format by 29/04/2021, midnight (CET). Proposals received after this time will not be considered.

## Accepting Proposals

UNEP DTU Partnership will evaluate submitted proposals according to the criteria summarized in section 9, Proposal Evaluation Criteria. UNEP DTU Partnership may accept or reject any proposal, whether or not it satisfies the requirements stated in this RFP. UNEP DTU Partnership reserves the right to negotiate further with bidding suppliers.

Bidding suppliers' response to this RFP constitutes an offer by them to do business with UNEP DTU Partnership on the terms stated in the response. Should the supplier be selected, UNEP DTU Partnership may incorporate any portions of their response into the negotiated agreements.

In the event that UNEP DTU Partnership decides not to accept the proposal, bidding suppliers will be so notified. UNEP DTU Partnership reserves the right not to communicate the basis upon which its decision was made.

## Contracting Schedule

|  |  |  |  |
| --- | --- | --- | --- |
| **Milestone** | **Date Due** | **Deliverables** | **Responsibility** |
| Issue RFP to suppliers | April 09, 2021 | RFP published | UNEP DTU Partnership |
| Inquiries about the RFP | April 23, 2021 | Email inquiries | Suppliers |
| Answers to suppliers’ inquiries | April 27, 2021 | Q&A published | UNEP DTU Partnership |
| Written proposals submitted | April 29, 2021 | Proposals in soft copy | Suppliers |
| Highest score suppliers selected | May 07, 2021 | Email notifications | UNEP DTU Partnership |
| Negotiations completed | May 11,2021 | Final statement of work | UNEP DTU Partnership |
| Contract executed | May 17, 2021 | Contract | UNEP DTU Partnership, Supplier |
| Final notification to other suppliers | May 20, 2021 | Email notifications | UNEP DTU Partnership |

# Proposal Preparation Guidelines

Accompanying the proposal there should be a cover letter that specifies the legal name and address of the supplier, the name and contact information of the individual who is authorized to respond to issues raised by UNEP DTU Partnership, and the name and contact information of the individual who is authorized to conduct negotiations and execute a contract.

The proposal itself should be prepared in an A4 document with 2.5cm of margins, typed in Times New Roman 12pt font size, with line spacing of 1.5, and should be organized in sections, as follows.

|  |  |
| --- | --- |
| **Section** | **Content** |
| Executive Summary | Brief description of the proposed project development approach, explaining how the re; |
| Corporate information | Brief history of the company and key financial figures; |
| Qualifications | * Previous acquirers for whom the supplier has done work, with contact information, cost, schedule, and quality performance data (actual versus estimates); * Any software process qualifications or certifications; |
| Statement of work | * Description of the development, design, and implementation methods to be used; * Processes to be used for requirements management, configuration management, testing, and quality assurance; * Management of communication, evaluation and monitoring, and other technical interactions; * Proposed scheduled and how it was derived, including contingency buffers; * Milestones and deliverables; * Team, team members’ qualifications, technical skills; * Analysis of significant project’s risks; * Assumptions that the supplier made; * Any dependencies on external factors or third parties; * Any proposed tradeoffs between functionality, quality, schedule, and cost; |
| Costs and payment | * Total costs of software development, installation and checkout * Costs of maintenance and support on annual basis * Travel expenses and any other costs not requested by the acquirer * Payment milestones and the amount due at each in US Dollars |
| Other terms or conditions | Any conditions that the supplier wishes to impose on the project; |
| Supplier’s section | Any information the supplier feels relevant or useful to include in the project but was not requested in the RFP |

# Project Overview

## Background

In 2015, at the COP21 (21st Conference of Parties to the UNFCCC - United Nations Framework Convention on Climate Change), countries negotiated the Paris Agreement (PA). The Paris Agreement is a global pact to reduce greenhouse gas (GHG) emissions in order to hold the increase in the global average temperature to well below 2°C and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels. With the entry into force of this agreement, countries submitted their [nationally determined contributions](http://www4.unfccc.int/ndcregistry/Pages/Home.aspx) (NDCs) towards achieving that temperature goal, as required.

In order to track the implementation of NDCs, it is essential for Parties to establish solid national transparency systems to assess the impact of climate change actions and policies on the level of GHG emissions, and the achievement of NDC's goals. In many developing countries, climate change policies have been developed in the form of NAMAs (nationally appropriate mitigation actions). Therefore, tracking the implementation of NDCs in some cases will require that countries monitor the implementation of NAMAs.

The UNEP DTU Partnership is providing technical support to Mauritius for the development of a web-based platform for monitoring the implementation of NDCs, henceforth the Mauritius NDC Registry Platform. The objective of the NDC Registry Platform is to aggregate information about the climate policies and projects that Mauritius is implementing in its NDC, and to facilitate the collection of the necessary data for tracking the progress in the achievement of the NDC.

## Opportunity

Mauritius has at the moment no institutionalized procedures and centralized system to report and monitor the implementation of climate actions. The development of a Climate Change Portal is envisioned in order to become the central repository and reporting system for national information relevant for climate change, including for GHG inventory, the NDC, national communications and biennial transparency reports, climate change impacts and adaptation, support needed and received and relevant climate change data. As a first step to develop such portal Mauritius seeks to establish an NDC registry aimed at monitoring and reporting the implementation and achievement of the NDC, including mitigation policies and measures, actions and plans, including those with mitigation co-benefits resulting from adaptation actions and economic diversification plans, related to implementing and achieving the NDC.

Proposals that expand on or describe how the NDC Registry will facilitate the inclusion on other modules / functions of the platform that allow the monitoring, reporting and visualization of climate data in Mauritius, submitted reports to the UNFCCC, climate relevant policies, GHG inventory, adaptation, technical and financial and support needed and received will be assessed positively.

## Vision Statement

The NDC Registry needs to become the centralized platform through which relevant institutions report on the progress of their mitigation policies and measures, actions and plans, including those with mitigation co-benefits resulting from adaptation actions and economic diversification plans, related to implementing and achieving the NDC. The information reported will assist the country to track progress made in implementing and achieving its NDC, and report this information to the UNFCCC through biennial transparency reports. In addition, the NDC Registry will provide the general public with selected relevant information on the targets and progress towards the achievement of the NDC.

# Statement of Work

This section describes the management requirements for the project, including expectations about the ways in which UNEP DTU Partnership and the supplier will work together.

## Communication

To ensure close collaboration between UNEP DTU Partnership and the supplier’s team, the communication should be continuous and transparent. Different tools can support ongoing communication, namely videoconference, email, and chat tools. The supplier is welcome to propose its choice of communication setting.

## Design, Development, and Implementation Methods

The supplier is welcome to propose and elaborate on the choice of methodology, development tools, and technical environments to be used for building the platform. The use of design modeling conventions or tools, source code control procedures, quality assurance and testing procedures, backup and recovery procedures should also be documented in the suppliers’ proposal.

The interaction and functional design of the platform will be reviewed by UNEP DTU Partnership’s project team.

## Evaluation and Monitoring

Regarding evaluation and monitoring, the supplier should elaborate on:

1. Preferred frequency, format, mechanisms, and contents of status reporting;
2. Quality checkpoints and joint reviews that will involve representatives from both parts, with approximate review schedule;
3. How issues requiring corrective action will be raised, documented, communicated, escalated, and resolved;
4. Tracking of results against estimates, and how to handle situations in which an expected deliverable is not produced on schedule; and
5. How project’s risks are to be managed.

## Change Management

Any changes in scope (from the supplier or the client), requirements, and technology should be communicated, in writing, at the earliest. Changes will be jointly evaluated based on the impact they will have on the project’s schedule, cost, and quality.

The supplier is welcome to extend this process for management of changes in scope, requirements, and technology, or recommend an alternative.

## Product Acceptance

Notwithstanding the possibility of defining more detailed acceptance criteria at the contracting stage, the overall evaluation of interim and final deliverables will consider:

1. Data and database integrity testing: The databases and the database processes will be tested as separate systems without the application.
2. Functional testing: Evaluation of product functionality to assess its adequacy and fitness to the intended operating environment. The beta version of the software will be tested with the stakeholders.
3. User interface testing: A user interface test will be conducted to verify the interaction with the software of different user classes.
4. Performance testing: Performance testing will be conducted to measures response times, transaction rates, and other time sensitive requirements. Performance testing will be conducted several times using a different 'background load' on the system.
5. Load testing: Load testing will be carried out to subject the system-under-test to varying workloads to evaluate the system’s ability to continue to function properly under these different workloads.
6. Security and access control testing: Security and Access Control Testing will be done to check application security, including access to the Data or Business Functions, and system security, including logging into / remote access to the system.
7. Defect data: Evaluation of eventual defects, and verification of product operation for priority features.
8. Install testing: Verification of product install and uninstall in host server, and the installation procedure must be fully documented.
9. Customer documentation: Project documentation must be provided in soft format, as specified in section 6. Deliverables will be evaluated for accuracy and completeness.

## Support and Maintenance

Regarding the handling of defects, the supplier is expected to attend and resolve issues detected within the period of 2 months after the handover of the platform. Based on the severity of service level, the expected response times to reported defects are: 1 day for critical, 3 days for serious, and 5 days for normal.

With respect to the operational maintenance of the platform (software updates), the service provider will commit to support and maintenance for a period of at least three years.

# Technical Requirements

This section describes the concept and range of the platform to be built, and explains the capabilities that the web-based NDC Registry platform will include.

## Hosting Environment

Hosting of the software will be done by the Government Online Centre (GOC) of Mauritius. A secured g-cloud based on Intel Operating Systems is available at the GOC to provide for Infrastructure as a Service (IA as) for different applications within e-Government. The backup solution available at GOC is Veritas NetBackup 8.2. The Supplier should quote for capacity based license depending on the capacity of data that will need to be backed up for the Virtual Machines and the Databases.  The proposed virtual machines to be provisioned to host the software is listed below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Environment | VM | Processor (virtual CPUs) | RAM | Hard Disk Capacity | Operating System |
| Production | Web Server | 4 vCPU | Min 16 GB | 300 GB | Microsoft Windows Server 2019 (or latest) or Linux Operating System |
| Application Server | 4 vCPU | Min16 GB | 300 GB |
| Database Server | 4 vCPU | Min 16 GB | 300 GB |
| Test | Web Server | 2 vCPU | 4 GB | 100 GB |
| Application Server | 2 vCPU | 4 GB | 100 GB |
| Database Server | 2 vCPU | 4 GB | 100 GB |

## User Classes

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Approx.  Number | Authentication | Description |
| Focal points of policies and projects | 150 | Required | Users who have information about the implementation of climate policies and projects, who will be data providers for the NDC platform |
| Focal points of ministries | 25 | Required | Officials from the ministries overseeing the implementation of climate action and policies |
| Content Administrators | max. 5 | Required | Staff from the Ministry of Environment, Solid Waste Management and Climate Change |
| QA/QC | 2 | Required | Users appointed to perform data validation and quality assurance and quality control purposes |
| External users |  |  | External users who are given access to a select information. |

## Operating Environment

The NDC Registry platform shall be compatible with standard browsers - such as Edge, Firefox, Safari, Opera, and Chrome – operating on desktop and tablet devices. That is, it shall operate in Windows, Mac, Linux, Chrome OS, iOS and Android environments.

## Design and Implementation Constraints

CO-1: The content administrator shall be able to maintain and modify the platform without requiring very specialized technical knowledge beyond basic HTML or the use of website admin tools.

CO-2: For common web-based features, as for example for user accounts, registration, password recovery, and login, the platform shall use available, thoroughly tested CMS modules rather than custom-written code.

CO-3: The NDC platform shall be built in a way to allow a modular architecture that allows the platform to expand and integrate modules for amongst other climate data in Mauritius, submitted reports to the UNFCCC, climate relevant policies, GHG inventory, adaptation, and support needed and received.

## Major Features

FE-1: Create, view, modify, delete and search NDCs.

FE-2: Create, view, modify, delete, and search sectors and sub-sectors.

FE-3: Create, view, modify, delete and search climate policies and NDC actions.

FE-4: Create, view, modify, delete and search projects.

FE-5: Assign climate policies and projects to focal points (data providers).

FE-6: Assign climate policies and projects to independent verifiers.

FE-7: Create, view, modify, and delete activity data for climate policies and projects.

FE-8: Create view modify and delete emission factors for GHG.

FE-9: Create, view, modify and delete GHG emissions for climate policies and projects.

FE-10: Create, view, modify and delete indicators for NDC targets.

FE-11: Search and filter information about climate policies, and show it in a dashboard that can be printed and exported to csv and pdf file formats.

FE-12: Search and filter information about projects, and show it in a dashboard that can be printed and exported to csv and pdf file formats.

FE-13: Create, view, modify, and delete user accounts.

FE-14: Edit the content of specific pages of the platform, namely the About page, the FAQ page and particular sections of the home page (announcements).

FE-15: Select, filter, and aggregate information about the implementation of climate policies and show it in a dashboard, which can be printed and exported to csv and pdf file formats.

FE-16: Select, filter, and aggregate information about the implementation of projects and show it in a dashboard, which can be printed and exported to csv and pdf file formats.

FE-17: Display labels and menu names in English.

FE-18: Create, view, modify, and delete notifications for users to take action on providing data and verifying data.

## Interface requirements

IR-1: The fields used in all forms shall be wide enough to accommodate 95% of expected entries without requiring either horizontal or vertical scrolling, except for fields intended for descriptive entry, where vertical scroll bars shall become enabled if necessary.

IR-2: Scripts that are executed when the user clicks a button shall display an animated image to indicate that the request is being processed.

IR-3: When processing of a script is completed, the web page shall display either a message confirming that the processing was successful or a descriptive error message if an error occurred during processing.

## Nonfunctional requirements

NR-1: The web pages shall load in an average response time of 7 seconds or less over low speed internet connections.

NR-2: The platform shall use secure login protocols for authentication of users.

NR-3: The platform shall include web analytics code in all pages and integrate with webmaster tools.

NR-4: The URLs of the platform’s pages shall have the possibility of being edited or configurable.

## Scope of Releases

|  |  |  |  |
| --- | --- | --- | --- |
| Feature | Release 1 | Release 2 | Release 3 |
| FE-1: Create, view, modify, delete and search NDCs. | x |  |  |
| FE-2: Create, view, modify, delete, and search sectors and sub-sectors. | x |  |  |
| FE-3: Create, view, modify, delete and search climate policies and NAMAs | x |  |  |
| FE-4: Create, view, modify, delete and search projects. | x |  |  |
| FE-5: Assign climate policies and projects to focal points (data providers). |  | x |  |
| FE-6: Assign climate policies and projects to independent verifiers. |  | x |  |
| FE-7: Create, view, modify, and delete activity data |  | x |  |
| FE-8: Create view modify and delete emission factors for GHG |  | x |  |
| FE-9: Create, view, modify and delete GHG emissions |  | x |  |
| FE-10: Create, view, modify and delete indicators |  | x |  |
| FE-11: Search and filter information about climate policies |  |  | x |
| FE-12: Search and filter information about projects |  |  | x |
| FE-13: Create, view, modify, and delete user accounts | x |  |  |
| FE-14: Edit the content of specific pages of the platform |  |  | x |
| FE-15: Select, filter, and aggregate information about the implementation of climate policies |  |  | x |
| FE-16: Select, filter, and aggregate information about the implementation of projects |  |  | x |
| FE-17: Display labels and menu names in English |  |  | x |
| FE-18: Create, view, modify, and delete notifications for users |  |  | x |
| IR-1: Fields wide enough |  |  | x |
| IR-2: Scripts processed with animated image |  |  | x |
| IR-3: Success and error messages |  |  | x |
| NR-1: The web pages shall load in an average response time of 7 seconds |  |  | x |
| NR-2: The platform shall use secure login protocols for authentication of users |  |  | x |
| NR-3: The platform shall include web analytics code in all pages |  |  | x |
| NR-4: The URLs of the platform’s pages shall have the possibility of being edited or configurable |  |  | x |

# Deliverables

The table below lists the deliverables for this project. Deliverables will be evaluated by UNEP DTU Partnership prior to acceptance.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Nr.** | **Deliverable** | **Description** | **Payment** | **Due by** |
| 1 | Software requirements specification (SRS) | SRS to be produced by the supplier’s team with inputs from UNEP DTU | 10% | 31-05-2021 |
| 2 | Software development plan | Detailed schedule |
| 3 | Software design description | Platform interface design including mockups, to be developed with inputs from UNEP DTU | 10% | 26-07-2021 |
| 4 | Software source code | All source code with code comments included; the supplier should provide an example of code comments for approval of format | 40% | 31-10-2021 |
| 5 | Test cases and training of stakeholders on Beta version | Test cases to be developed by supplier’s team with input and revision by UNEP DTU Partnership and end users | 20% | 15-11-2021 |
| 6 | Testing summary | Test plans, procedures, and detailed report of execution;  Defect tracking reports and performance metrics; | 10% | 15-01-2022 |
| 7 | Maintenance and installation document | Detailed procedures for installation and maintenance of software | 10% | 31-01-2022 |

# Schedule Estimates

The expected timeline for the development of the NDC Registry Platform is as follows.

|  |  |
| --- | --- |
| Milestone | Due by |
| Release 1 | 31.07.2021 |
| Release 2 | 31.10.2021 |
| Release 3 | 31.01.2022 |

Proposals that are significantly outside this schedule should provide a justification for that divergence.

# Contracts and Licenses

Suppliers will be retained on a contract based on deliverable outputs. The developer should not use intellectual property of any other third party without clients written consent.

All documentation and products resulting from the services provided by the supplier (foreground intellectual property) will be the intellectual property of the UNEP DTU Partnership and the Ministry of Environment, Solid Waste Management and Climate Change. The developer will retain existing intellectual properties at the time of contracting (background intellectual property).

# Proposal Evaluation Criteria

Proposals will be evaluated according to the following criteria (the order is random):

|  |  |
| --- | --- |
| **Criteria** | **Description** |
| Financial proposal | Total costs of development, with break-up for the different deliverables |
| Project management and technical capabilities | Complete and detailed statement of work that addresses the requirements of this RFP |
| Technical expertise | Competences, expertise, and relevant past experience of the company and project team |

# Supporting documents

## SAMPLE HARDENING GUIDE FOR Microsoft SQL server

## SAMPLE HARDENING GUIDE FOR Windows 2012 R2