

TERMS OF REFERENCE

- A. **Job title:** Information Technology Specialist
- B. **Type of position:** Local/ regional consultant
- C. **Duty Station:** Home based and Podgorica, Montenegro
- D. **Duration of appointment:** June 2025 – January 2026 (90 days a month during that period)
- E. **Contract type:** Individual Contract (IC)

I. Background:

As a Party to the Paris Agreement, Montenegro—like all other signatories—is committed to the implementation of the Enhanced Transparency Framework (ETF) for action and support under Article 13. The ETF is designed to build mutual trust and confidence among Parties and to promote effective implementation of both the Agreement and countries' Nationally Determined Contributions (NDCs).

This commitment requires countries to make substantial and immediate progress in strengthening their domestic Monitoring, Reporting, and Verification (MRV) systems. Many existing systems are fragmented, inconsistently updated, and based on varying data collection methodologies. Meeting ETF requirements calls for the establishment of robust, integrated MRV systems, supported by well-defined governance structures, harmonized methodologies and tools, and predictable, periodic data flows.

A core condition for success is the availability of sustained financial and capacity-building support to developing countries, enabling them to build and maintain credible MRV processes and fulfill Paris Agreement obligations. A robust MRV system is also essential for national policy planning and decision-making. Digital platforms are a key enabler of the transparency and credibility required for effective NDC tracking, and for countries seeking to engage in international carbon markets under Article 6 of the Agreement.

National Climate Transparency Platform (NCTP)

In response, UNDP has identified a unique opportunity to support countries through the development of an open-source, open-data, and privacy-conscious digital climate MRV system. Montenegro will build on this international best practice to customize, adapt and scale its own **National Climate Transparency Platform (NCTP)** is a customized digital solution developed under this initiative. The platform will enable the secure compilation, validation, and reporting of climate actions, progress, and support under the ETF. The platform is adaptable to Montenegro's specific institutional and sectoral needs, and includes the following core features:

- **User Management:** Customizable roles and permissions based on organizations and sectoral responsibilities.
- **Data Validation:** Tiered validation workflows to ensure data integrity and accuracy.
- **Standardized Reporting:** Consolidated reporting aligned with Biennial Transparency Reports (BTRs) and Common Tabular Formats (CTFs).
- **GHG Projections:** Integrated modules for sector-specific emissions forecasting using established modeling tools.
- **Additional features** – EU reporting

II. Duties and Responsibilities:

Objective of the assignment:

To ensure successful localization and implementation, the platform's deployment in Montenegro involves collaboration with a local IT company for customization and installation, alongside technical support from international advisors. Once installed, the system will serve as a national repository of verified data on all mitigation, adaptation, and enabling actions undertaken as part of Montenegro's NDC implementation.

The main objective of the assignment is to develop, install, and adapt a National Climate Transparency Platform to Montenegrin context, building on the international open-source code base. The system will be digital to track mitigation, adaptation, and enabling projects aiming at addressing climate change in country.

The consultant is expected to utilize an open-source codebase of a national MRV/NDC Tracking system that was developed by UNDP. The scope of this assignment is to configure the code to meet the national context and needs and build an additional module allowing for EU obligations reporting. The initial scope will be to develop the mitigation and adaptation action MRV, GHG inventory modules and EU obligations reporting modules. Additional work may be identified during the scoping phase.

Taking the above into consideration, the assignment will involve the following activities split into 3 phases

1. Scoping phase (defining and testing requirements)

- **Design and test information structure for MRV system:** Support the national and international transparency consultants to identify what data exists/does not exist in the country, what fields from the demo version need to be optional, changed. Test users can complete information exercises. Identify where data can be imported (integrated) with existing national systems. Create mockup of information structure (reporting system) that can be tested with stakeholders.
- **Review IT Constraints:**
 - Work with the national government's IT team to assess the current IT infrastructure (server capabilities, security requirements, costs, etc.).
 - Present the trade-offs of different hosting options, domain setup, security plans, and data backup strategies before finalizing decisions.
- **Engage project board to Decide on Local Hosting or Cloud Server:**
 - Present the two different deployment options: cloud or on-premise, explore costs, benefits
 - Select the option that best aligns with national infrastructure, maintenance capabilities, and security preferences.
- **Define User Access and Roles:** Based on solution d Define admin user emails, user groups, and account settings based on the roles and responsibilities of the registry's users. Define clear accountability for administrating the site and approving projects/credits/transfers.
- **Prioritize additional scope:** Work with stakeholders to agree on scope, including any additional features or integration with other national or international databases, additional APIs or data migration, associated cost
- **Finalize Security Plan:** Identify and secure SSL certificates, encryption keys, and other elements needed to meet national data security standards. Finalize security plan and identify SSL certificate, keys etc. required to secure data meeting national standards
- **Set Up Regular Data Exports, Backups, and Archiving:**
 - Determine Frequency: Decide how often data exports and backups will occur (e.g., daily, weekly, or monthly) to ensure data security and recovery capabilities.
 - Choose Storage Locations: Identify where backups and archived data will be stored, ensuring alignment with security and compliance requirements (e.g., local servers, cloud storage)

- Implement Data Archiving Procedures: Establish guidelines for data archiving, including retention policies and access controls for long-term data storage.
- **Approve maintenance plan and budget:** Based on final design and technical architecture, calculate 1-3 year maintenance cost (server, hosting, capabilities) and get approval for maintenance budget.
- **Final Deliverable Scoping Report:** Produce a comprehensive scoping report detailing all updated requirements for approval including
 - User types, user flow, custom features
 - Detailed technical architecture describing the overall design and structure of the system, which includes specifying how different components of the software (e.g., databases, APIs, servers, security layers) will interact, how the system will be built and deployed
 - Plan for security, data backup, scaling and performance
 - Plan for governance and stakeholder engagement, user training
 - Plan for maintenance
 - Updated budget and timeline

2. Configure phase

- **Set up Local Server or Cloud Environments:**
Establish both staging (test) and production (live) environments on a local server or cloud, ensuring they are aligned with the technical architecture outlined in the scoping report. Purchase all licenses and IT infrastructure required according to scoping plan
- **Standard Configuration of the MRV system:**
 - Configure user types, access, data fields, approvals, organisation types, charts as per the scoping report recommendations.
 - [Optional] Develop Advanced Features or Integrations: Implement any advanced features, integrations, or APIs based on the scoping report, prioritizing features according to national requirements and budget.
- **Install SSL Certificate and Encryption Keys:** Install and configure the SSL certificate, encryption keys, and any other security protocols to ensure secure data transmission.
- **End-to-End User Testing:** Conduct thorough testing of the entire system on the staging environment with at least four end users, identifying any gaps, bugs, or issues in functionality and user experience.
- **Iterations and Fixes:** Address any issues found during user testing, quality assurance (QA), and security testing through iterations and bug fixes
- **Write User Support Materials:** Draft a comprehensive FAQ section and support documentation to assist approved users in navigating the platform efficiently.
- **Final Deliverable:** A fully localized NTS system deployed in both staging and production environments, including thorough testing of security, privacy, accessibility, performance.

3. Installation, handover and launch phase

- **Complete Installation and Setup:** Finalize the installation and configuration of the NTS on the designated server (cloud or on-premise). Ensure the system is fully operational and ready for use in both the staging and production environments.
- **Conduct User Acceptance Testing with Stakeholders:** Conduct a formal end-to-end testing of the tool with the Task Force and key stakeholders. This testing must cover all reporting categories and all user groups, to ensure it meets the requirements set out. Test scenarios should ensure the system functions seamlessly across all intended use cases and aligns with both national and international standards. Identify and resolve any gaps or issues found.



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- Demonstrated experience in designing, developing, configuring, and deploying customized digital platforms, preferably in the environmental, public sector, or governance domains.
- Strong knowledge of IT systems architecture, including server setup (cloud and on-premise), security protocols, data encryption, and backup systems.
- Proven ability to assess IT infrastructure, conduct technical scoping, and translate user requirements into robust system architecture and workflows.
- Experience with secure web hosting, including SSL certification, data encryption standards, and vulnerability testing.
- Hands-on experience in developing and testing APIs and integrating platforms with existing national or international databases and services.
- Familiarity with data governance and system maintenance planning, including budgeting and long-term sustainability strategies.

Project Management and Communication:

- Strong project planning and implementation skills, with demonstrated ability to manage multi-phase projects from design to delivery.
- Experience in working with diverse stakeholders including government officials, IT staff, and technical consultants.
- Ability to translate technical language into clear, actionable steps for non-technical stakeholders.
- Proven track record of documenting system design, user guides, and technical manuals, and submitting code and documentation to platforms such as GitHub.

Preferred Experience:

- Previous experience with Measurement, Reporting, and Verification (MRV) or National Transparency Systems (NTS), or similar climate and environment-related digital systems is highly desirable.
- Knowledge of international standards for data security, digital governance, and public sector IT solutions.
- Experience working in or with public administration, particularly in transition or developing countries, is an asset.

Language Requirements:

- Excellent written and spoken Montenegrin and English is required.

V. The Terms of Reference approved by:

Name: Nenad Vitomirović, National Project Director

Signature: _____

Date: 20.06.2025.