Terms of Reference
Geoportal Manager for Mangrove monitoring
at Foundation for Forest Management and Production Control (SBB)

Project Title:	Strengthening and improving of the existing mangrove monitoring system
Contracting Authority:	Foundation for Forest Management and Production Control (SBB)
Contract Type:	Individual Contract (IC)
Duration of Assignment:	12 months
Start Date:	March 2026

1. BACKGROUND

The Mangrove Monitoring System, set up with support of the first GCCA+ project in Suriname, achieved its main goals in establishing the national mangrove forest cover extent as well as data in support of carbon estimations and biodiversity data. Following these results, the GCCA+ phase 2 project was approved with the objective to further strengthen the Monitoring System through improved remote sensing and field data acquisition.

In the GCCA+ phase 2 project, sampling units increased from eleven (11) to seventeen (17) sampling units, ranging from degraded to pristine mangrove areas along the coast. The project will expand earlier efforts by adding sampling units on the ground, with specific attention to units in areas dominated by *Rhizophora spp.* (red mangrove) ranging from damaged to pristine mangrove areas along the coast. This wide range of sampling will allow for comparative studies to better understand the complex mangrove ecosystems and inform subsequent policy adjustments and improvements, that are subject to significant pressures on their mangrove extent and biodiversity.

Existing permanent sampling plots first measured in 2019, then in 2022, will be re-measured towards the end of the project as is mandatory practice for national forest inventory plots. Additional parameters will be included in the protocols for all sampling plots to broaden the understanding of the mangrove ecosystems, especially in relation to their overall health. These additional parameters will involve flora (mangrove species and other vegetation), fauna (aquatic and terrestrial key indicator species), soil (heavy metals and nutrients) as well as water quality parameters. In addition, novel methods for Suriname, to measure mangrove health will be explored, building on earlier experience. The Commewijne district will be the pilot site to develop a comprehensive Mangrove Quality Index that could classify mangrove ecosystem health.

Additional activities will focus on capacity building among national partners, including both personnel and equipment, in areas relevant to executing national forest inventory (NFI) work, subsequent data processing and remote sensing. Where possible, new technologies will be integrated within the NFMS.

Within this project, improved monitoring and classification of wetlands will also take place, of which mangroves form a key component. This is essential to ensure a comprehensive assessment of coastal ecosystems and their functions. Wetlands form the broader ecological framework of Suriname's coastal zone and provide key ecosystem services related to carbon storage, hydrological regulation and coastal protection. Improved wetland stratification, supported by integrated remote sensing and field-based data, is therefore critical to enable robust assessments of mangrove ecosystem structure, functioning and health.

The project will be executed within the National Forest Monitoring System (NFMS) (SBB, 2017)[1] structure and bolster efforts related to the NFMS by strengthening institutional capacities, partnerships between national institutions and expanding on currently available data for Suriname's mangrove forests. Embedding the mangrove monitoring system within the NFMS structure contributes to standardization of existing data, harmonization of existing information systems, and support of international reporting efforts for UNFCCC (REDD+, GHG-inventory) and CBD. In addition, the NFMS provides the mangrove monitoring system with the necessary data management and data dissemination platforms which are key to the further development and improvement of relevant policies such as the National Mangrove Strategy.

2. OBJECTIVE OF THE ASSIGNMENT

The geoportal manager will contribute to the further strengthening and improving of the existing mangrove monitoring system by:

- Highlighting the importance and information of mangrove forest on Kopi and Gonini.
- Keep Gonini and Kopi functional.
- Ensure a full integration of mangrove and wetland datasets into NFMS geoportals, to guarantee a full transparency of the NFMS data, to support national transparency processes (for e.g. UNFCCC reporting).

All activities will be carried out in an inclusive and participatory manner, strengthening the national institutional capacities.

3. SCOPE OF WORK

The database manager will carry out the following tasks:

1. Make sure that the NFMS geoportal (www.gonini.sbb.sr) and the KOPI portal (www.kopi.sbb.sr) are online for the users and solve eventual technical problems in collaboration with the different partners.
2. Update the NFMS geoportal (www.gonini.sbb.sr) with up-to-date spatially explicit information including the data generated within the NFMS, the forestry data and data available through projects such as the mangrove monitoring project. This includes the new mangrove cover maps, the NFI data (the publicly available data) and wetland classification maps.

3. Share publications, up-to-date information, project status, graphs and statistics on all forest and mangrove related data through SBB- data portal Kopi. This includes research outputs, NFI reports, mangrove forest cover monitoring reports.
4. Support database development and management of NFMS databases.
5. Improve the mangrove monitoring function on Gonini and Kopi by amongst others:
    a. Include interactive functions of maps by having clickable zones where pictures and measurement data can be visualized
    b. Create story maps on mangrove forest
    c. Include multimedia (drone videos, photos, time series) within the portals
    d. Collect data on the mangrove projects ongoing in Suriname and share them through Gonini and Kopi
6. Make awareness products on the Gonini/Kopi (user manuals, videos) to be shared through social media.
7. Support all other relevant NFMS related activities.

4. INSTITUTIONAL ARRANGEMENT

The Database manager will work within the NFMS Unit hosted by the Foundation for Forest Management and Production Control (SBB) and will technically report to the Deputy Director of Research and Development of SBB. The Database Manager will submit monthly reports on the work done in line with the work plan to the Project Manager. Where necessary, the Geoportal Manager will work closely with the partner institutions to strengthen the synergies and alignment in activities. These institutions are: CELOS (co-lead of mangrove NFI, wetland mapping, biomass analysis), NCD (MUMA authority, fauna data), NZCS (fauna expertise), BBS (flora and vegetation expertise).

5. REPORTING REQUIREMENTS

All Monthly reports should be submitted in Microsoft Word to the Project Manager. This includes progress on all activities within the Scope of Work and explicitly on the following outputs including the relevant documentation:

- Reports and data published through Gonini and kopi on improved mangrove forest and forest cover monitoring system including up to date data on the mangrove forest and forest cover extent for the years 2023 and 2025.
- Reports and data published through Gonini and kopi on the expansion of mangrove forest inventory database including changes in existing SU's.
- Reports on the Improved institutional capacity in mangrove forest monitoring.
- Processed data and analysis for the implementation of new technology in mangrove forest monitoring.
- Training report about contribution in Remote sensing and GIS processing for mangrove forest monitoring.

Other relevant activities that the consultant has participated in.

6. QUALIFICATIONS, EXPERIENCE AND KNOWLEDGE

The candidate most suited to complete this consultation should have:

- ICT experience of a minimum of three years or a BSc. degree in ICT, environmental sciences, forestry, natural resource management, geographic information systems, or other related fields.
- Demonstrated a good understanding of REDD+, NFMS, FREL/FRL, and MRV.
- Experience working with Remote Sensing and/or Geographic information systems.
- Experience managing large datasets.
- Experience working with QGIS, R, PostGRESQL/ PostGIS, GeoServer or other related software.
- Experience with developing mobile data collection applications with a.o. ODK is an asset.
- Affinity with computer science or basic experience in coding (e.g. R, JavaScript, Python)
- Affinity with the environmental sector
- Experience in implementing training and transmitting knowledge.
- Proficiency in at least English and Dutch. Knowledge of other languages e.g. Sranan Tongo is an asset.
- Excellent writing, reporting and presenting skills