Terms of Reference

For

“Consultant to produce a GIS database for the Mozambique Blueforests Project: mangrove forests in the Zambezi delta”

1. Background

Mozambique has the second largest mangrove area in Africa covering approximately 305,400 ha (Fatoyinbo and Simard 2013) with the Zambezi river delta representing a large portion of the country’s total mangrove area and the second largest continuous mangrove habitats in Africa (Barbosa, et al 2001). World Wide Fund for Nature - Mozambique Country Office (WWF-MCO) is currently implementing a project entitled: “Mozambique Blue Forests Project”, which is part of a global initiative funded by Global Environment Facility (GEF) which focus is the application of blue forests methodologies and approaches for valuing carbon and other ecosystem services (ES). The intervention aims at improving the understanding of ES and carbon storage and sequestration for mangrove ecosystems in Mozambique, and to develop improved ecosystem management founded upon that understanding. This small-scale intervention will help meet national priorities in coastal management, especially pertaining to the protection of mangrove ecosystems, and priorities in national climate change policy.

The Chinde district in Zambezia province, is a remote region in central Mozambique where the Blueforests project is located within the mangrove forests of the Zambezi Delta. For this project, several locations were surveyed over the past year and geodata was collected but mostly scattered. For this reason, WWF-MCO seeks a specialist in GIS (Geographic Information Systems) to develop a GIS database for the Blueforests Project. Specific deliverables are listed in the sections below.

2. Objective of the consultancy

The objective of the consultancy is to develop a comprehensive GIS database with all available data related to the Blueforests Project located in Chinde District, Zambezia Province. The consultant will be required to gather up-to-date information on multi-uses within project site that will contain relevant information for mangrove management, disaster risk reduction (DRR) and sustainable livelihoods. Activities will involve collecting, processing and mapping of geodata.

The results of this work will support decision making processes related to mangrove management and planning, engagement with stakeholders and to support the strategic planning of the Blue forests Project.
3. **Methodology**

The consultant will work closely with WWF-MCO team to gather all relevant information in order to produce the required result. Below are the indicative tasks to be performed by the GIS consultant.

**Phase 1: Identify, collect available information and analyse all geodata related to the Blueforests Project** (topographic maps with details of community and district boundaries, roads, trails, public facilities, schools and health facilities, climatic maps, soil maps, forests, socioeconomic data, community villages, GPS data already created by the project, available satellite images, aerial photos, etc.).

**Phase 2: Create metadata sets, digitalize and spatially geo-referenciate all the information gathered.**

This phase will involve working with WWF team as well as contacting key elements involved in the project to collect data and analyze existing GIS layers, coordinates and maps related to the program. This will involve inclusion of existing data, planning and development of new layers.

a) Map project boundaries (Chinde district), including locations surveyed, households, indication of conservation status of mangrove areas (new and degraded areas), infrastructures, conservation sites, roads, schools and health facilities, water systems, and mangrove creeks, critical mangrove sites used during field work and used by maritime transport;

b) Identify and map mangrove and community areas for future mangrove management intervention in the Zambezi Delta;

c) Map areas for promotion of sustainable alternative livelihood practices;

d) Any other relevant features to be included and mapped.

4. **Deliverables/Expected outputs**

1) A preliminary report and a list of available entry information and digital data sets prepared, as well as, identification of data gaps, including proposal to acquire the new data and fill in the data gaps;

2) An updated GIS database with shapefiles from all datasets available and developed under the Blueforests Project;

3) Digital GIS Maps produced from all the datasets available, such as maps (resolutions to be agreed with Program Manager) or other GIS products quantifying the current situation, recent changes (where available, for sample areas) and results of scenarios for the differing NRM systems and livelihoods in the Zambezi delta;

4) An updated map of the Blueforests Project total area and buffer area including different capital assets in the area with available data on human and biophysical dimensions;

5) A Final Technical Report including:

   a. Status and trend of critical areas including digital maps (at appropriate scales), information on biophysical and socioeconomic issues and priority areas requiring attention (biodiversity hotspots);
b. Qualitative (based on expert opinion) and quantitative (based on data) analyses of the status and trends should include an analysis of the situation today (baseline) and recommendations to improve management of critical areas;

6) One day GIS training workshop for project team on how the system should work and what are the requirements of the program to continue to build GIS capacity and information.

5. Logistical Support
WWF will provide support in connecting the consultant with the team, local partners and communities as necessary; reviewing GIS products developed; and providing logistical support for field trip to the Zambezi delta (if necessary).

6. Assignment Work Station
The consultant will be based in Maputo. The consultant will be directly managed by the Program Manager.

7. Timeframe
This consultancy should be completed in a month timeframe.

8. Eligibility
The consultant(s) should have at minimum:

- Knowledge about the technical aspects of geographical data management and utilization;
- Proficiency with GIS software (ArcGIS and Quantum GIS);
- Knowledge about data processing, evaluation and organizing the collection, storage, usage of geographic data and visualization;
- Ability to solve GIS-specific problems and convey GIS information to non-GIS people;
- Good interpersonal communication and coordination skills;
- Ability to adhere to deadlines and flexibility.

9. Applications
All applicants must meet the minimum requirements described above. Only short listed candidates will be contacted.
Interested parties must submit technical (highlighting relevant expertise, past experience and methodology) and financial proposals, including a reference letter or letter of recommendation, from previous work and experience. Applications must be submitted by 23 June 2017, via email to: concursos@wwf.org.mz with Title “Blue Forests – GIS” or delivered to WWF-MCO – Offices of Maputo located in Av. Kenneth Kaunda, nº 1174, Sommerschield, Maputo City. For more information, including the Terms of Reference see the webpage: http://www.wwf.org.mz/oportunidades/consultoria/