**TERMS OF REFERENCE**

**Post Title: GIS Specialist to support Biodiversity Assessment**

**Duration:**   **12 months**

**Organization: Environmental Coordinating Unit/Forestry Division**

**Project Description**

The small size and insularity of Dominica influences the number of terrestrial species that occur on the island, including the relatively high concentration of endemism and the vulnerability to biodiversity loss due to catastrophic events and long term human induced habitat changes or climate change. The Morne Trois Pitons National Park (MTPNP) lies within a Conservation International designated Conservation Hotspot and a WWF/IUCN Centre of Plant Diversity and a Bird Life designated Endemic Bird Area. Many of the birds are migratory, while sixty species breed on the island. Dominica's resident birds include two single-island endemic species and nine regional endemic species. Dominica's two endemic parrot species - the imperial parrot or Sisserou" (*Amazona imperialis*) and the red-necked parrot or "Jaco" (*Amazona arausiaca*) are both considered threatened (IUCN Red Data List) and are "specially protected" birds under Dominican law.

The most recent (1999) population estimate put the parrot populations at approximately 200 *A. imperialis*, and 1,500 *A. arausiaca*. Although *A. imperialis* may never have been abundant in Dominica, it is now considered to be the world’s most critically endangered Amazon parrot. Both species have been negatively impacted by the combined effects of forest clearance for agriculture and the damage to the forests caused by hurricanes. The populations of these two endangered parrots reached critical levels, as low as 60 *A. imperialis* and 200 *A. arausiaca,* following Hurricane David in 1979.

This project is seeking to map the location of its biodiversity resources – specifically the major animal species in and around the MTPNP. The 2013 NBSAP reported 79 species of Birds, 55 species of Butterflies, 20 species of Crabs, 3 species of Amphibians 13 species of Reptiles (4 snakes), 18 species of Mammals and 11 species of Stick Insects.

**Objectives of this Consultancy**

The objective of the activity is to develop a GIS-based Base Map showing details of existing Land use patterns including other associated features and attributes. Proposed maps may be considered to assist in strategic planning, resource utilization management, planning and management of day-today operations of activities around the MTPNP. Specific objectives of this assignment are:

1. Development of a GIS-based map for MTPNP and surroundings;
2. Implementation of a GIS-based system for biodiversity management;
3. Support other departments’ access to information to facilitate planning/ investment decisions.
4. Support community level response plan with the assistance of the GIS map of the area.

**The consultant will be required to:**

Review the existing situation of the MTPNP areas and collect all available secondary level data that will assist the process; prepare a base map of each area by interpreting and digitizing of all existing land-use features and prepare different layers of information. (Digitization process should include vectorization, symbolization facility, edge matching, topological integrity, and data base linking facility as necessary.)

Potential features for base maps shall contain the following: boundary, road network of all types of roads with associated details, rivers and drainage systems including all details of water bodies, residential areas, commercial areas, utility services such as water supply and power supply, existing land use /cover, hilly and land slide prone areas. Base map should be prepared on various layers for ease of operation in AUTOCAD/GIS.

Generation of scale and detailed base maps with necessary data inputs under different layers such as boundaries, sensitive habitats, biodiversity hot spots, location of major biodiversity resources particularly animal, roads of foot paths, water-bodies, important landmarks, physical features, open spaces, community activity sites, etc.

Conduct a GPS survey and consultations (with Physical Planning, Environmental Coordinating Unit, disaster management committee, Forestry Division, etc.) for ground trotting and validation of the identified features

**The contractor’s tasks are**:

* Generate real-time geographic layers specific for the context;
* Generate and update base maps with the support of the project team and Planning;
* Produce operational maps, planning maps and support to the operations
* Adapt and follow procedures concerning data collection and data management and mapping;
* Train GPS data collectors as required;

**Qualifications and professional experience**

* A University degree in social sciences related with GIS and mapping.
* At least 3 years of relevant experience in mapping
* Excellent communication, coordination, and information management skills
* Mastering ArcGIS software
* Analytical thinking, Providing technical support and advice
* Ability to work in difficult context with heavy safety constraints

. **Payments schedule:**

* 30% upon receipt and approval of work plan with time lines and methodology.
* 30% upon completion and submission of GPS survey, preparation of base maps work for other attributes and submission of draft copies of maps
* 30% Upon submission of final copies of agreed deliverables
* 10% upon completion of workshop with main project partners