REVISION OF ECOSYSTEMS AND FOREST TYPES OF NEPAL

Terms of Reference for Field Crew Member (Botanist/Taxonomist) – Five Positions

1. Background

In 2019, the Government of Nepal - Ministry of Forests and Environment (MoFE) initiated Ecosystem and Forest Type Mapping as a priority program and assigned the Forest Research and Training Centre (FRTC) to manage this. The program's overarching goal is to enhance the sustainable management and conservation of Nepal's ecosystems and thus support local as well as national economies. The program also supports a timely response to the Aichi Targets #14 of the Convention on Biological Diversity's (CBD) ensures international commitments of ground action and reporting. This target primarily focuses on the restoration and protection of ecosystems by 2020 that provide essential services that contribute to the health, livelihood and well-being of women, and indigenous and vulnerable people.

To date, the vegetation maps drawn by Dobremez and his colleagues in the 1980s have been used as the basis of knowledge and classification of Nepal's ecosystems and vegetation types. They identified 198 vegetation communities in seven ecological maps covering the entire area of Nepal. In 1995, the Biodiversity Profile Project (BPP 1995) digitized these maps and synthesized 118 unique ecosystem types by merging the vegetation types into one class despite their difference in the structures or conditions. Since the Nepalese Government commissioned the BPP and accepted the report, 118 ecosystem types were officially recognized for Nepal.

A comprehensive and systematic study of ecosystem and forest types of Nepal is long overdue, as the existing classifications made before the 1980s were based on limited expeditions, field studies and ground verification. Hence, the MoFE's present initiative is a significant milestone, which aims to deliver a national-level ecosystem mapping effort using the standardized methodology

developed by the Global Earth Observation System of Systems (GEOSS) under the global ecosystem mapping initiative.

The standardized methodology for ecosystem mapping entails the integration of vegetation types and the creation of a composite map of environmental parameters. The macroclimate, lithology and landforms are the commonly used spatial parameters for the vegetation type. The vegetation type is considered to be a proxy for a specific biological community. The homogeneity of the environmental parameters with relatively stable condition delineates the iso-potential zone with a unique habitat and represents an ecological facet. Each ecological facet is considered as a distinct ecosystem type.

A national-level classification of forest, rangeland, agriculture and wetland ecosystem types will apply medium resolution satellite images in combination with extensive field data to validate the resulting map. Assessment threats and vulnerabilities to individual ecosystems and forest types will also be assessed using standard methods. Hence, the Ecosystem Mapping Program will contribute to devising national-level policies and strategies to protect and manage these life-supporting systems.

This ToR is developed and shared to seek Field Crew Members (Botanist/Taxonomist) to carry out ecosystem and forest types mapping in Nepal.

2. Objectives

The objectives of the Ecosystem Mapping Program are as follows:

- To review the existing knowledge and database relevant to the terrestrial and aquatic ecosystems of Nepal.
- To reclassify and delineate forest, rangeland, agriculture and wetland ecosystem types by applying a standardized methodology and generate appropriate maps.
- To assess critical threats and vulnerabilities to the ecosystems and provide management prescription.
- To improve institutional capacity for future monitoring and updating ecosystems of Nepal.

3. Roles and Responsibilities

Field Crew Member (Botanist/Taxonomist) will work under the supervision of Technical Advisor (TA), Ecosystem Mapping Coordinator, FRTC management, and with the crew leader.

Specific tasks

- Collect biodiversity information (both plant and animal);
- Identify the plant/wildlife species with support from local helpers;
- Identify the wetlands with support from local helpers;
- In the tree measurements, assist the team for identifying the tree, herbs and shrub species, as per necessity;
- Assist during forest type and wetland mapping activities;
- Collect samples (specimen) of unidentified plants or traces of wildlife and take pictures to document them;
- Assist the crew leader to collect biodiversity information's (both plant and animal) and wetland information;
- Collect data on invasive alien species and forest diseases/pests;
- Collect data on NTFPs to be complemented through discussions with local people.
- Enter or help entering of field data in the field computer/field device as soon as possible after each working day.

4. Duration of contract:

The duration of the contract is 15 months with at least 21 working days per month in the field for field data collection.

5. Required Skills and Experience:

- Master's degree in Botany (preference in Taxonomy) having minimum three years' experiences in species identification for forest resource assessment of Nepal.
- Demonstrated team management experience to work with the field crew team.
- Good interpersonal skill with the ability to effectively interact with all team members and stakeholders.

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