

CONSULTANCY SERVICES

Project Title: Innovative Large-Scale Production of Affordable Clean Burning Solid Biofuel and Water in Southern Africa: transforming bush encroachment from a problem into a secure and sustainable energy source

Under this European Union (EU) funded project, Botswana Institute for Technology Research and Innovation (BITRI) seeks Consultants' services.

Location: Inalegolo, Kgalagadi district, Botswana

Application Deadline: 29-January- 2022 (Midnight Gaborone, Botswana)

Type of Contract: Individual Contract

Languages Required: English

Consultancy period: 3 weeks

1.Rangeland Inventory and Assessment Consultant

Duties and Responsibilities

- Identify (and georeferencing and mapping), estimate spatial coverage, diameter, and height of *Senegalia mellifera* clusters in a sixteen thousand hectares (16 000 ha) cattle ranch.
- Identify and document understory vegetation (e.g., saplings, shrubs, grass, forbs) under these *Senegalia mellifera* clusters
- Determine the carrying capacity of the ranch
- Working with Soil Science Consultant, downscale and validate <https://opengeohub.org/article/isdasoil-open-access-soil-property-and-nutrient-maps-africa-30-m-resolution/> (soil 30m map Africa) at ranch level.
- Assist the Biodiversity Consultant to map occurrence and quantities of insects, arthropods, and other indicators of ecosystem health under *Senegalia mellifera* clusters and across the ranch.
- Carryout spatial analysis for range resources, soils properties, biodiversity indicators under *Senegalia mellifera* clusters and across the ranch to determine any spatial interactions between these three
- Write reports on range resources and support Soil and Biodiversity Consultants in writing their reports.

Competencies

- Spatial analysis skills demonstrated by publications in peer reviewed journal articles
- Experience in rangeland resource inventory supported by past consultancies
- Working knowledge of geoprocessing supported by publications in peer reviewed journal articles

Required Skills and Experience

- PhD in Geography, Range Sciences, or related fields
- Strong spatial analysis and geoprocessing capability

2. Soil Survey and Assessment Consultant

Duties and Responsibilities

- Determine physical and chemical soil properties under *Senegalia mellifera* clusters
- Working with Rangeland Inventory and Assessment Consultant, downscale and validate <https://opengeohub.org/article/isdasoil-open-access-soil-property-and-nutrient-maps-africa-30-m-resolution/> (soil 30m map Africa) at ranch level.
- Working with Rangeland Inventory and Assessment consultant and Biodiversity Consultant to carry out spatial analysis interactions between range resources, biodiversity soil properties
- Write a report on soils

Competencies

- Soil survey field experience as demonstrated by past consultancies and research
- Soil chemical analysis laboratory experience as demonstrated by years of performing such work, research and consultancies

Required Skills and Experience

- PhD in Soil Science or related fields
- Experience in soil survey and laboratory soil analysis

3. Biodiversity Consultant

Duties and Responsibilities

- Map occurrence and quantities of insects, arthropods, and other indicators of ecosystem health under *Senegalia mellifera* clusters and across the ranch
- Working with Rangeland Inventory and Assessment consultant and Soil Consultant carry spatial analysis interactions between range resources, biodiversity soil properties
- Write a report on biodiversity

Competencies

- Experience is using arthropods and other organisms in the assessment of Ecosystem health
- Experience in project design, implementation, monitoring and reporting

Required Skills and Experience

- PhD in Entomology or related fields
- Experience in field identification of insects and arthropods



The expected date of assignment completion is February 27th, 2022.

Applicants should submit letters of interest, and CV to:

nbatisani@bitri.co.bw or nnyaladzi.batisani@gmail.com

