



FRANKFURT  
ZOOLOGICAL  
SOCIETY

## SELOUS CONSERVATION PROJECT

### REQUEST FOR EXPRESSION OF INTEREST

#### CONSULTANCY SERVICES – Technical support in mapping and assessing land use/cover types in Selous Game Reserve

FZS Selous Conservation Project is seeking two (2) suitably qualified short term consultants to provide technical support for mapping, assessing and field/ground truthing land use/cover change within the Selous Ecosystem, which includes Selous Game Reserve (50,000 km<sup>2</sup>) and adjacent Wildlife Management Areas (WMAs). The Land use/cover mapping, classification and change assessment will compare data sets from 1990, 2008 and 2017. The exercise will involve extensive field visits and transect walks within Selous Game Reserve(SGR).

FZS invites suitably qualified consultants to submit an expression of interest in providing the services. The consultants will assist the team already in place in the whole process of mapping and report writing. Interested consultants should provide the following:

- information indicating that they are qualified to perform the services including a CV
- description of similar assignments and experience in similar conditions
- indicative budget
- Indication of earliest availability

Expressions of interest may be submitted by:

Email to: [kathryndoody@fzs.org](mailto:kathryndoody@fzs.org)

or

Hard copy: Frankfurt Zoological Society Selous Conservation Project, Room 404, 4<sup>th</sup> Floor, Mpingo House, Ministry of Natural Resources and Tourism, Dar es Salaam.

Deadline for submission: 16<sup>th</sup> August 2018



Selous Conservation Project  
P.O. Box 14935  
Arusha  
Tanzania

## **Terms of Reference**

### **Consultancy for technical support in mapping and assessing land use/cover types in Selous Game Reserve**

Two short term consultants are required to support field truthing, mapping and assessing land use/cover change within the Selous Ecosystem which includes Selous Game Reserve (50,000 km<sup>2</sup>), and adjacent Wildlife Management Areas (WMAs). Land use/cover mapping, classification and change assessment will compare 1990, 2008 and 2017. The exercise will involve extensive field visits and transect walks within the Game Reserve. Changes in administrative boundaries, establishment of WMAs, human population growth and climate change and variability have impacted the integrity and size of the ecosystem, therefore mapping and determining changes over time is essential for sustainable management planning and conservation.

As a leading institution, Frankfurt Zoological Society (FZS) working closely with SGR have technical teams in place to undertake the mapping and assessment activities, additional multidisciplinary technical support is required to complement the existing team particularly in the areas of botanical species identification and GIS.

#### **Introduction**

##### **Frankfurt Zoological Society**

FZS conserves wildlife and ecosystems in protected areas and outstanding wild places. FZS maintains long-term conservation programmes in Africa, South America, Asia and Europe. The Africa Programme is the Society's largest and oldest and works with partners in four focal countries: Tanzania, Ethiopia, Zambia and Zimbabwe. The Africa Regional Office is situated in Arusha, Tanzania. For more information on the Society and our projects, please visit our website at [www.fzs.org](http://www.fzs.org).

The Selous Game Reserve (SGR) in Tanzania is one of the last remaining great wilderness areas in the Africa and covering approximately 50,000. It is characterized by a diverse range of habitats, which harbour an impressive fauna of large mammals, including globally significant populations of African

elephants, black rhino and African wild dogs. The international significance of SGR was recognized through its inscription on the World Heritage List in 1982.

### **Selous Ecosystem Conservation and Development Project (SECAD)**

SECAD is co-financed by KfW, FZS, WWF and the Government of Tanzania.

#### **SECAD Objective:**

“Natural Resources of Selous Game Reserve and selected community use zones in adjacent districts are effectively protected and managed in a coordinated manner by SGR management and other stakeholders.”

#### **SECAD Expected Result Areas**

Under agreement with the Ministry of Natural Resources and Tourism (MNRT), Frankfurt Zoological Society (FZS) is one of the implementing partners of the project, It is largely responsible for delivering the first of SECAD 3 expected result areas:

1. Management of Selous Game Reserve is strengthened;
2. Sustainable Ecosystem Management of the natural resources in priority parts of the SGR buffer zone;
3. Infrastructure and equipment of SGR/AA improved and sustainably maintained.

#### **Background**

Covering approximately 50,000 km<sup>2</sup>, SGR is one of the largest remaining wilderness areas on the continent, accomodating approximately 40% of Tanzania’s total elephant population, a population that has been steadily declining since the 1970’s. The 2013 and 2014 Selous Aerial Surveys conducted by TAWIRI with support from FZS revealed a drastic decline of the SGR elephant population to approximately 15,000. In 2014, SGR was inscribed on the List of World Heritage in Danger as a result of the increase in poaching driven by a soaring demand for ivory and rhino horn from South East Asia. The Government of Tanzania (GoT) through MNRT together FZS and other conservation partners have taken measures to bring the elephant poaching under control in Tanzania and especially in SGR.

One of the key activities in realising SECAD Result 1 is the updating of the General Management Plan for Selous Game Reserve, thus mapping, vegetation classification and land use change detection activities are important preliminary activities to support the planning process.

#### **Objectives of the consultancy**

- To provide technical support to identify and categorize vegetation/land cover types within the Selous Ecosystem
- To support mapping, assessing and field verification of vegetation/land cover types within the Selous Ecosystem
- To support technical report writing on mapping and assessment activities

## **Skills and experience required:**

### **a. Qualifications and experience – essential:**

#### **Role 1: GIS technical support**

- Proven professional background in Geographical Information System (GIS) softwares especially ArcGIS Advanced.
- Strong Remote Sensing skills especially image corrections, processing, interpretation and classifications.
- Experience in using various credible sources of geographical data
- Demonstrated professional experience (at least 3 years) in working with protected areas or conservation institutions on mapping activities.
- Familiarity with existing Tanzanian wildlife laws, rules and regulations.
- Proven good confidentiality ethics.
- Good report writing skills
- Fluency in both Swahili and English

#### **Role 2: Forester**

- Proven professional background in forestry or ecology
- Demonstrated professional experience (at least 3 years) in working with protected areas or conservation institutions in forestry or ecology
- Expertise in species identification
- Familiarity with existing Tanzanian wildlife laws, rules and regulations
- Proven good confidentiality ethics
- Excellent report writing skills
- Fluency in both Swahili and English

### **b. Qualifications and experience – desired:**

#### **Role 1: GIS Technical Support**

- Advanced skills in Geographical Information System (GIS) and Remote Sensing
- Familiarity with Protected Areas in Tanzania
- Availability and ability to work in remote areas in Tanzania.
- Willingness to fly both short and long distances by plane.

#### **Role 2: Forester**

- Background in forestry or ecology
- Familiarity with Protected Areas in Tanzania
- Availability and ability to work in remote areas in Tanzania.
- Willingness to fly both short and long distances by plane.

### **c. Behaviour Competencies**

The successful consultant(s) need(s) to:

- Maintain sensitive information with utmost confidentiality
- Provide sound scientific advice without bias
- Physically able to deal with remote working locations in field conditions

## Tasks / Expected Methods:

Working with SGR management and Tanzania Wildlife Management Authority (TAWA) and FZS, the Consultant will support the identification and categorization of different land cover types available in the reserve according to the standard scientific criteria. The consultant will be part of the team working for the whole period of the tasks both on and off the field.

Specifically, where applicable, the consultant(s) will participate in the following mapping and assessment activities but not limited to the following other technical issues:-

- Assisting with mapping and assessing the identified land use/cover types
- Validation or ground truthing vegetation / land cover types to identify and classify satellite image into different land use/cover categories.
- Description of vegetation/land use categories
- Calculating map accuracy

## Deliverables /Outputs (by the whole team)

- Three **(3)** vegetation cover/land use of the Selous ecosystem for the year 1990, 2008, 2017, and two **(2)** change detection maps between year 2017-2008 and 2008-1990 overlaid with other different types of data should be produced.
- Three **(3)** climate versus land use/cover maps each for the three **(3)** time periods should be produced.
- A written technical report on mapping activities stating technical aspects mainly methodologies and steps involved, results, change detection, challenges, solutions and accuracy of the maps should also be produced.

## Location

Selous Game Reserve, Matambwe.

## Time frame

The contract is expected to cover the minimum of 31 days between August 15<sup>th</sup> to September 15<sup>th</sup> 2018.

Working days will comprise travelling, mapping and assessment and report writing time.

## Budget

To be provided by Consultant for review

The contract will be subject to tax in according with TRA regulations, likely to be withholding tax (10 %).