



# **African Forest Forum**

A platform for stakeholders in African forestry

## **CALL FOR PROPOSALS**

**STRENGTHENING THE UNDERSTANDING OF THE DYNAMICS OF THE  
AFRICAN FOREST VEGETATION UNDER CHANGING CLIMATE THROUGH  
PERMANENT SAMPLING PLOTS**

**NOVEMBER 2021**

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## **1. INTRODUCTION**

The African Forest Forum (AFF) is a pan-African non-governmental organization with its headquarters in Nairobi, Kenya. It is an association of individuals who share the quest for and commitment to the sustainable management, use and conservation of the forest and tree resources of Africa for the socio- economic wellbeing of its people and for the stability and improvement of its environment. The purpose of AFF is to provide a platform and create an enabling environment for independent and objective analysis, advocacy and advice on relevant policy and technical issues pertaining to achieving sustainable management, use and conservation of Africa's forest and tree resources as part of efforts to reduce poverty, promote gender equality, enhance economic and social development and protect the environment.

To this end, AFF, with funding from the Swedish International Development Cooperation Agency (Sida) is implementing a project titled "*Strengthening management and use of forest ecosystems for sustainable development in Africa*". The project seeks to generate and share knowledge and information through partnerships in ways that will provide inputs into policy options and capacity building efforts for improved forest management that will better address climate change impacts as well as contribute to poverty alleviation and environmental protection in Africa.

One of the objectives of this project is "to improve knowledge and capacities of African stakeholders in responding to adverse effects of climate change through better management and use of forest ecosystems and trees outside forests". One of the expectations (output) in pursuing this objective is "improved quality and updated knowledge on African forest types and trees outside forests under changing climate". Such knowledge is expected to support improved decision making for better management of forests that respond to adverse effect of climate change. However, since climate changes with time, this knowledge will need updating with new information in future. This can be facilitated by having and monitoring permanent sample plots that could be established and/or monitor if any such plots were already established in selected countries. AFF intends to launch such an activity per forest type in selected countries and working in partnerships with experts and institutions in those countries.

## **2. BACKGROUND ON PERMANENT SAMPLE PLOTS (PSP) IN AFRICA**

Sustainable management and use of forest and tree resources require effective planning which should be based on sound scientific knowledge of the status of the resources, their dynamics over time and the factors that drive such dynamics in a changing environment that includes climate change, among others.

Assessing and monitoring changes in natural forests has received attention in the past few decades, with issues connected to deforestation, climate change, carbon storage, or forest exploitation. Permanent sample plots (PSP) defined as sampling plans where plots/trees are individually and permanently marked have been documented as very useful tool to monitor vegetation changes over time. As trees stands are monitored repeatedly over time, population demographic parameters, such as survival rates, recruitment rates, and growth rates, can be estimated from PSP data. PSPs are also set up by private forest owners seeking forest

certification. Moreover, with repeated measurement data, the impact of some drivers (such as climate change) on vegetation dynamics can be assessed.

The frequency of monitoring of PSP depends on a number of factors including how quickly changes are expected from the target vegetation parameters, the resources (human, time, money, etc.) required for monitoring. Five (5) years is generally considered as a suitable time interval for monitoring adult tree individuals in permanent sampling plots while the monitoring of regeneration is planned annually.

Despite the recognized importance of PSP to support planning and sustainable management in forestry, sound knowledge emanating from PSPs is generally not readily available due to, among other things, lack of time series / long term data, lack of technical capacity to properly explore existing data, irregular monitoring of existing PSP, etc., all of which might be due to low financial capacity of the actors in the field. This is particularly the case in the context of Africa.

### **3. PURPOSE OF THE WORK AND TARGET FOREST TYPES**

This consultancy aims at providing “updated knowledge on the dynamics of vegetation in different forest types in Africa under changing climate”

The study will look at different forest ecosystems, namely:

- *dry tropical forests,*
- *moist tropical forests,*
- *savanna woodlands* and
- *mangroves.*

One expert / team will be recruited for each forest type.

### **4. SPECIFIC TASKS**

The specific tasks for the assignment include:

- With local partners set up modalities for continuous monitoring of the vegetation on existing forestry PSP sites in the selected countries.
- Collect any existing data on the PSP and together with partners update it and analyze the dynamics of the vegetation, taking into account aspects of climate change (impact of climate change on the vegetation).
- Together with local partners draft a plan on how the PSPs can be managed jointly between AFF and local partners/authorities over time, and including the financial implications and roles of partners.

### **5. DURATION**

The tasks in these ToRs are expected to be completed within 3-4 months (between January and April 2022).

### **6. MINIMUM QUALIFICATIONS AND SKILLS**

This consultancy is meant for experts demonstrating the following skills. Application as a team of 2 or 3 experts with complementary skills are also encouraged:

- Have a PhD degree in natural resources management, forestry, climate change, environment management or any related area;
- Be an expert with proven knowledge, and at least five years' experience, in the broad areas of forest ecology including issues related to climate change, its adaptation and mitigation in forestry, sustainable development and natural resources management;
- Have a good understanding and use of climate data;
- Have good scientific writing skills, including a good list of publications in reputable journals;
- Excellent written and oral communication skills.

## **7. EXPECTED DELIVERABLES**

Selected experts are expected to produce the following deliverables:

- A technical report of about 40 pages long, excluding references;
- A journal article, policy brief and a fact sheet;
- A project concept note to set the basis for jointly exploring with AFF opportunities to mobilize funding to sustain maintenance of the PSP site and regular monitoring.

All to be finalized in collaboration with relevant staff at the AFF Secretariat.

## **8. HOW TO APPLY**

Each application should contain the following:

- Cover letter stating how you meet the above qualifications and experience requirements.
- Curriculum vitae of your team members (or yourself if you are submitting as an individual);
- A letter from the institution / person in charge of the PSP site certifying that the expert, if recruited by AFF, will have access to the PSP site for new data collection and will also have access to the already available data on the PSP.
- A detailed description of the targeted PSP and the methodology including the following:
  - Year and objective of PSP site establishment, experimental design (number of study factors, size and number of replicate plots, layout, etc.), frequency of past measurements, parameters usually measured, status of maintenance of the site (including ensuring that the PSP is still being regularly monitored, etc.);
  - How the work will be conducted (parameters to be recorded, field equipment to be used, the technical team to be used in the field, etc.);
  - How the team intends to (i) process and analyze the time series vegetation data to understand the dynamics of the vegetation over time, (ii) explore the sensitivity of the dynamics of the vegetation to climatic parameters using historical climate records (including indicating which climatic parameters they will use and how they intend to get them, etc.), and (iii) assess the impact of the projected climate change on the vegetation using different Representative Concentration Pathways (RCP) - at least the optimistic and pessimist scenarios (including indicating which climatic parameters they will use and how they intend to get the climate data, etc.);
- A detailed cost estimate for the whole assignment.

The experts shall work from their locations but in close consultation with relevant staff at the AFF Secretariat.

All these should be submitted as email with attachment, indicating in the subject line: "Consultancy no 1-2.1.1.3. Expert to work on permanent sampling plots in forestry in Africa". The mail should be addressed to: Dr Doris Mutta ([d.mutta@cgiar.org](mailto:d.mutta@cgiar.org)), with copy to Dr Djibril S. Dayamba ([d.dayamba@cgiar.org](mailto:d.dayamba@cgiar.org)), Dr Mercy Ojoyi ([m.ojoyi@cgiar.org](mailto:m.ojoyi@cgiar.org)) and [exec.sec@afforum.org](mailto:exec.sec@afforum.org). Application deadline is 31st December 2021.