TERMS OF REFERENCE

DEVELOPMENT AND PROMOTION OF GUIDELINES FOR INCLUSION OF RELEVANT CLIMATE STI INDICATORS INTO NAIPS, FOR USE BY REGIONAL AND CONTINENTAL INSTITUTIONS

Reference: CAADP-XP4 3.1.3

A. Background

Climate change is likely to intensify seasonal and inter-annual rainfall variation as long-term changes and trends take place. Climate change may create water and heat stress, the outbreak of pests and diseases, the loss of productive lands through the deterioration of ecosystems, and additional burdens to supply chains such as increased postharvest losses during storage and distribution. The likely consequences of such stresses include yield reductions, decreased livestock values, post-harvest losses, and reduced food accessibility and consumption. In addition, natural disasters, migrations, and threats to human health can degrade human and social capital and devalue assets and infrastructure in agricultural communities. The population in Africa is more vulnerable to climate change than those in other continents although Africa's contribution to greenhouse gases and carbon emission remains negligible. The colossal negative effects of climate change on Africa are attributed to Africa's stagnated development and the over-reliance on natural weather for most of the small-scale agricultural production activities on the continent. Current climate change scenarios predict an increase in temperatures and rainfall variability in many parts of Africa. The speed of desertification in the dry savannah regions of Africa has increased in recent years leading to the eradication of certain crop and livestock production systems and reduction in the volume of arable land.

Despite the uncertainty about the likely effect, research has found that, in aggregate, a decrease in the yields of major crops (maize, rice, groundnuts) in Africa is likely to happen if no adaptation measures are made. The traditional pastoral livestock systems in the dry savannah are also much affected by the reduction in lush pasture leading to a gradual move down the south. Africa needs to develop strategies to cope with the stress and damage that climate change can impose on the continent's agricultural sector. As variability in the global food supply increases due to climate change, building a climate-resilient agricultural sector will help Africa to address domestic food security and remain a stable commodity supplier for the globe. The scourge of climate change has received broad attention at the global level as well as on the continent by

institutions such as the EC, FARA, and the African AR4D supra-national institutions including AFAAS, ASARECA CCARDESA, and CORAF.

The African AR4D supra-national institutions (AFAAS, ASARECA CCARDESA, CORAF, FARA), have secured resources from the EU under the Development Smart Innovation through Research in Agriculture (DeSIRA) initiative to implement a 4-year project in Africa. In the context of this project, dubbed CAADP Ex-Pillar 4, Africa Regional and Sub-regional Organizations for Agricultural Research and Innovation will work collaboratively to link research and innovation with development initiatives to boost innovation in agriculture and food systems to make them more resilient to climate change and better respond to development demands. Its objective is to enable agricultural research and innovation, including extension services, to contribute effectively to food and nutrition security, economic development, and climate mitigation in Africa.

The overall objective of the CAADP-XP4 is to increase the contribution of Africa's regional and country-level agriculture and food innovation systems towards the achievement of climate-relevant and sustainable transformation of the continent's agriculture and food systems. Specifically, the CAADP XP4 aims at improving the individual and collective capacities of the key supra-national agricultural research and innovation institutions in their support to countries to achieve the programme's overall objective, through (i) establishing and strengthening multi-stakeholder partnerships (including European institutions) for climate-relevant innovation; (ii) strengthening policies, regional institutional arrangements, and markets access; (iii) enhancing knowledge management for advocacy and decision support; and (iv) strengthening coordination (including planning, M&E, and learning) and reporting.

An inherent element of CAADP-XP4 is to strengthen the collaborative mechanisms of the continental supra-national AR4D institutions to jointly operate and deliver global public good to transform agriculture on the African continent. This consultancy is to develop and promote guidelines for the inclusion of relevant STI indicators into national agricultural investment plans to facilitate agricultural transformation and aid the tracking of progress of STI at national, regional, and continental levels towards national, regional, and continental, as well as global SDGs.

B. The rationale of the Assignment

African countries have also shown a strong commitment to the implementation of the 2030 Agenda for Sustainable Development, which shares several objectives with the Malabo Declaration and the Africa Agenda 2063, "The Africa We Want." Sustainable agriculture (crops, livestock, fisheries & forestry) and natural resource management are critical in tackling the root causes of poverty and hunger, which is an overarching challenge for achieving the Sustainable Development Goals (SDGs). With 257 million people hungry and every third person malnourished in Africa, sustainable food and agriculture have become even more critical. African policymakers at the continental, regional and national levels are attempting to main-stream climate change into their agricultural policies, generally referring to this as "CSA", albeit with var-ying degrees of success. There are many policies on the African continent, however, when considering actual implementation, as well as the coherence between existing climate and agricultural policies, there are several bottlenecks to making agriculture climate-smart. These include the lack of adequate technical knowledge among stakeholders as well as weak governance and institutional arrangements, not only in

terms of poor horizontal linkages between relevant sectors (climate, agriculture, water, etc.) but also limited vertical linkages and coherence.

Science, Technology, and Innovation (STI) is a catalyst for sustainable economic and social development, and no nation has ever developed without the integration of STI into its national development strategies. Science, Technology, and Innovations are the developmental pillars that facilitate increased productivity, improve competitiveness, foster growth, and ensure improved livelihoods. Within the context of the Science Agenda for Agriculture in Africa (S3A), FARA in collaborations with its Sub-regional organizations and AFAAS continues to support its national and regional partners to strengthen their institutional systems for the adoption and use STI in the agricultural sector in Africa. Within the context of science, technology, and innovation uptake, building stakeholder capacity and guiding them provides the local perspective and ensures equity, efficiency, effectiveness, and sustainability. It has the potential to improve the transparency of the technology implementation process, thereby accelerating the uptake of technology. Within the context of S3A, FARA together with the SROs and AFAAS realizes the need for more effort and capacity improvement to identify, conceptualize and define specific STI indicators that are measurable at all levels for the promotion of climate-smart agriculture on the continent. These indicators need to account for and address both technical and institutional dimensions of science, technology and innovations. The absence of guidelines that facilitate and promote the inclusion of relevant climate STIs, into NAIPs serves as a major challenge to the adoption of climate-smart agriculture. Countries must be supported to identify innovative approaches to stimulate the uptake of deployment-ready climate technology solutions to provide policy recommendations on this issue.

Current sets of STI indicators consist of five accepted dimensions including research and development (R&D), human resources, patents, innovation, and technology balance of payments (TBP). These dimensions have been exhaustively discussed and analyzed by researchers and expert committees and the methodological guidelines for their collection and interpretation have also been provided by experts. Despite the widespread acceptance of these guidelines, the availability of indicators varies among countries and regions. While several regional and international organizations have moved towards the creation of databases, there are still several obstacles to overcome before an Africa-wide STI indicator set can be said to exist. In this context, moving towards a set of indicators capable of contributing to the design of a consistent STI policy that supports development strategies will demand different complementary kinds of efforts. While some countries particularly those in Africa need to concentrate their efforts on building basic STI statistical capabilities, other countries with long experience in the collection and analysis of STI data need to find ways to conciliate the local use of the information with the need for international comparability.

The purpose of this consultancy is thus, to support countries and governments to mainstream relevant climate STIs into their NAIPs through the development of relevant STI indicators for African countries and further provide guidelines to mainstream these indicators. At the same time, it is aimed at supporting countries to implement policy reforms to improve the generation and uptake of climate-relevant agricultural innovation which would eventually translate into development impact.

C. *The objective of the Assignment*

The central objective of this activity is to develop and promote guidelines for the inclusion of relevant STI indicators into national agricultural investment plans to facilitate agricultural transformation.

The specific objectives are:

1. To develop relevant climate STI indicators at the national, regional, and continental levels.
2. To develop national, regional, and continental action plans to promote the inclusion and mainstreaming of relevant climate STI indicators into National Agricultural Investment Plans (NAIP).
3. To harmonize the national and regional action plans into a continental plan for use by national, regional, and continental institutions.
4. To provide technical guidelines for agenda-setting to enhance mainstreaming STI indicators into NAIPs by national and regional institutions.

SCOPE OF ASSIGNMENT

The consultant will perform the following tasks under this assignment:

- Develop relevant climate STI indicators, define them, provide means of verifying them, and develop a methodology for tracking them at the national, regional, and continental levels.
- Harmonize the national action plans into sub-regional action plans, and further harmonize the sub-regional action plans into a continental action plan.
- Develop technical guidelines to support African countries and governments to mainstream the identified relevant climate STI indicators in NAIPs.

D. OUTPUT/DELIVERABLES

This activity is expected to lead to the following outputs:

1. Developed National and sub-regional level action plans that promote the inclusion and mainstreaming of relevant climate STI indicators into National Agricultural Investment Plans (NAIP).
2. Harmonized continental Action Plan of relevant climate STI indicators into NAIPs available for use at the continental level.
3. Developed Technical and practical guidelines for agenda setting and mainstreaming climate-relevant STI indicators into NAIPs.

E. DURATION OF ASSIGNMENT

The duration of this assignment will be 35 consultancy days spread over two (2) months.

F. LOCATION OF THE ASSIGNMENT

The assignment will mostly be home-based.

G. PERFORMANCE CRITERIA

The Consultant is expected to undertake the services with the highest standards of professional and ethical considerations, competence, and integrity. He/she is expected to deliver the outputs listed in Section C and D most effectively and efficiently within the assignment period stated in Section E of this document.

H. REPORTING

The Consultant will report to the Executive Director of FARA through the Director of Research and Innovation and Policy Expert at FARA during the entire period of the assignment and on regular basis. The draft report of the assignment will be presented by the Consultant at a workshop (Webinar) organized by FARA. The final report of the assignment is to be presented to FARA **14 Days after** the presentation of the draft report at a workshop.

I. FACILITIES TO THE CONSULTANT

1. Technical support services by the Policy Officer at FARA.
2. Logistics
3. Any other relevant information required for the assignment

J. FINANCING THE ASSIGNMENT

The Study would be financed as follows:

- *30% of the consultancy fee shall be paid upon submission and clearance of the Inception Report*
- *50% of the consultancy fee shall be paid upon the submission and clearance of the Draft Report*
- *20% of the consultancy fee shall be paid upon the submission and clearance of the Final Report*

An inception meeting to be organized by FARA

K. QUALIFICATION AND EXPERIENCE

The consultant must possess the following qualifications:

a) An advanced university degree in agricultural economics, economics, Agricultural Policy, social science, development studies or statistics, or other related fields of study.
b) He/She should be an Economist or Socio-economist with strong policy background and a proven track record in policy design and analysis.
c) At least eight (8) years post-qualification experience in agricultural sector policy development and analysis with experience on the African continent.
d) Excellent analytical skills as demonstrated by reports or working papers.
e) Have a fair knowledge of FARA activities and interventions
f) Have skills in working-group facilitation, stakeholder consultative process, and development planning process
g) Have excellent English writing and communication skills are required; French proficiency will be an added advantage.
h) Be available for carrying out the assignment.

L. APPLICATION PROCEDURES AND DEADLINE

Interested consultants may obtain further information at the address below during office hours 9h00 to 15h00 GMT. Submission of EOIs on the assignment must be delivered to the address below on or before **9th July 2021:**

Dr. Yemi Akinbamijo,
Executive Director
Forum for Agricultural Research in Africa (FARA)
PMB CT 173, Cantonment-Accra, Ghana
Email: recruitment@faraafrica.org

For further information and clarifications contact ONLY:

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FARA Affirmative Action Statement on Recruitment: *there is no discrimination based on gender, race, religion, ethnic orientation, disability, or health status.*