FEDERAL MINISTRY OF ENVIRONMENT
NIGERIA EROSION AND WATERSHED MANAGEMENT PROJECT (P124905)

TERMS OF REFERENCE (TOR)

FOR

CONSULTANCY SERVICES FOR THE DEVELOPMENT OF CLIMATE SMART AGRICULTURE (CSA) GUIDELINES & ITS PRODUCTION

NOVEMBER 2019

1.0 INTRODUCTION/BACKGROUND

The Federal Government of Nigeria initiated the Nigeria Erosion and Watershed Management Project (NEWMAP) through World Bank funding aimed at addressing the problems of land degradation (Soil Erosion) in initial seven (7) States (Abia, Anambra, Cross River, Ebonyi, Edo, Enugu and Imo) now known as the mover states. The successes recorded by combatting land degradation and gully control has led to addition of second batch of states consisting of Sokoto, Kano, Gombe, Plateau, Kogi, Delta, Katsina, Borno, Akwa Ibom, Niger, Oyo and Ondo. Other than land degradation and gully erosion control, climate change impact and adaptation is a major component of the project.

Climate Change is a serious threat to Nigeria's development aspirations and in particular the country's Agricultural Sector. This is documented in the recent World Bank analytical work ***"Towards climate Resilience Development in Nigeria, 2013 and recognized by Nigeria's National Climate Change Policy Response and Strategy (CCPRS) 2012 by the Federal Ministry of Environment.*** In respect to Agriculture, the CCPRS call for the development of an integrated agricultural intervention plan that can reduce the sector's vulnerability to climate change and enhance its productivity for national food security and poverty reduction. In order to achieve this, there is need for the introduction of climate smart agriculture into the Nigeria agricultural production system as it is envisaged worldwide.

Accordingly, the Federal Government of Nigeria and the World Bank agreed for the inclusion of the development and adoption of Climate Smart Agriculture (CSA) strategy as part of the packages of NEWMAP. The justification is that the deteriorating watershed and gully erosion in different areas of the NEWMAP states are a great threat to Agriculture and Livestock production, Livelihood and Ecosystem health. NEWMAP is aimed at addressing the worsening problems of soil erosion and land degradation exacerbated by climate change effects in the short term, reduce vulnerability to gully erosion and climate variability in the medium term and promote long term climate change resilience.

The climate-smart agriculture (CSA) concept reflects the ambition to improve the integration of agricultural development and climate responsiveness. CSA aims to achieve food security and broader development goals under a changing climate and increasing food demand. CSA seeks to initiative sustainable increased agricultural production, enhance resilience of agro-systems, and reduce greenhouse gases (GHGs) from agricultural production systems, and require planning to address tradeoffs and synergies between these three pillars: productivity, adaptation, and mitigation.

While the concept is new, and still evolving, many of the practices that constitute CSA already exist worldwide and are used by farmers at different degrees to cope with various production risks. Mainstreaming CSA requires a critical stocktaking of existing and promising agricultural production practices that are sustainable for the future, and of institutional and financial enablers for CSA adoption.

By virtues of its geographical location and spatial extent, different CSA technologies may be appropriate for different agro-ecological zones of Nigeria. In order to operationalize CSA, the government of Nigeria recognizes the need to develop a comprehensive evidence framework and mapping of appropriate CSA technologies for different agro-ecological zones of the country in

form of a Guideline that will depict CSA that apply to specific agro-ecological or livelihood zones. This requires systematic data collection and analysis for a range of parameters, such as precipitation and temperature, land and water management strategies. These CSA practices may include conservation agriculture, soil and water conservation, resilient crop varieties, cropland management, soil fertility management and agro-forestry, among others.

As part of FGN plan for the agricultural sector, the FMARD has requested NEWMAP to undertake the development and production of a Climate -Smart Agriculture (CSA) Guideline to support its implementation of climate smart agricultural practices in Nigeria.

2.0 MAIN OBJECTIVE OF THE CONSULTANCY

To develop a CSA Guideline that will establish CSA best practices to address climate change challenges in the six distinct agro-ecological zones of Nigeria. This is to help in strengthening the knowledge and capacity of farmers to be better equipped and more resilient to climate change impacts in the agricultural sector.

The Guideline will delineate differences among six distinct agro-ecological zones in Nigeria namely; Mangrove Swamp, Rainforest, Derived Savanna, Guinea Savanna, Sudan Savanna and Sahel Savanna. This will include identifying areas with different climate, landforms, soil and land cover. It will also help the country to determine what data are available to measure the benefits of particular site-specific interventions across different crops and agroecological or livelihood zones. The results of these measurements and analyses can be used to establish CSA standards. The Guideline is thus an important resource for setting the context and establishing a baseline for the realization of CSA adoption in Nigeria.

2.1 Some Specific Applications of the Guideline:

- Helps in enhancing climate resilience in the different agro-ecological zones of Nigeria
- Strengthen Nigeria’s farmer’s capacity to promote low carbon and maximize the use of climate resilient structures
- Provides a guide for identification of suitable technologies and practices for successful implementation of CSA which will enhance agricultural production.
- Provides a guide for development actors; extension services, research institutions and the private sector to promote CSA practices and technologies
- Improve climate governance across sectors; Ministries, International Organizations, Research and Extension in Agriculture, Hydro meteorological system and irrigation programs for Agricultural Transformation Agenda.
- Helps to create awareness and building knowledge and capacity among farmers and other stakeholders on CSA as an approach for climate change mainstreaming and environmental management in the agricultural sector

3.0 SCOPE OF WORK

The tasks or suggested methodology for the work include but not limited to four major components namely:

A. Situation Analysis

Capturing the current status of CSA initiatives, vulnerabilities and threats. Given specific contexts as well as the enabling environments across sectors and multiple levels. The agricultural, political, social, environmental and economic contexts in which the CSA approach is being applied should be explored. Highlighting the entry points for investment in priority CSA initiatives at a given scale. Content of the situation analysis is usually based on existing global and national data sources, as well as expert input and surveys ideally including farmers and technical experts, and can also incorporate more localized data if available. Situation analysis can cover a range of topics, but generally involves the following:

- Agricultural snapshots
- Assessment of climate impacts and vulnerability
- Identification and evaluation of current and proposing CSA practice and services
- Identification of institutional and policy entry points
- Assessment of financial entry points

B. Targeting and Prioritization

A range of technological, institutional, and policy options for climate-smart interventions exists that have varying environmental and economic impacts and costs. Identifying appropriate interventions requires tradeoffs across levels from farmers to sub-national and national policy makers and consideration by decision-makers about what is appropriate for given contexts. Decision-support tools needed to be identified and described which can assist relevant stakeholders to prioritize appropriate strategic decisions to improve the resilience, adaptability and efficiency of agriculture and rural livelihoods in the face of climate change. Targeting and prioritizing approaches narrows an extensive list of possible practices, services, and policies down to a range of best-bet options that can be scaled out, and which may serve to attract investment and funding. Identification of best practice tools for targeting and prioritization generally aim to provide guidance on the following sub-questions:

i. What regions, production systems, and users should adaptation interventions be prioritized for?
ii. What existing and promising adaptation options should be assessed for investment?
iii. What criteria should be used to evaluate and prioritize options, e.g. ability to build resilience; achieve co-benefits such as mitigation; economic costs and benefits?
iv. What barriers to adoption exist, and how can these be overcome for investments to have impact at scale?

C. Program Support

Program support concentrates on developing tangible materials and plans to inform, train, and roll-out intended interventions. The consultant is to generate tangible co-generated and

demand-driven products—training curricula, extension materials, business models, implementation plans, etc.—that enable the development and delivery of information and services. Products created through Program Support describe 'how to' help actors implement CSA interventions on the ground.

Description of task(s);

i. Define content and end-user (with end-users), to clearly identify the subject matter such as which CSA practice or organization to target in the supply chain in the case of business model, target audiences in terms of level of education, best method to reach them
ii. Assessment of available information from source, including an analysis of what already exists and lesson learned from implementation.
iii. Innovation in product design, including both adapting material for local condition and / or develop new ideas for spreading information when and where appropriate.
iv. Interact with end-users to field test, refine and improve the material

D. Monitoring, evaluation and learning

CSA plan's monitoring, evaluation, and learning (ME&L) component develops strategies and tools to track progress of implementation, evaluate impact, as well as facilitate iterative learning to improve CSA planning and implementation

4.0 DELIVERABLES

The expected deliverables of the project are:

i. Baseline and secondary data and thematic GIS maps generated
ii. CSA Guideline developed (Soft and Hard) to help farmers and other land users make climate smart decisions
iii. Relevant DSS tools for prioritization and targeting are identified and described
iv. Ecological map produced for the agro ecological zones.
v. Dissemination and extension plan for government to use in rolling out the Guideline
vi. Reports of stakeholder workshops.

5.0 INSTITUTIONAL FRAMEWORK

The institutional framework for this consultancy under the NEWMAP will be as follows:

i. Technical responsibility for the consultancy will be with Federal Ministry of Agriculture and Rural Development (FMARD), guided by Natural Resources Specialist of NEWMAP, as the lead who would coordinate all activities with other Ministries, Departments & Agencies. The FMARD, Dept. of Agricultural Land and Climate Change Management Services (ALCCMS) shall constitute a Technical Committee that will ensure that the project is implemented according to plan. The Committee will consist of FMEnv (DCC), FMWR, NIMET, NASC, NIHSA, NASRDA, NIWRMC, IAR and RBDAs. This will be in conjunction with NEWMAP FPMU and FMARD.

ii. Fiduciary responsibility (Procurement and Disbursement) for the project will be with the FPMU;

iii. The FPMU will liaise with the Consultants, the Bank, and all participating MDAs'.

5.1 FPMU and the contributions:

i. The FPMU will assist the Consulting firm for guidance and to access the available information that is relevant to the assignment, including such information as may be available from Federal Ministries, Departments and other Government Agencies. State Project Management Unit (SPMU) will also assist and facilitate the Consultancy firm for guidance and to access the available information that is relevant to the assignment, including such information as may be available from state Ministries, Departments, Government Agencies and stakeholders.

6.0 REPORTING OBLIGATION

The Consulting Firm shall report to the implementing Agency, FMARD through the FPMU, NEWMAP. The following would be adhered to by the Consultant.

a. Inception Report

The Consultant(s) shall undertake preliminary activities in conjunction with FMARD (Consultative visits and site selection) and prepare ten (10) hard copies and electronic (soft) copies of an inception report outlining how the Consultant(s) plans to carry out the assignment.

b. Monthly and Quarter Progress Report

The Consultant(s) shall prepare ten (10) hard copies and electronic (soft) copies, monthly and quarterly progress reports to keep the client informed of the progress of the assignment.

c. Draft Final Report

The Consultant(s) shall present ten (10) copies of a draft report of the study indicating the major findings of the study, significant recommendations, and other requirements. The consultant(s) shall be required to make oral presentation of the draft report to stakeholders. This shall comprise of executive summary and final report.

d. Final Report.

The Consultant(s) shall produce a **Final Project Report** and provide ten (10) hard copies and electronic (soft) copies of the final report and make an oral presentation summarizing all the activities under the Project, including **executive summary and recommendations** and any amendment to the draft. The report shall be submitted within one (1) month after completion of the Consultant's services.

7.0 CONSULTING FIRM EXPERTISE AND STAFFING REQUIREMENTS

7.1. Qualification of the consulting firm.

The interested consulting firm should have at least twelve (12) years of working experience/general knowledge in the field of climate change mitigation and adaptation in the Agricultural sector. In addition, it should have a background in the following areas:

i. Agricultural systems
ii. Environmental Management and Impact assessment
iii. Soil and Water Engineering and Geography with specialty in either Climate change or Environmental Sciences.
iv. Experience in Environmental Reclamation/Environmental Impact Assessment will be an added advantage
v. Evidence of carrying out a similar work with job completion certificate.

7.2. Number of Key Staff to Carry out The Work

The Team should include experts from varied areas of agriculture, environment, climate and development and related sectors. A minimum of 8 professional staff as key officers comprising the following: Soil and Water Engineers or Soil and Water Management, GIS/Remote Sensing Specialist, Climate Change Adaptation Specialist, Agric. Economist, Climate Risk Analyst, Irrigation Specialist, Sustainable Land Management Specialist, Community development/social development specialist, Entomologist, Meteorologist, Agronomist

Professional Specialization	Minimum Years of Expertise Experience
1. Team leader: Should have a minimum of Master's Degree in Geography, Soil Science or Environmental Science; however a PhD Degree holder will be an added advantage. • Should have a good knowledge of global and national climate change issues with respect to agriculture; • Demonstrate team working spirit; and • A track record of engagement and dealings with government on issues related to agriculture	10

and climate change is very important.	
2. Soil and Water Engineer: At least a Master's level graduate of Soil/Water Engineer with work experience on broad spectrum climate change issues and projects addressing low carbon emission, mitigation etc.	7
Other Staff: GIS/Remote Sensing Specialist, Climate Change Adaptation Specialist, Sustainable Land Management Specialist, Agricultural Economist, Community Development/Social Development Specialist, Agronomist, Entomologist, Meteorologist. Task staff/specialists should have Master's degree in the priority sectors and knowledge of Climate Smart Agriculture will be an added advantage. In addition, they should have the following: technical knowledge on such related fields, experience in Sustainable Land Management, Soil Erosion Control, Conservation Agriculture, Soil Capability and Suitability Classification, Pest Control and Plant Breeding. Experience in working and collaborating with governments will be an asset; a sound knowledge of soil dynamics, gully erosion, land degradation, mass movement in soil, soil fertility evaluation, sustainable land management, land use and classification and engineering survey.	7

8.0 TIMELINE

	Activity/sub-activity	Outputs/milestones	Time
1	Submit proposals (technical and financial) including outlines of all proposed reports	Full proposal	30th Dec., 2019
2	Selection of consultant team; signing contract with the selected team	Signing of Contract	30th Jan., 2020
3	Reviewing secondary information, field work and organizing technical workshops with relevant MDAs	Technical workshop completed and findings discussed with Relevant actors	May-June, 2020.
4	Provide first draft of reports for review	Draft reports reviewed by CSA project team	August, 2020
5	Organizing consultation workshop on draft reports and finalizing	Final reports submitted and approved by CSA project team	November, 2020

9.0 CONSULTANT PAYMENT

Payment should be made to the consultant as follows;

i. 20% of the contract sum shall be paid to the Consultant on signing the contract upon provision of a bank guarantee to the same amount.
ii. 20% of the contract sum shall be paid on presentation of midterm report acceptable by the Client.
iii. 40% of the contract sum shall be paid upon submission of the draft report acceptable by the Client.
iv. 20% of the contract sum shall be paid upon submission of the final report acceptable by Client.

10.0 RECRUITMENT/CONDUCT OF CONSULTANT

The Consultant shall pass through competitive bidding. Due process shall be followed in selecting the consultant. The selected consultant will report to its client (i.e. FMARD through NEWMAP/FPMU). The Project Implementation Committees (PIC) will report to the Ministry.

11.0 THE DURATION OF THE PROJECT

The duration for the completion of the project is proposed for 12 Calendar Months.

12.0 COST OF THE CONSULTANCY

The estimated cost of the Consultancy is USD 800,000 but not exceeding USD 1million