

TERMS OF REFERENCE

Title of the Consultancy:	Consultancy Services to Undertake a Genome Editing Landscape Analysis in Selected African Countries. Project: Advancing Science, Technology and Innovation in Africa - Genome Editing to Optimise Agriculture and Food Systems.
Consultancy Type: (individual or firm)	X 2 Consulting Firms
Directorate & Division	Directorate of Knowledge Management Programme Evaluation - Centre of Excellence in Science, Technology and Innovation.
Contact Person:	Florence Nazare
Procurement Number	76/AUDA/DKMPE/CoE/QCBS/2023
PR Number	External Budget

Background

The AUDA-NEPAD is placing science-driven innovations at the core of its programming and interventions across Africa supported by solution-focused research and development. The Centre of Excellence in Science, Technology and Innovation is leading an initiative to harness the potential of genome editing as a rapidly developing suite of biotechnology tools. The initiative aims to facilitate the increased uptake of genome editing tools by AU Member States through effective science communication and advocacy towards viable and competitive agricultural and agro-industry transformation.

There is increasing evidence that technology, including new biotechnologies like genome editing, will be a key factor in determining the pace and characteristics of advances in Africa's socio-economic development. However, critical factors including challenges and unexploited opportunities still hinder access to and the adoption of such technologies at scale. Addressing these critical factors requires a clear understanding of the status of technical, institutional, infrastructure and financial resources that are currently available in countries, as a means to inform future interventions through evidence.

Rationale

Available information in biotechnology in Africa is highly fragmented, making it difficult to build an accurate and comprehensive storyline about the Continent's competencies and current trajectories related to advances in applications of biotechnology in the agriculture sector. This includes information on research and development institutions that are actively working on the application of biotechnology with a view to product development. Such data and information is critical for effective decision-support systems. The AUDA-NEPAD seeks to address this by engaging two (2) consulting firms to undertake a thorough Landscape Analysis covering a select number of countries across the 5 AU regions.

Objectives of the Assignment

The aim of the consultancy is to assess genome editing related capabilities as follows:

- Assess existing national genome editing policy and technical capacity in public and private sector, incl. capabilities of African-based seed industries focusing on R&D in biotechnology;
- Provide an evidence-based description of the situation (major trends, factors and areas for attention) as well as context and circumstances (technical, political and geo-political, social, science, human, culture and traditions, etc.) that support or hinder advances in the application of genome editing in agricultural and food systems;
- Identify the emerging needs that genome editing can address, especially those which require rapid responses at scale. These needs will focus on food systems i.e., food productivity, climate adaptation, diets, and nutrition;
- Identify key food security crops or other crops based on African regional contexts to improve the livelihood of people through better nutrition, climate resilience, and increased cost-effective sustainable productivity;
- Assess priority crop-by-trait targets in the African countries; and
- Identify main adjustments or new actions to ensure increased uptake of genome editing towards commercialisation of products for attention at policy, scientific and R & D levels.

From the above, using the information and data arising from the landscape analysis, a synthesis report.

Scope of Work, Activities and Tasks

The Landscape Analysis will gather information and data on:

1. The policy environment, including the existence of policies and regulations, incentives and disincentives to advance genome editing in agriculture;
2. R&D institutions with national and regional mandate to improve agriculture productivity and food systems.
3. National, regional and international institutions whose mandate is to improve staple crops of Africa origin for enhanced productivity, nutrition and post-harvest value-addition;
4. African-based seed industries focusing on R&D in biotechnology to improve productivity in crops and agroforestry, and nature of their participation in genome editing;
5. Capabilities, access to, and management of intellectual property; policies and/or practices for in- and out-licensing and other issues that affect freedom to operate;
6. Status of genome editing technical capacity in public and private sectors, with a specific focus on crops, livestock, fisheries and agroforestry;
7. State of new and existing biotechnology laboratories on the Continent with potential for genome editing, and human resource skills and competencies in various aspects of biotechnology and specifically for genome editing;
8. Sources of funding for genome editing R&D in agriculture e.g., government budgets, philanthropy, VCs etc;
9. Inventory of projects from within the continent and/or products and their development stage e.g., discovery → commercialization → deployment → scaling.
10. Inventory of major training courses offered at national and regional levels, and by who;
11. Inventory of select genome editing projects in agriculture from outside the continent (with a particular focus on Asia) listing products and stages of development stage e.g., discovery → commercialization → deployment → scaling; and
12. Identification of Stakeholders, interest groups, and experts active in genome editing.

The Landscape Analysis will comprise both consolidation and summary of available evidence through a desk review and interviews with key stakeholders. The desk review will use secondary information and data sources such as websites, validated datasets, annual and other published reports, conference publications, scientific journals and peer-reviewed publications, media resources like biotechnology-focused magazines, repositories of press releases and others. The desk study will both inform and be supplemented by primary sources of information/data collected through interviews, surveys, and questionnaires.

General Specifications Expected from the Firms.

For both primary and secondary data collection, the AUDA-NEPAD will select consulting firms based on the criteria described below:

- The firms should have prior experience and proven expertise in primary and secondary data collection and analysis for similar projects in biosciences in Africa. This will be verified by requesting the prospective consultants to share client references;
- The firms should demonstrate their capacity for data collection, analysis, and synthesis. This can be assessed by seeking information about their team of researchers with the required years of experience in key areas, as stipulated below;
- The data collection plan provided by the consultants should detail standard operating procedures for primary and secondary data collection. Best practices for enumerator training and data quality checks should also be detailed. Enumerators should be trained and experienced in tasks related to data collection, including the content of interviews/surveys, courtesy, trust-building, and clarification of confidentiality and anonymity terms; and
- The consulting firms should demonstrate professionalism and ethics throughout the process of data collection and ensure the confidentiality of the primary data as well as maintain anonymity of the respondents.

Deliverables and Expected Outputs

The firm will be under the direct supervision of the Directorate of Knowledge Management Programme Evaluation's Centre of Excellence in Science, Technology and Innovation and will submit monthly updated reports on the progress attained in achieving the following deliverables:

- An inception report which includes a consolidated proposed approach and work plan with timelines;
- A satisfactory draft landscape analysis and synthesis report, containing a stakeholder map indicating major players and biotechnology laboratory capabilities. Following the desk study, in-country assessments and consultations with key stakeholders, the consulting firm will produce a first draft of the landscape analysis which will be presented to AUDA-NEPAD staff for initial review for a production of the 2nd draft. This will be followed by another round of review and feedback, prior to the stakeholder validation;
- A final stakeholder validated report by a select group of experts; and
- Final project report on compilation of all accrued information, data and resources in a searchable database. This will be designed and developed in collaboration with AUDA-NEPAD to ensure conformity with AUDA-NEPAD requirements.

Milestones & Reporting Schedule

S/N	Milestone	Timelines
1.	An inception report with a consolidated proposed approach and work plan with timelines.	31 July 2023
2.	A satisfactory 1st Draft landscape analysis with emerging findings from the country assessments	30 Sept 2023
	A satisfactory 2nd Draft landscape analysis and synthesis report, containing a stakeholder map indicating major players and biotechnology laboratory capabilities etc	31 Oct 2023
3.	A final stakeholder validated report	30 Nov 2023
4.	Compilation of all accrued information, data and resources in a searchable database	10 Dec 2023
5.	2 Policy products with key messages to inform a high-level Ministerial discussion towards enhanced uptake of Ged (x 1 on policy and x 1 technical issues)	10 Dec 2023
Total person days		120 person/days

Timeframe of the Assignment

It is anticipated that the assignment will commence in July 2023 and conclude in December 2023, for a period of seven months.

Location

The Landscape Analysis will cover the following countries: (West Africa) Burkina Faso, Ghana, Nigeria, Senegal; (North Africa) Egypt; Morocco; Tunisia (Central Africa) Cameroon; (Southern Africa) Malawi, Zimbabwe, Mozambique; South Africa (East Africa) Ethiopia, Kenya, Mauritius, Rwanda.

Submission & Approval of Reports

The submission of all reports will be managed and reviewed by the internal team including STI Centre of Excellence and ABNE, with a team of collaborating partners and cleared by the Ag Director, Knowledge Management and Programme Evaluation, her designate, or the Project Coordinator.

Language Requirements:

English

Consultancy fees

TBD

Person Days/Months

Commencing from July 2023 to December 2023 for a total period of six 6 months.

Governance, Support and Facilities to be Provided by AUDA-NEPAD

The firm will be managed by the internal team including STI Centre of Excellence and ABNE, with a team of collaborating partners and cleared by the Ag Director, Knowledge Management and Programme Evaluation, her designate, or the Project Coordinator. No additional facilities will be provided to the consulting firm.

Tentative Proposed Payment Schedule

The Consultant firm will be paid based on deliverables and submission of progress reports as follows:

- 10% upon submission of satisfactory draft landscape analysis and synthesis report, containing a stakeholder map indicating major players and biotechnology laboratory capabilities ;
- 40% upon submission of final stakeholder validated report by a select group of experts; and
- 50% upon submission of final project report on compilation of all accrued information, data and resources in a searchable database.

Reports to be submitted and cleared the Ag Director, Knowledge Management and Programme Evaluation or Project Coordinator working with the STI Centre of Excellence, Evaluation, and experts from collaborating institutions.

Experience of Firms, Key Experts & Team Composition

The firms should be formally registered and possess at least 5 years of specific working experience in STI and biosciences, advanced biotechnology, science communication, institutional and policy assessments in African countries with the following attributes:

- Formally registered firm with 5 years of in-depth knowledge and understanding of the African Union overall development Agenda 2063, and STISA-2024, focusing on science, and specifically biotechnology research, landscape assessments, data analysis with report writing of international standards
- A multi-disciplinary team with requisite expertise in the fields related to STI, natural and applied sciences, with specific reference to biotechnology, agriculture

- incl. economics, R&D, with experience in data analysis and statistics, organisational development, and policy analysis, as an added advantage
- Experience working in the biosciences, agriculture, agribusiness sectors and science communication in Africa.
- Explicit experience with landscape analysis, to include mapping and analysis in related fields will be an advantage.
- Proven track record working at country and regional levels, with international experience as added advantage.
- Knowledge of key trends in the development and application of modern biotechnology globally.

Qualification and Work Experience of Key Experts Per Firm

Key Expertise (KE) 1: Senior Expert in Advanced Biotechnology (Lead)

- Advanced University Degree (Masters or higher) in molecular biology, agriculture specialising in genetics, biotechnology or equivalent, PhD is added advantage;
- Minimum 7 years of working experience in R & D, STI, biotechnology, genetics and genomics and their application to breeding
- Advantage from experience in leading projects in seed systems and new breeding techniques.
- Proven experience in conducting science research, with links to agriculture value chain development.
- Experience in scientific, technical and policy publications in R & D
- Excellent drafting, analytical, problem solving and strategic thinking ability
- Experience with innovation and/or commercialisation and product development
- Proven ability to communicate orally and in writing to public, private and non-state actors.

Key Expertise (KE) 2: Senior Expert in Regulatory Policy and Biosafety

- Advanced University Degree (Masters or higher) in health-related biological sciences, coupled with studies in legal science or equivalent, PhD is added advantage;
- Minimum 7 years of working experience in biotechnology and biosafety regulatory policy and systems at national and/or regional levels particularly in the context of agriculture in public institutions and/or with business and private sector.
- Experience in the area of biosafety licensing, legislation, and regulatory frameworks in agriculture biotechnology
- Proven experience in conducting regulatory research, with links to agriculture value chain development.
- Experience in scientific, technical and policy publications in R & D
- Excellent drafting, analytical, problem solving and strategic thinking capability
- Ability to liaise and communicate with diverse stakeholders of all levels.

Key Expertise (KE) 3: Stakeholder Engagement and Science Communication Expert

- Advanced University Degree (Masters or higher) in Economics, Business Administration, Rural Development or related social sciences field, PhD is added advantage;
- At least 5 years of working experience in science communication, stakeholder engagement and advocacy targeting policy actors in the public and private sector in agriculture incl. agribusiness, environment and fields related to biotechnology.
- 7 years of direct experience working with cross-sector stakeholders from government, development partners, private sector and non-state actors
- Strong and proven networking, advocacy, and communication skills with ability to build confidence among stakeholders.

- Excellent drafting, analytical, problem solving and strategic thinking ability particularly in the analysis of country needs to determine key issues and messages towards change.
- Ability to liaise and communicate with diverse stakeholders of all levels with adequate understanding of inherent sensitivity of the subject matter.

Evaluation Criteria

The firm will be evaluated against a combination of technical and financial criteria through a combined scoring method. Maximum score is 100% out of which technical criteria equals 70% and financial criteria equals 30%.

a) The technical evaluation will include the following:

Criteria	Full Score	Actual Score
Experience of the Firm	20	
Adequacy and Quality of the Proposed Methodology, and Work Plan in Responding to the TORs	30	
Key Experts' Qualifications and Competence for the Assignment	40	
Local Participation and Firms Knowledge & Culture of the African Regional Sector	10	
Total	100	

Application Procedure

Consulting firms that met the criteria outlined above should submit their detailed proposals to AUDA-NEPAD c/o [XXXXXXXXXX] by **XXXX** 2023

Proposals must include:

1. Project Approach and Methodology
2. Work Plan with Milestones and Dates
3. Firm Qualifications and Related Project Experience
4. Team Member Roles, Responsibilities and Biographies
5. Financial Proposal

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