NATIONAL PLANNING AUTHORITY

TERMS OF REFERENCE (TOR) FOR UNDERTAKING PRE-FEASIBILITY AND FEASIBILITY STUDIES FOR AGRICULTURAL STORAGE AND POST-HARVEST HANDLING INFRASTRUCTURE

1 INTRODUCTION

The Third National Development Plan (NDPIII) has identified Agriculture Storage and Post-harvest handling Infrastructure (Silos, Cold rooms and Dryers) as a core project. Community storage facilities, modern grain processing equipment and cold chain infrastructure for dairy have been developed. However, Uganda still has a shortage of standard and modern storage facilities which leads to use of poor-quality storage and subsequently deterioration in quality of the products. Uganda's post-harvest losses range from 30 to 40 percent for grains and other staples, and 30 to 80 percent for fresh-fruits and vegetables.

As per the NDPIII, the project once implemented is to support objective 2 of the NDPIII Agro-Industrialisation Programme, "Improve post-harvest handling and storage," through:

a) Establish post-harvest handling, storage and processing infrastructure including silos, dryers, warehouses, and cold rooms of various scale and capacities at subcounty, district and zonal levels.

b) Establish regional post-harvest handling, storage and value addition facilities in key strategic locations; grain in Jinja; Cassava in Gulu; Dairy in Mbarara; Meat in Nakasongola; fresh fruits in Soroti; vegetable oil in Kalangala; beverages in Fort Portal, Fish in Mukono and Rice in Butaleja.

c) Improve the transportation and logistics infrastructure such as refrigerated trucks and cold rooms for priority commodities.

The goal the NDPIII Agro-Industrialisation Programme is to increase commercialisation and competitiveness of agricultural production and agro-processing. Given the dominance of agriculture as a source of livelihood, Agro-Industrialisation (AGI) offers a great opportunity for Uganda to embark on its long-term aspiration of increasing household incomes and improving the quality of life:

a) AGI presents an avenue for promoting inclusive and equitable growth.

b) It provides an opportunity to add value to agricultural raw materials in order to promote export expansion of high value products.

c) It provides an opportunity for import substitution.

d) Fifth, it provides an opportunity to address the high post-harvest losses, minimize losses to disasters, stabilize prices and increase household incomes.

e) The backward and forward linkages between agriculture and agro-industries will necessitate that Uganda sustainably transform agro-value chains to ensure sufficient supply for domestic industries to undertake transformative sustainable manufacturing while creating employment for its citizens.

2 PROBLEM STATEMENT

Inadequate Agricultural Storage and Post-Harvest Handling Infrastructure has constrained agricultural production and productivity in Uganda. In particular, it has increased post-harvest wastage as most agricultural products perish quickly without proper handling and or storage:

a) Limited value addition and slow agro-industrialisation. Agro-industrialisation requires constant supply of raw materials to factories requiring good post handling.

b) Small proportion of agricultural exports leading to unfavourable Balance of Payment (BoP) position. sustaining Uganda's market share in the current markets (AfCFTA, China, EU, and the Middle East) is crucial for the agro-industrialization agenda.

c) Low incomes among the agricultural communities. Agro-industrialization has the potential to transform the majority of Ugandans livelihood considering that it employs most of the youth and women.

To address these challenges, NPA seeks to undertake pre-feasibility and feasibility studies to assess the economic, technical, financial, environmental and social viability of investments in post-harvest handling, storage and processing infrastructure including but not limited to silos, dryers, warehouses, cold rooms and a warehouse receipt system for farmers.

3 EXPECTED OUTCOMES

This project once implemented will deliver the following outcomes:

a) Reduce post-harvest loses;

b) Increase investments in agro-based industries;

c) Increase the total export value of processed agricultural commodities;

d) Improve the competitiveness of Uganda's agricultural sector;

e) Increase labour productivity in the agro-industrial value chain;

f) Increase the number of jobs created per annum in agro-industry;

g) Reduce the percentage of households dependent on subsistence agriculture; and,

h) Increase the proportion of households that are food secure.

4 OBJECTIVE OF THE ASSIGNMENT

The purpose of this assignment is to undertake pre-feasibility and feasibility studies post-harvest handling, storage and processinvvg infrastructure including but not limited to silos, dryers, warehouses, cold rooms and a warehouse receipt system for farmers in line with the Development Committee (DC) guidelines.

The specific objectives include to:

a) Analyse the demand, access, distribution, and level of utilization for post-harvest handling, storage and processing infrastructure.

b) Assess the availability of requisite infrastructure, technology, utilities, skills, financial and fiscal incentives for establishment of post-harvest handling, storage and processing infrastructure.

c) Analyse the policy, legal and institutional environment necessary for successful establishment of post-harvest handling, storage and processing infrastructure; identify issues/factors that may encourage or hinder livestock vaccine manufacturing and commercialisation in the country.

d) Assess the viability of establishment of post-harvest handling, storage and processing infrastructure commercialisation models including Public-Private Partnerships, and Traditional Public Sector Investment.

e) Analyse the economic and social factors that should be adhered to, to ensure success of establishing post-harvest handling, storage and processing infrastructure in Uganda.

f) Assess and profile the roles of all stakeholders involved in establishment of post-harvest handling, storage and processing infrastructure including; farmers, the private sector and Government, and identify appropriate institutional arrangements to foster effective partnerships of the project.

g) Examine the financial and economic viability of establishing post-harvest handling, storage and processing infrastructure in country including identifying and assessment of associated risks and their mitigation measures.

5 FIRM EXPERIENCE

The Consultant will be a firm or consortium of firms with diversified experience and technical competencies in areas including: Project planning and management, Feasibility studies, Local Economic Development, among others. Further, the firm should demonstrate the following:

a) List of completed feasibility studies undertaken in Uganda.

b) Good understanding of Uganda's Agriculture value chains.

c) Good understanding of post-harvest handling, storage and processing infrastructure.

d) Sound legal status, strong financial management and institutional stability.

e) Demonstration of good technical, managerial and project management capabilities.

6 SCOPE OF WORK

The consultancy services will include but not be limited to:

a) Collect data and review documents that are relevant to the assignment, including Vision 2040, NDPIII and PIAPS, Agriculture related plans, relevant laws, regulations and policies, and other ongoing post-harvest handling, storage and processing infrastructure / agro – industrialisation related initiatives.

b) Identify existing/potential for addressing post-harvest handling, storage and processing infrastructure challenges based on existing initiatives.

c) Define and map the project value chain clearly illustrating the forward and backward linkages.

d) Identify, analyse and forecast financial and economic revenues and costs associated with the project.

e) Define and explain the plant, equipment and machinery requirements for the post-harvest handling, storage and processing infrastructure.

f) Identify, prioritize and cost in terms of BoQs the infrastructure and equipment requirements for the project.

g) Identify and undertake costing of all infrastructure, equipment, and recurrent items necessary to get the project running.

h) Undertake Strategic Environmental Social Impact Assessment (ESIA) for the project.

i) Conduct financial, economic, stakeholder, and distributive analysis for the project.

j) Analyze policy, legal and regulatory requirements necessary to effectively implement the project.

k) Define the human resource, management and sustainability requirements of the Vaccines processing plant.

l) Conduct project risk analysis and provide a risk mitigation plan.

m) Conduct key stakeholder engagements including validation of the draft project documents/results of the study

n) Identify key stakeholders for the development of the sites

o) Highlight the necessary human resource requirements for project implementation

p) Demonstrate good understanding of Uganda's Public Investment Management processes.

q) Preparation of draft and final project documents

r) Printing and dissemination of the final project documents/results for key stakeholders.

1.1. REQUIRED OUTPUTS

The outputs expected from the consultant shall be reports/results of the study on the financial viability and economic justification for the project, including but not limited to the following:

a) Inception Report

b) Draft Reports including:

- *Comprehensive Prefeasibility and feasibility study reports*
- *Financial and economic analysis models Ms-Excel sheets*
- *Master Plans and Engineering designs for the project (architectural, structural, mechanical, electrical)*
- *GIS Maps on the location of key facilities*
- *Report on Equipment requirements for the project*
- *Strategic Environmental Social Impact Assessment (ESIA) report*

c) Final Reports in (b) above

d) Process Report

7 CONTRACT DURATION

The duration of the consultancy is six (04) months commencing from the date of signing of the contract.

8 KEY DELIVERABLES

The scope of the services to be provided by the consultancy or consortium will include delivery of the following:

	Activity	Time from Start (Weeks)	Copies
1.0	Inception Report	2	6
2.0	Draft Pre-Feasibility Study Reports	6	6
3.0	Final Pre-Feasibility Study Reports	8	6
4.0	Draft Feasibility Study Reports	12	6
5.0	Final Feasibility Study Reports	16	6

9 OBLIGATIONS OF THE CONSULTANT

Six (6) hard copies and one (1) soft copy (word format) of each deliverable should be provided to NPA for review along with Power-point summary presentations. The consultant will also be required to make formal presentations to the client.

The consultant is also required to timely deliver all expected deliverables in a manner and form approved by the client in addition to appropriately addressing all the comments raised by the client and other stakeholders.

10 OBLIGATIONS OF THE CLIENT

The Client will provide the following services to the consultant:

a) Liaison services with other stakeholders considered essential for proper execution of the assignment

b) Coordinate with other stakeholders to be engaged in the course of the assignment through provision of introduction letters to the consultant

c) Make timely payment to the consultant in line with the contract.

11 INCIDENTAL EXPENDITURE

The contract covers all incidental expenditure up to finalisation of the contract.

12 PAYMENT SCHEDULE

a) 30 percent on delivery of accepted inception report

b) 40 percent on delivery of draft reports

c) 30 percent on delivery of accepted (final) reports

13 REPORTING AND SUPERVISION

A multidisciplinary and multi-agency Technical Working Group led by NPA and comprising of key government and private sector stakeholders in addressing post-harvest handling, storage and processing infrastructure challenges will be established to undertake the assignment. Key institutions for consultation while undertaking the pre-feasibility and feasibility studies including project implementation are: MAAIF, MTIC, UWRSA, NAADS, OWC, DDA, UCDA, CDO, NAGRC&DB, LGs, Private sector, TGCU, and MWT.

The Consultant shall submit all draft and final reports and deliverables to the Executive Director, National Planning Authority (NPA) through the Manager Project Development and Investment Planning

14 COMPOSITION AND QUALIFICATIONS OF THE CONSULTANTS

The consulting team shall be headed by a Team Leader/Lead consultant. Members of the team shall have the necessary qualifications to undertake the various tasks as set out in these Terms of Reference.

The consultant shall possess the following expertise as part of the core team: (i) Agricultural Engineer; (ii) Financial and Economic Analysis Expert; (iii) Environmental Expert; (iv) Legal Expert; (v) Civil/Structural Engineer; (vi) Mechanical Engineer/ HACV Expert; (vii) Energy Efficiency & Management Expert. The experts are further described below:

A. **Agricultural /Expert (Team Leader)**

Minimum requirements

- A minimum of a Masters degree in Agricultural Engineering or related discipline,
- Good written and oral proficiency in English and good communication skills.

Professional experience

- At least 10 years' experience working experience in post-harvest handling or related field.
- Experience in planning and implementing projects of a similar nature.
- Knowledge of Uganda's development planning frameworks

B. **Financial and Economic Analysis Expert (Assistant Team Leader)**

Minimum requirements

- A minimum of a master's degree in economics, finance, business administration or any related discipline.
- Possession Professional Qualification such as CFA, ACCA, CPA, or CIMA or related professional qualification.

- Good written and oral proficiency in English and good communication skills.

General professional experience

- At least 10 years working experience post-graduation in the relevant field.
- Experience in conducting planning and implementing projects of a related nature will be desirable.
- Have specific experience in economic and financial analysis.

C. Environmental Expert

Minimum requirements

- A minimum of a master's degree in Environment and Conservation Management, Forestry, Environmental Economics, Engineering or related fields
- Registered with NEMA as a Team Leader
- Good written and oral proficiency in English and good communication skills.

Professional experience

- At least 10 years working experience postgraduation in conducting environment impact assessment with demonstrated knowledge of the environment and natural resource landscape of Uganda.
- Have specific experience in conducting environmental and impact assessments for industrial projects.

D. Legal Expert

Minimum requirements

- A minimum of a Master's degree in law.
- Diploma in Legal Practice.
- Good written and oral proficiency in English
- Good communication skills.

Professional experience

- At least 8-years of working experience postgraduation in the field of law.

E. Civil/Structural Engineering Expert

Minimum requirements

- A minimum of a Master's degree in Civil Engineering and/ or a related field as per the Engineering Registration Board
- Uganda Civil Engineering disciplines categorization is an added advantage.
- Registered or Chartered Civil Engineer

- Good written and oral proficiency in English and good communication skills.

Professional experience

- At least 10 years working experience postgraduation experience in Civil or building engineering design and construction works.

F. Mechanical Heating Air-conditioning and Ventilation (HACV) Engineering Expert

Minimum requirements

- Bachelor's degree in Automotive / Mechanical Engineering or a related field as per the Engineering Registration Board -Uganda Mechanical Engineering disciplines categorization
- Being Registered with a valid practicing license is an added advantage.
- Good written and oral proficiency in English and good communication skills.

Professional experience

- At least 8 years working experience postgraduation in Heating Air Conditioning and equipment selection.

G. Energy Efficiency and Management Expert

Minimum requirement

- A minimum of a Master's degree in in Renewable Energy, Energy Management or related field.
- Registered or Charted Engineer with valid Practicing License.
- Certified Energy Manager with valid certificate is an added advantage

Professional experience

- At least 8 years' experience in preparation of energy management systems for process facilities.
- Demonstrated experience in plant processes, safety design and management