



# **Liberia Sustainable Management of Fisheries Project (LSMFP)**

## **National Fisheries & Aquaculture Authority**

P. O. Box 10-1384  
United Nations Drive, Bushrod Island  
1000 MONROVIA 10, LIBERIA



### **REQUEST FOR EXPRESSION INTEREST (INDIVIDUAL CONSULTANCY)**

**Preparation Advance No. IDA V3100**

**PROJECT ID: P172012**

**Subject: Request for Expression of Interest (REOI) for provision of Consulting Services to prepared Detailed Architectural Designs and Supervised the Works for the Rehabilitation and Construction of Klay Hatchery**

**Reference No.: LR-NAFAA-255514-CS-CQS**

**Assignment Title: Consulting Services to prepared Detailed Architectural Designs and Supervised the Works for the Rehabilitation and Construction of Klay Hatchery**

The government of Liberia through the National Fisheries and Aquaculture authority (NaFAA) has received support from the World Bank Group toward the preparation and implementation of the, “Liberia Sustainable Management of Fisheries Project (LSMFP)”. The project development objective (PDO) is to improve the management and utilization of selected fisheries. The objective of this terms of reference is to recruit a firm who will prepare detailed architectural designs and supervised the works for the rehabilitation and construction of Klay Hatchery.

#### **The objectives of the assignment**

The purpose of this piece of work is for a firm to prepare and provide technical input particularly in civil engineering plan, design, survey, as well estimating and costing of the rehabilitation and construction of the Klay hatchery. The selected firm will also be charged with the responsibility of (Phase II) “supervision of works” for the rehabilitation of Klay Hatchery. The specific objective of this aspect of the consulting services is to assist the NaFAA/PIU to implement the Project as follows:

- To ensure high standards of quality assurance in the execution of works and to actively facilitate completion of the works within the stipulated time limit;
- To provide comprehensive supervision of project implementation activities carried out by the contractor and ensure complete compliance with the drawings, technical specifications and various stipulations contained in the contract documents; and

- To undertake comprehensive and independent measurement of activities and calculation of quantities and administer detailed record-keeping for the estimation of interim payments and calculation of final ad-measured quantity for final payment.

The short-listed candidate is expected to have the following qualifications:

**Qualifications and Experience:**

The Consultant is required to have the following minimum qualifications and experience:

The minimum requirements for the firm:

are (i) extensive and proven experience in civil engineering field for last five years. (ii) The Firm must show evidence of at least 5 years’ experience, knowledge and familiarity with project planning, design, survey and construction of aquaculture civil works. (iii) Experience, knowledge in structural/ work in the field level will be an added advantage.

In order to complete the assignment, the firm will assemble a multi-disciplinary team of technicians: Structural engineer, Mechanical Engineer, Electrical Engineer and Cad Operator with substantial practical experience (no less than 10 years) and adequate educational backgrounds (bachelor’s degree and higher) who will ensure the services are carried out in a professional and timely manner.

The team will include, but may not be limited to:

Description of Input (list only core responsibilities)	Position and experience
Lead and manage inputs of consultant team; responsible for overall product delivery and for timely and quality execution of services; primary contact point for contract execution	<b>Team Leader (Key Position) *-</b> The Person should be a highly-experienced engineer, with a minimum of Master’s Degree in Civil/Structural Engineering or equivalent, having overall experience of at least 10 years. He/she should have worked as Senior or Chief Resident Engineer or as 'Engineer' or 'Engineer's Representative' for at least eight (8) years on supervision of rehabilitation/construction projects.
	<b>Mechanical Engineer:</b> Bachelor’s degree in mechanical engineering or equivalent, at least 10 years’ experience
	<b>Electrical Engineer.</b> Bachelor’s degree in electronic or electrical engineering or equivalent, at least 10 years’ experience
	<b>Resident Engineer:</b> The Individual should be an experienced Engineer, with a minimum of Bachelor’s Degree in Civil Engineering or equivalent, having overall experience of at least 10 years. He should have worked as Senior Resident Engineer or as 'Engineer' or 'Engineer's Representative' for at least eight (8) years on supervision of rehabilitation/construction.

	<b>Cad Operator.</b> Bachelor’s degree in relevant field of engineering to include computer aided draughting and design. At least 8 years’ experience
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(\*) Key Positions that will be included in the technical proposal evaluation (based on the detailed CVs of the proposed respective team members).

The detailed Terms of Reference (TOR) for the assignment can be found at the following websites:

- a) [www.nafaa.gov.lr](http://www.nafaa.gov.lr)
- b) [www.emansion.gov.lr](http://www.emansion.gov.lr)
- c) [www.moa.gov.lr](http://www.moa.gov.lr).

The attention of interested individual Consultants is drawn to Section III, paragraphs, 3.14, 3.16, and 3.17 of the World Bank’s “Procurement Regulations for IPF Borrowers” dated July 2016, revised November 2017, August 2018 and November 2020, setting forth the World Bank’s policy on conflict of interest. Please refer to paragraph 3.17 of the Procurement Regulations on conflict of interest related to this assignment which is available on the Bank’s website at <http://projectsbeta.worldbank.org/en/projects-operations/products-and-services/brief/procurement-newframework> .

A Consulting Firm will be selected in accordance with the **Consultant Qualification Selection (CQS)** method set out in the Procurement Regulations.

Further information can be obtained at the address below during office hours, i.e. 0900 to 1600 hours GMT.

Expressions of interest must be delivered in a written form to the address below (in person, or by mail, or by fax, or by e-mail) by **Tuesday November 2, 2021 @ 4:00PM GMT**

**Liberia Sustainable Management of Fisheries Project (LSMFP)**

**Attn: The Acting Project Coordinator  
Mesurado Pier, Freeport of Monrovia  
Monrovia, Liberia**

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# Terms of Reference

## 1.0 Introduction

The government of Liberia through the National Fisheries and Aquaculture Authority (NaFAA) has received support from the World Bank Group toward the preparation and implementation of the, “Liberia Sustainable Management of Fisheries Project (LSMFP)”, and desires to apply part of the proceeds towards eligible payment of the services for a consulting firm to prepared detailed Architectural designs and supervision of works for the Klay fish hatchery, Klay, Bomi County. The purpose of this terms of reference is to solicit the interest of qualified consulting firm to prepare detailed Architectural Designs and supervised the works for the rehabilitation of Klay Hatchery.

## 2.0 Background

The Government of Liberia through the National Fisheries and Aquaculture Authority (NaFAA) has secured funding from the World Bank Group to help develop the Liberia fisheries and aquaculture sector. The project has identified five (5) components namely: **Component 1:** Improving management and governance of fisheries; **Component 2:** Improving handling of fish and fish products; **Component 3:** Support to Aquaculture; **Component 4:** Project Management and **Component 5:** Contingent Emergency Response Component (CERC). Component 3 focuses on supporting aquaculture through the development of a policy and regulatory framework and a zoning map to help identify prone aquaculture areas. It also focuses on establishment of a full-scale aquaculture technology research and development and a Quality Assurance Center (QAC) in Klay, Bomi County. This component is to raise awareness about aquaculture and develop a private sector aquaculture on the basis of public- private partnership (PPP).

Against this backdrop, through the Liberia Sustainable Management of Fisheries Project (LSMFP) is soliciting the expertise of a reputable and qualified engineering firm or consultant to facilitate the reconstruction of the Klay Fish Hatchery, that would serve as the Centre of excellence for the following purpose:

- Produce annually at least 10 million good quality fingerlings of tilapia (70%), catfish (20%) and Heterotis (10%) for smallholder and commercial fish farmers. This projected amount of fingerlings need is based on the current hectare (115) cover by fish ponds and tanks. This amount is expected to increase by 5 percent per annum based on the projection of the annual growth rate of the aquaculture sector and the emergence of cage farming (Kamstra and Kpadeh, 2017).
- Produce quality feed for fingerlings production, grow-out and research at Klay hatchery.

- Conduct primary and adaptive research in aquaculture development and technology in laboratory, indoor hatchery, tanks, earthen ponds and in recirculating aquaculture systems.
- Conduct testing of water quality parameters, proximate analysis and fish diseases
- Provide vaccine and treatment for disease fish. This will require facility such as cooling system to store vaccines, testing kits to detect fish disease, quarantine facility to monitor sick or imported fish, fish counter systems, microscopes, treatments, etc.
- Provide short- and medium-term technical training for farmers, hatchery managers and processors with emphasis on practical work.
- Provide extension/advisory services for farmers. This will require a lecture hall with a capacity of 30 participants and 2 housing units for lodging of trainees and staff.

### **3. Objective of the assignment**

The purpose of this piece of work is for a firm to prepare and provide technical input particularly in civil engineering plan, design, survey, as well estimating and costing of the rehabilitation and construction of the Klay hatchery. The selected firm will also be charged with the responsibility of (Phase II) “supervision of works” for the rehabilitation of Klay Hatchery. The specific objective of this aspect of the consulting services is to assist the NaFAA/PIU to implement the Project as follows:

- To ensure high standards of quality assurance in the execution of works and to actively facilitate completion of the works within the stipulated time limit;
- To provide comprehensive supervision of project implementation activities carried out by the contractor and ensure complete compliance with the drawings, technical specifications and various stipulations contained in the contract documents; and
- To undertake comprehensive and independent measurement of activities and calculation of quantities and administer detailed record-keeping for the estimation of interim payments and calculation of final ad-measured quantity for final payment.

### **4.0 Scope of Work**

The Civil engineering firm will undertake the following tasks under the guidance of the Division of Aquaculture and Inland Fisheries and the Project Implementation Unit (PIU).

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## **PHASE I (Detailed Architectural Designs)**

- Assist Aquaculture and Inland Fisheries Division and PIU in planning, designing, and identifying the infrastructure needed at the hatchery to supply the target fingerlings and broodstock.
- Assist in design of a cottage fish feed formulation and production facility including a fish nutrition lab to be able to utilize locally available feed ingredients.
- Design a Biosecurity system with appropriate zonation and quarantine system.
- Lead survey work and design of civil work related to the existing buildings, specify the civil works required to restore them to full productive capacity.
- Establish the site boundaries, ownership of the land and buildings, access to roads and services.
- Design a topographical and engineering lay out plan depicting the site elevations and the proposed layout of the Klay Hatchery and Center of Excellence, including all its structures, access, services, power supplies, waste systems.
- Put in place flood control mitigation measures to avoid fish mixing or loss where applicable especially in hatchery.
- Assess, redesign and develop current irrigation channels to accommodate other production systems, such as tanks.
- Lead the survey of existing and new ponds and water circulating systems to specify the works and materials needed to restore them to full productive capacity.
- Design the necessary power systems, power distribution systems and specify all requirements needed.
- Specify waste infrastructure to compliance with national standards.
- Specify accommodation requirements commensurate with the business plan for necessary staff and management to operate the hatchery.
- Provide detail costing of the reconstruction of the Klay Fish hatchery and Center of Excellence into a modern facility with laboratories and processing unit.
- Complete specifications for the package of works up to the standard required for an international competitive bidding tender to World Bank guidelines.

## **4.1 Scope of Work**

The Civil engineering firm (Supervision of Works) will undertake the following tasks under the guidance of the Division of Aquaculture and Inland Fisheries and the Project Implementation Unit (PIU).

### **PHASE II (Supervision of Works)**

- Verification and approval of contractor's construction documents.
- Hand-over site to the construction contractor in company of the client and any relevant stakeholders.
- Review and monitor contractors' construction, equipment supply, installation and commissioning programs and activities including: Construction programs; Equipment supply programs; Integrated Construction Program; Progress monitoring of construction activities.
- Health and Safety.
- Organize site meetings and act as secretariat
- Quality control of civil works including: Set out survey and measurement; Field and laboratory tests control; Foundation and permanent excavation works; Structural concrete; Erection of Steelwork; Foundation grouting
- Conduct independent measurement and estimation and thereby review the Contractor's Claims (Payments and Variation),
- Review of Contractors Claims (Payment and Variations) including: Payment claims; variations in conditions; and claims for extras.
- Environmental Monitoring.
- Review Contractors Submissions for Completion of the Works and action as appropriate: Partial and final taking over certificates; As-Built Drawings; Operations and Maintenance Plan; Acceptance of the Works; Defects liability Period.
- Submission for completion of the works and handover of the works and related actions as appropriate.
- The supervision firm will administer the contract and ensure that all of its clauses are respected.
- Assign a Resident Engineer [RE] at the Klay Hatchery Construction site. Specifically, the RE will carry out the following tasks:
  - a. give order to commence the works and variation orders as specified above;
  - b. approve the materials, equipment and construction procedures;
  - c. approve quality of the civil and vegetation related works according to the contract specifications;

- d. approve the contractor's work programmed, method statement and the source of materials;
  - e. approve and/or issue the schedule, working drawings, approve the setting out of the works and give instructions to the contractor;
  - f. make measurements and keep the measurement books;
  - g. issue interim certificates for periodic payments to the contractors, certify completion of parts or totality of works;
  - h. order tests of materials and of completed works, order removal of improper works;
  - i. advise the Client on all matters relating to the execution of the contract;
  - j. make sure that the environmental management plan (ESMP) and Resettlement action plan (RAP) are implemented timely and maintaining the desired quality standards; and
  - k. issue reports on a regular basis.
- The Firm will seek the prior approval of Client on:
    - a. Issuance of any variation orders with financial implications (as specified above), except in an emergency situation, as reasonably determined by the supervision consultant;
    - b. Issue variations in work quantities;
    - c. Sanction additional items, sums or costs;
    - d. Approve the subletting of any part of the works; and
    - e. Approve any extension of contractual time limits.
    - f. Prepare Final Account

### **Output (Phase I) Detailed Architectural Designs**

The firm is fully responsible for its independent report and will be prepared according to the following outline:

- Transmittal letter
- Executive summary
- Introduction
- Body of the report (design, layout, etc.)
- Reconstruction budget and expenditure
- Technical specifications of all works, equipment and materials required for rehabilitation to agreed standards
- Develop a detailed work plan consistent with the international best practice and standards.
- Supervise the works and to approve the construction materials and workmanship.

### **Output (Phase II) Supervision of Works**

The firm is fully responsible for its independent report and will be prepared according to the following outline:

- A. An Inception/commencement report along with a construction supervision manual in 3 copies, to be submitted within 14 days of commencement of services. The commencement report shall contain the details of all meetings held with the Client and the Contractor and decisions taken therein, the resources mobilized by the Consultants as well as the Contractor and the Consultants' perception in the management and supervision of the project. The Report shall also include the Master Work Programmed and Resource Mobilization for the Project. The primary objective of the Supervision Manual will be to evolve guidelines for administration, supervision and management of the project. Such a manual is not intended to be a contractual document nor is it to take precedence over the specifications. The Manual will merely act as a guide and reference to the various staff in the management and supervision of the project in discharging their duties in a smooth and systematic manner.
- B. A brief monthly progress report in 3 copies which should be submitted within 7 days of the end of each month.
- C. A detailed quarterly report in 3 copies, to be submitted within 14 days of the end of each quarter. Quarterly reports should include description of project activities, illustrated by progress/completion photographs, status of any delays and contractual claims, and details of all latest financial projections. The Progress Report (monthly and quarterly) shall contain details of all meetings, decisions taken therein, mobilization of resources (Consultants' and the Contractors') physical and financial progress and the projected progress for the forthcoming periods. The report shall clearly bring out the delays/non-conformance(s) if any, reasons for such delays, if any, and the recommendation for corrective measures. The report shall also contain the performance data for Contractor's plant and equipment.
- D. A detailed Contract Completion/ Final Report in 3 copies are to be submitted to the Employer. The consultant (will prepare a comprehensive final completion report of the construction contract package after completion of the work. The report shall incorporate summary of the method of construction, the construction supervision performed, as built construction drawing, problems encountered and solutions undertaken. The consultant shall submit the self-appraisal report within the prescribed time summarizing the following details:
- a) Details of Personnel including substitution made during the Assignment.
  - b) Details of variation orders issued.

- c) Details of extension of time granted to the Contractor.
- d) Details of Quality Assurance System.
- e) Quality observed at site by the consultant.
- f) Details of claims.
- g) Special preventive measures for maintenance suggested by the consultant.
- h) A Quality Assurance Manual in 4 copies, detailing all QA/QC procedures, to be submitted within 30 days of commencement of services.
- i) A maintenance Manual, detailing routine and periodic maintenance tasks that will be required to maintain the completed Project. Draft copies of this manual should be submitted for comments to the Employer within 12 months of commencing services.

E. Interpretation of the Technical Specifications and other Contract Documents.

**5.0 Qualification Requirements and Composition of Study Team:** The minimum requirements for the firm:

are (i) extensive and proven experience in civil engineering field for last five years. (ii) The Firm must show evidence of at least 5 years' experience, knowledge and familiarity with project planning, design, survey and construction of aquaculture civil works. (iii) Experience, knowledge in structural/ work in the field level will be an added advantage.

In order to complete the assignment, the firm will assemble a multi-disciplinary team of technicians: Structural engineer, Mechanical Engineer, Electrical Engineer and Cad Operator with substantial practical experience (no less than 10 years) and adequate educational backgrounds (bachelor's degree and higher) who will ensure the services are carried out in a professional and timely manner. The team is expected to have the following:

- Strong analytical and report writing skills
- Strong communication and facilitation skills
- High computer literacy, and
- Full proficiency in English

The team will include, but may not be limited to:

Description of Input (list only core responsibilities)	Position and experience
Lead and manage inputs of consultant team; responsible for overall product delivery and for timely and quality execution of services; primary contact point for contract execution	<b>Team Leader (Key Position) *-</b> The Person should be a highly-experienced engineer, with a minimum of Master's Degree in Civil/Structural Engineering or equivalent, having overall experience of at least 10 years. He/she should have worked as Senior or Chief Resident Engineer or as 'Engineer' or 'Engineer's Representative' for at least eight (8) years on supervision of rehabilitation/construction projects.

	<b>Mechanical Engineer:</b> Bachelor's degree in mechanical engineering or equivalent, at least 10 years' experience
	<b>Electrical Engineer.</b> Bachelor's degree in electronic or electrical engineering or equivalent, at least 10 years' experience
	<b>Resident Engineer:</b> The Individual should be an experienced Engineer, with a minimum of Bachelor's Degree in Civil Engineering or equivalent, having overall experience of at least 10 years. He should have worked as Senior Resident Engineer or as 'Engineer' or 'Engineer's Representative' for at least eight (8) years on supervision of rehabilitation/construction.
	<b>Cad Operator.</b> Bachelor's degree in relevant field of engineering to include computer aided draughting and design. At least 8 years' experience

(\*) Key Positions that will be included in the technical proposal evaluation (based on the detailed CVs of the proposed respective team members).

## 6. Deliverables, Schedule of Deliverables

### I. Deliverables Phase I (Detailed Architectural Designs)

The Consultant will produce the following deliverables (described further below):

1. Inception Report: 2 weeks
2. Draft Architectural Designs Report: 6 weeks
3. Final Architectural Designs Report: 8 weeks

**The total duration** of the consultancy services will be **8 weeks** from the date of contract signing.

#### 6.1 Deliverables, Schedule of Deliverables

### II. Deliverables Phase II (Supervision of Works)

The Consultant will produce the following deliverables (described further below):

- A. An Inception/commencement report along with a construction supervision manual in 3 copies, to be submitted within 14 days of commencement of services. The commencement report shall contain the details of all meetings held with the Client and the Contractor and decisions taken therein, the resources mobilized by the Consultants as well as the Contractor and the Consultants' perception in the management and supervision of the project. The Report shall also include the Master Work Programmed and Resource Mobilization for the Project. The primary objective of the Supervision Manual will be to

evolve guidelines for administration, supervision and management of the project. Such a manual is not intended to be a contractual document nor is it to take precedence over the specifications. The Manual will merely act as a guide and reference to the various staff in the management and supervision of the project in discharging their duties in a smooth and systematic manner.

- B.** A brief monthly progress report in 3 copies which should be submitted within 7 days of the end of each month.
  
- C.** A detailed quarterly report in 3 copies, to be submitted within 14 days of the end of each quarter. Quarterly reports should include description of project activities, illustrated by progress/completion photographs, status of any delays and contractual claims, and details of all latest financial projections. The Progress Report (monthly and quarterly) shall contain details of all meetings, decisions taken therein, mobilization of resources (Consultants' and the Contractors') physical and financial progress and the projected progress for the forthcoming periods. The report shall clearly bring out the delays/non-conformance(s) if any, reasons for such delays, if any, and the recommendation for corrective measures. The report shall also contain the performance data for Contractor's plant and equipment.
  
- D.** A detailed Contract Completion/ Final Report in 3 copies are to be submitted to the Employer. The consultant (will prepare a comprehensive final completion report of the construction contract package after completion of the work. The report shall incorporate summary of the method of construction, the construction supervision performed, as built construction drawing, problems encountered and solutions undertaken. The consultant shall submit the self-appraisal report within the prescribed time summarizing the following details:
  - a) Details of Personnel including substitution made during the Assignment.
  - b) Details of variation orders issued.
  - c) Details of extension of time granted to the Contractor.
  - d) Details of Quality Assurance System.
  - e) Quality observed at site by the consultant.
  - f) Details of claims.
  - g) Special preventive measures for maintenance suggested by the consultant.
  - h) A Quality Assurance Manual in 4 copies, detailing all QA/QC procedures, to be submitted within 30 days of commencement of services.

i) A maintenance Manual, detailing routine and periodic maintenance tasks that will be required to maintain the completed Project. Draft copies of this manual should be submitted for comments to the Employer within 12 months of commencing services.

E. Interpretation of the Technical Specifications and other Contract Documents.

It is anticipated that the Consulting services defined under this TOR will last for fifteen (15) months including Defect Liability Period. The estimated time of completion of the works is twelve months (12 months). The actual commencement date will be confirmed during negotiations and will be dependent upon progress towards award of contract with the Contractor for construction of the Project. The period of services has been derived on the basis of the consulting Services commencing two months prior to commencement of construction and extending 3 months beyond completion i.e, within the Defect Liability Period. However, neither the commencement nor completion of construction work shall be construed as necessary conditions of either commencement or completion of services.

The total duration of the consultancy services will be 15 months from the date of contract signing.

## **7. Institutional Arrangements**

NaFAA is the implementing agency of the project hence, the Consultant will work under the direct supervision of the LSMFP Project Coordinator and in close collaboration with the Division of Aquaculture and Inland Fisheries.

## **8. Consultant Responsibilities**

Data, personnel, facilities and services will be provided by the Consultant as detailed in this ToR. The Consultant will mobilize the necessary expertise for the effective delivery of the services as stipulated in the scope of works and ToR. The Consultant will carry out the services in the best interest of the Client, the GoL represented by NaFAA, with reasonable care, skills and diligence in line with sound professional, administrative and financial practices. The Consultant will be responsible to the client for the execution of the contract according to the terms and conditions spelled out therein. Consultant will organize presentations and dissemination events to enable the monitoring of progress and study results by the relevant NaFAA personnel.

## **9 Client's Responsibility**

The client, NaFAA, will provide access to available data, reports and information, and to relevant personnel of NaFAA and officials of government institutions with important roles in achieving the objectives of this terms of reference. NaFAA will also provide a favorable work environment and logistical support for the consultant, and support/facilitate stakeholder consultations. NaFAA will review all draft reports and provide comments and suggestions to enable the consultant finalize the detailed architectural designs and supervision of the works.

## **10.0 Payment Schedule**

Payment will be made according to the following schedule:

- (i) 20% after submitting an inception report
- (ii) 25% after submitting monthly progress report
- (ii) 30% after submitting quarterly progress report
- (iii) 25% after submitting final completion report

All the payments will be made only after acceptance of the reports and deliverables by the Client.

**11.0 Selection method** will be through Consultant Qualification Selection (CQS)