



Liberia Integrated Fisheries Sector Strengthening Project (LIFSSP)

National Fisheries & Aquaculture Authority

P. O. Box 10-1384

United Nations Drive, Bushrod Island

1000 MONROVIA 10, LIBERIA

**REQUEST FOR EXPRESSION OF INTEREST (REOI)
(Consulting Services – Firm Selection)**

Country: Liberia

Name of Project: Liberia Integrated Fisheries Sector Strengthening Project (LIFSSP)

Loan No.: I5809P

Date: October 7, 2026

Assignment Title: Consulting Services for the Provision of Detailed Engineering Design, Tender Documentation and Construction Supervision for the Construction of the Fisheries Competent Laboratory in Monrovia, Montserrado County

Reference No.: NAFAA/IFSSP/QCBS/001/2026

The National Fisheries and Aquaculture Authority (NaFAA) through the Government of Liberia has received financing support from the OPEC Fund for International Development (OPEC Fund) towards the implementation of the “Liberia Integrated Fisheries Sector Strengthening Project (LIFSSP)”, and intends to apply part of the proceeds towards eligible payment for the consulting services to provide detailed engineering design, prepare tender documentation and supervise the construction of the Fisheries Competent Laboratory in Monrovia, Montserrado County.

The consulting services (“the Services”) include the provision of comprehensive professional services for the detailed engineering design, preparation of bidding documents, procurement support, construction supervision, contract administration, and defects liability supervision for the construction of the Fisheries Competent Laboratory in Montserrado County. The assignment is expected to be completed in a period of thirty-six (36) months after the signing of the Contract.

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

a) www.nafaa.gov.lr

b) www.emansion.gov.lr

The National Fisheries and Aquaculture Authority (NaFAA), executing agency of the LIFSS Project, now invites eligible consulting firms to indicate their interest in performing the Services.

Interested firms should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services (brief corporate profile, description of similar assignments, experience in similar conditions, availability of appropriate skills, etc.)

The Consulting Firm or Consortium shall demonstrate adequate technical, professional, managerial, financial and organizational capacity to undertake the assignment.

Specifically, the firm shall:

- Firms shall demonstrate a minimum of ten (10) years of experience in multidisciplinary engineering consultancy services and proven experience in the planning and detailed design of specialized laboratory facilities, construction supervision, preparation of construction tender documentation, laboratory equipment integration, and laboratory quality and accreditation requirements.
- The Firm/Consortium shall demonstrate relevant experience in at least two (2) projects of comparable technical complexity and value, including preferably experience involving food, fisheries, veterinary, environmental, public-health or other analytical laboratories. Experience in Liberia or West Africa shall be considered an advantage.
- The Firm/Consortium shall demonstrate availability of a multidisciplinary team with qualifications and experience consistent with the requirements set out in the Terms of Reference.
- Demonstrate prior experience working on donor-funded projects, including familiarity with international design standards and procurement procedures.

The attention of interested Consultants is drawn to Section G and Appendix II of the OPEC Fund's Principles of Procurement of Goods, Works and Services dated June 2023, setting forth the OPEC Fund's policy on conflict of interest.

Consultants may associate with other firms to enhance their qualifications, but should indicate clearly whether the association is in the form of a joint venture and/or a sub-consultancy. In the case of a joint venture, all the partners in the joint venture shall be jointly and severally liable for the entire contract, if selected.

A Consultancy Firm will be selected in accordance with the Quality and Cost Based Selection (QCBS) method set out in the Procedures for the Procurement of Consulting Services dated April 2023.

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 Thursday, November 5, 2026 @ 4:00PM GMT:

Liberia Integrated Fisheries Sector Strengthening Project (LIFSSP)

National Fisheries and Aquaculture Authority

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National Fisheries & Aquaculture Authority
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TERMS OF REFERENCE (ToR)

Consultancy Services for the Provision of Detailed Engineering Design, Tender Documentation and Construction Supervision for the Construction of the Fisheries Competent Laboratory in Monrovia, Montserrado County

Under the

Liberia Integrated Fisheries Sector Strengthening Project (LIFSSP)

Project ID: I5809P

Reference No.: NAFAA/IFSSP/QCBS/001/2026

October 2026

1. BACKGROUND

The Government of Liberia, through the National Fisheries and Aquaculture Authority (NaFAA), is implementing the Liberia Integrated Fisheries Sector Strengthening Project (LIFSSP), with financing support from the OPEC Fund for International Development.

NaFAA is the Government institution responsible for the management and development of Liberia's fisheries and aquaculture sector. Its mandate includes strengthening fisheries management, improving fisheries value chains, enhancing fish quality and value addition, and developing institutional and technical capacities within the sector.

A key investment under LIFSSP is the establishment of a modern Fisheries Competent Laboratory in Monrovia. The laboratory is intended to provide the scientific and analytical infrastructure required to support fisheries quality assurance, food safety, regulatory compliance, fisheries development, research and international market access.

An earlier consultancy assignment is being executed to conduct feasibility studies and an Environmental and Social Impact Assessment (ESIA) for the proposed Fisheries Competent Laboratory. The results of those studies are intended to inform the final scale, configuration and technical requirements of the facility.

The proposed laboratory will be located in Monrovia. The facility is expected to comprise specialized laboratory spaces, sample reception and preparation areas, offices, support facilities, utilities, waste-management systems, storage areas and other infrastructure required for a modern fisheries testing facility.

The laboratory should be designed with due consideration to internationally recognized laboratory practices and the objective of establishing a technically competent laboratory capable of progressively achieving and maintaining accreditation, including conformity with the applicable requirements of ISO/IEC 17025.

The design must also respond to the Liberian regulatory context, including applicable requirements of NaFAA, the Liberia Environmental Protection Agency (EPA), relevant building and public-health authorities, utility providers and other competent government institutions.

The EPA has established procedures covering environmental permits, ESIA requirements, chemical handling and analytical laboratory-related regulatory matters, which shall be taken into account in the design and implementation of the facility.

2. RATIONALE FOR THE ASSIGNMENT

The establishment of the Fisheries Competent Laboratory is expected to strengthen Liberia's capacity to:

- undertake reliable and timely testing of fish and fishery products;
- verify compliance with national fisheries and food-safety requirements;
- support sanitary and phytosanitary (SPS) measures;

- support certification and export of fish and fishery products;
- detect microbiological, chemical and other contaminants in fishery products;
- provide scientific evidence for fisheries management and regulatory decisions;
- support surveillance and enforcement activities;
- provide analytical services to fisheries processors, exporters and other stakeholders;
- support fisheries research and development;
- improve national laboratory and quality-management capacity; and
- establish a foundation for national and/or international laboratory accreditation.

The Consulting Firm will therefore be expected to translate the approved feasibility study, ESIA requirements, functional requirements and Client's operational objectives into a complete, buildable and cost-effective engineering design and subsequently provide professional supervision of construction.

3. OBJECTIVE OF THE ASSIGNMENT

3.1 Overall Objective

The overall objective of the assignment is to engage a suitably qualified and experienced multidisciplinary consulting firm to:

1. undertake all investigations and technical assessments necessary for the final design of the Fisheries Competent Laboratory;
2. prepare complete detailed architectural and engineering designs;
3. develop technical specifications, bills of quantities and cost estimates;
4. prepare complete bidding/tender documentation for construction and associated works;
5. support NaFAA during the procurement of the construction contractor; and
6. provide professional construction supervision, contract administration, quality assurance, commissioning and defects-liability-period services.

3.2 Specific Objectives

The assignment shall specifically:

- convert the approved functional requirements into a practical laboratory layout;
- ensure appropriate segregation of laboratory activities, personnel, samples, clean and contaminated materials and waste streams;
- incorporate laboratory safety, biosafety, chemical safety and occupational health and safety requirements;
- provide appropriate mechanical, electrical, plumbing, HVAC and specialist laboratory systems;
- provide appropriate water, power, backup power, renewable-energy and other utility systems;

- provide appropriate laboratory waste, wastewater and hazardous-waste management systems;
- incorporate energy-efficient and climate-resilient design solutions;
- ensure accessibility and appropriate universal-design principles;
- incorporate security, fire protection and emergency-response systems;
- provide appropriate provisions for laboratory equipment and instrumentation;
- ensure that building and engineering systems are compatible with the intended laboratory equipment;
- develop a design capable of supporting laboratory accreditation requirements;
- optimize capital and lifecycle costs;
- prepare complete construction documentation; and
- ensure that construction is undertaken in accordance with the approved designs, specifications, applicable standards and contract requirements.

4. SCOPE OF SERVICES

The Consulting Firm shall provide a complete range of multidisciplinary professional services required for the successful delivery of the laboratory.

The scope shall include, but not necessarily be limited to, the following.

4.1 Review of Existing Information and Inception

The Consultant shall:

- **Review Technical and Site Information:** Assess feasibility studies, ESIA reports, site data, geotechnical and soil investigations, topographical surveys, and utility information.
- **Evaluate Laboratory Requirements:** Examine functional requirements, proposed equipment lists, and technical specifications to ensure adequacy and compliance.
- **Assess Regulatory and Standards Frameworks:** Review applicable national laws, regulations, permitting requirements, and international standards in laboratory, food safety, engineering, and construction.
- **Conduct Stakeholder Engagement:** Consult with NaFAA and relevant stakeholders to validate information, capture expectations, and align project objectives.
- **Identify Information Gaps:** Highlight deficiencies in available data, surveys, or specifications that may affect design and implementation.
- **Prepare an Inception Report:** Document reviewed information, outline design methodology, specify additional investigations, assess risks and constraints, define stakeholder consultation needs, propose functional arrangements, present a preliminary program, establish quality-assurance measures, and provide a detailed work plan.

5. SITE INVESTIGATIONS AND TECHNICAL ASSESSMENTS

The Consultant shall undertake or verify all investigations necessary for detailed design. These shall include, as applicable, the Topographical Survey, the Geotechnical Investigation, the Utilities Assessment and the Climate and Environmental Assessment.

6. LABORATORY FUNCTIONAL AND SPACE PLANNING

The Consultant shall develop a detailed functional brief and laboratory space plan in consultation with NaFAA and relevant technical stakeholders.

The laboratory configuration should, as appropriate to the approved testing program, consider Sample Management, Laboratory Areas and Administrative and Support Areas.

7. LABORATORY DESIGN REQUIREMENTS

The Consultant shall ensure that the laboratory is designed according to good international laboratory practice and is capable of supporting the implementation of an appropriate laboratory quality-management system.

Particular attention shall be given to:

- **Workflow, Movement, and Segregation:** Optimize workflow efficiency, personnel and sample movement, segregation of incompatible activities, contamination control, clean/dirty separation, controlled access, and laboratory ergonomics.
- **Environmental and Material Controls:** Ensure temperature and humidity regulation, ventilation, pressure relationships, appropriate finishes, ease of cleaning and maintenance, chemical and corrosion resistance, drainage, and equipment access/replacement.
- **Safety, Resilience, and Future Capacity:** Incorporate safety measures, emergency response provisions, and design flexibility to accommodate future expansion.

The design shall avoid cross-contamination between sample reception, preparation, microbiological testing, chemical testing and other laboratory activities.

8. ARCHITECTURAL DESIGN

The Consultant shall prepare complete architectural designs including:

- **Site and Master Planning:** Develop site development plan, master/site plan, external circulation, parking, landscaping, security fencing and gates, external service areas, waste storage, loading/unloading areas, and provisions for future expansion.
- **Building and Spatial Layouts:** Prepare building layouts, floor plans, laboratory furniture and casework layouts, internal circulation, accessibility provisions, and signage.

- **Architectural Detailing:** Produce elevations, sections, reflected ceiling plans, door and window schedules, and room-finish schedules.
- **Functional and Operational Considerations:** Integrate laboratory functional arrangements, ergonomic provisions, equipment access/replacement, and ensure compliance with safety, maintenance, and operational requirements.

Laboratory finishes shall be selected based on durability, hygiene, chemical resistance, cleanability and suitability for the intended use.

9. STRUCTURAL ENGINEERING

The Consultant shall undertake complete structural design for all permanent and ancillary structures.

The services shall include:

- **Structural Systems and Foundations:** Selection of structural systems, foundation design, and reinforced concrete design to ensure stability and durability.
- **Steelwork and Roofing:** Design of steel structures, roof systems, and associated equipment support structures, including plinths and vibration-sensitive supports.
- **Infrastructure and External Works:** Provision for water tanks and support structures, generator/fuel infrastructure, external structures, and drainage systems.
- **Specialized Structural Components:** Design of waste storage, loading/unloading areas, and other structural components required for safe and efficient facility operation.

All structural calculations shall be prepared and signed by appropriately qualified engineers.

10. MECHANICAL AND HVAC ENGINEERING

The Consultant shall design mechanical systems appropriate for a modern laboratory, including:

- **Ventilation and Airflow Systems:** Laboratory ventilation, HVAC systems, fresh-air supply, exhaust systems, fume extraction, fume cupboards, local exhaust ventilation, and pressure control where required.
- **Environmental Controls:** Temperature regulation, humidity control, refrigeration systems, cold rooms, freezers, and equipment cooling requirements.
- **Plumbing and Sanitary Installations:** Complete plumbing networks, sanitary installations, hot-water systems, and drainage provisions.
- **Specialized Utility Systems:** Compressed air, vacuum systems, and medical/technical gases where applicable.
- **Mechanical Plant Infrastructure:** Design of mechanical plant rooms and associated support systems to ensure reliability, safety, and maintainability.

HVAC design shall take account of laboratory-specific requirements and the need to minimize cross-contamination.

The Consultant shall prepare detailed air-change, heat-load and ventilation calculations.

11. ELECTRICAL ENGINEERING

The Consultant shall design the complete electrical installation, including:

- **Power Supply and Distribution:** Incoming electrical supply, main distribution, sub-distribution, laboratory power, general power, equipment-specific power supplies, and dedicated circuits.
- **Lighting and Protection Systems:** Internal lighting, emergency lighting, external lighting, earthing and bonding, lightning protection, surge protection, and power-quality requirements.
- **Backup and Renewable Systems:** Standby generator, automatic transfer systems, UPS systems, solar photovoltaic systems where appropriate, and battery energy storage where justified.
- **Low-Voltage and Safety Systems:** Data and communications infrastructure, access-control systems, CCTV, fire alarm systems, security systems, and other low-voltage installations.

The design shall provide appropriate redundancy for critical laboratory equipment and systems.

12. WATER SUPPLY, DRAINAGE AND WASTEWATER

The Consultant shall design:

- **Water Supply Systems:** Potable water supply, treated laboratory water systems where required, emergency water supply, and water storage.
- **Laboratory Fixtures and Safety Provisions:** Laboratory sinks, eyewash stations, and emergency showers integrated into the facility layout.
- **Drainage and Wastewater Systems:** General drainage, laboratory wastewater collection, wastewater pre-treatment, septic/sewer connections as applicable, and wastewater discharge arrangements.
- **Stormwater and Hazard Control:** Stormwater drainage and oil/chemical separation systems where required to ensure environmental protection and compliance.

The design shall ensure that laboratory effluent is appropriately managed before discharge.

13. FIRE AND LIFE SAFETY

The Consultant shall prepare a comprehensive fire and life-safety design covering:

- Fire detection and alarm, fire extinguishers, fire hydrants, fire hose reels where applicable, and fire suppression systems.
- Emergency exits, evacuation routes, emergency lighting, and assembly points to ensure safe evacuation.
- Fire-rated construction, smoke control where applicable, and emergency signage for compliance and visibility.
- Emergency response procedures/interfaces and coordination with safety systems to ensure resilience and preparedness.

The design shall consider specific hazards associated with chemicals, electrical installations, laboratory equipment and stored materials.

14. LABORATORY SAFETY AND BIOSAFETY

The Consultant shall incorporate appropriate laboratory safety measures, including:

- **Chemical and Biological Safety:** Chemical safety, biological safety, hazardous-material storage, chemical segregation, spill containment, biosafety provisions where required, and autoclave/sterilization arrangements.
- **Emergency and Protective Provisions:** Emergency showers, eyewash stations, emergency response procedures, personal protective equipment storage, and safety signage.
- **Ventilation and Waste Management:** Fume extraction, sharps and biological waste management, hazardous waste management, and controlled access to sensitive areas.

The Consultant shall consult appropriate laboratory safety specialists where specialized testing creates specific risks.

15. LABORATORY EQUIPMENT INTEGRATION

The Consultant shall work closely with NaFAA to develop and validate the laboratory equipment schedule.

The Consultant shall:

- Review existing equipment lists, develop equipment room data sheets, and identify equipment utilities.
- Establish electrical loads, HVAC requirements, water and drainage needs, exhaust provisions, compressed air/vacuum requirements, and data requirements.
- Determine equipment access and installation routes, design equipment supports/plinths, and coordinate laboratory casework for seamless integration.

- Prepare equipment connection schedules and ensure full building compatibility with proposed equipment.

The Consultant shall ensure that the design does not proceed on the assumption that equipment can be installed without verification of dimensions, utility loads and manufacturer requirements.

16. INFORMATION AND COMMUNICATION TECHNOLOGY

The Consultant shall design appropriate ICT infrastructure, including:

- **Core Connectivity and Cabling:** Structured cabling, laboratory data connectivity, internet connectivity, and Wi-Fi where appropriate.
- **Systems and Interfaces:** Laboratory Information Management System (LIMS) infrastructure, equipment interfaces, and secure server/network facilities.
- **Security and Access Control:** CCTV, access control, electronic security, and time-attendance systems where required.
- **Data Protection and Resilience:** Backup systems, data-protection infrastructure, and measures to ensure reliability and continuity of ICT services.

The design shall allow future integration of laboratory information systems and electronic sample tracking.

17. LABORATORY QUALITY AND ACCREDITATION READINESS

The Consultant shall ensure that the physical and engineering design supports the implementation of a laboratory quality-management system and eventual accreditation.

The design shall consider applicable requirements of ISO/IEC 17025 and other relevant standards applicable to the laboratory's intended testing scope.

The Consultant shall specifically address:

- Controlled laboratory environments, environmental monitoring, sample integrity, segregation of incompatible testing activities, and provisions for future expansion of accredited testing services.
- Equipment calibration requirements, equipment maintenance, reference-material storage, and temperature-controlled storage.
- Controlled access, document and records management spaces, and traceability systems to ensure compliance and accountability.
- Personnel safety, quality-control areas, and supporting infrastructure to uphold laboratory standards.

The Consultant shall coordinate with any separate consultancy responsible for laboratory regulatory instruments, staffing, quality systems and accreditation protocols to ensure consistency between the physical facility and operational requirements.

18. ENVIRONMENTAL AND SOCIAL REQUIREMENTS

The Consultant shall integrate the recommendations and mitigation measures contained in the approved ESIA/ESMP into the engineering design and construction documentation.

The Consultant shall:

- Incorporate environmental mitigation measures, construction-phase environmental requirements, erosion and sediment control, stormwater management, energy efficiency, and water-efficiency measures.
- Integrate occupational health and safety requirements, community health and safety measures, accessibility and inclusion considerations, and ensure compliance with applicable environmental permits and conditions.
- Provide waste-management systems, hazardous-material management, chemical storage and disposal measures, and ensure safe handling practices throughout the project lifecycle.

The Consultant shall support the Client in securing technical clearances and approvals required from relevant authorities.

19. CLIMATE RESILIENCE AND SUSTAINABILITY

The design shall incorporate practical and cost-effective measures to improve resilience and reduce operating costs.

These may include:

- **Energy and Resource Efficiency:** Natural daylight where appropriate, energy-efficient lighting, efficient HVAC systems, solar photovoltaic power, battery backup, efficient water fixtures, and water storage.
- **Environmental Management:** Rainwater management, appropriate roof drainage, storm/flood-resilient site design, and heat-resilient systems to safeguard long-term performance.
- **Durability and Low Maintenance:** High-performance building envelope, corrosion-resistant materials, and low-maintenance finishes to ensure longevity and reduced lifecycle costs.

The Consultant shall conduct lifecycle-cost considerations for major engineering systems and recommend technically and economically justified options.

20. SECURITY

The Consultant shall design an integrated security system, including:

- **Perimeter and Entry Control:** Perimeter security, controlled entry, security gates, and visitor management systems.
- **Access and Surveillance:** Access control, CCTV coverage, and security lighting for monitoring and deterrence.
- **Secure Storage and Restricted Areas:** Secure chemical and sample storage, restricted laboratory zones, and controlled access to sensitive spaces.
- **Data and Equipment Protection:** Measures to safeguard sensitive laboratory data, IT systems, and critical equipment from unauthorized access or tampering.

21. DETAILED ENGINEERING DESIGN

The Consultant shall prepare a complete detailed engineering design package sufficient for construction without requiring substantial redesign during construction.

The design shall include, as applicable:

- **Architectural and Engineering Drawings:** Architectural, structural, civil, mechanical, HVAC, electrical, plumbing, fire-protection, site-development, landscape, and drainage drawings.
- **Laboratory and Equipment Layouts:** Laboratory layouts, equipment layouts, ICT/security drawings, equipment schedules, and room data sheets.
- **Technical Documentation:** Details and schedules, engineering calculations, technical specifications, and construction methodology requirements.
- **Operational Provisions:** Operation and maintenance requirements to ensure long-term functionality and compliance.

All drawings shall be coordinated between disciplines.

22. COST ESTIMATES

The Consultant shall prepare:

- Preliminary cost estimate, detailed engineer's estimate, and updated cost estimates at each major design stage. The cost estimate should include appropriate physical and price contingencies in the cost estimates, as well as clearly identifying assumptions regarding taxes, duties, inflation/price, to provide a more realistic estimate of the overall project cost.
- Bills of quantities, cost breakdown by discipline, and cost breakdown by building/component.
- Provisional sums where justified and lifecycle-cost assessment for major systems.

Cost estimates shall be based on current market conditions in Liberia and, where appropriate, verified through market enquiries.

23. TENDER DOCUMENTATION

The Consultant shall prepare complete bidding documents for the construction works in accordance with the OPEC Fund's procurement requirements and applicable financing-agreement requirements.

The Consultant shall ensure that the drawings, specifications and bills of quantities are fully coordinated.

24. PROCUREMENT SUPPORT

The Consultant shall provide technical support during procurement, including:

- Responding to technical queries, preparing clarifications, and participating in pre-bid meetings and site visits.
- Reviewing proposed technical alternatives, preparing addenda where required, and clarifying bidders' technical submissions.
- Conducting technical evaluation of bids and preparing a comprehensive technical evaluation report.

The Consultant shall not make procurement decisions on behalf of the Client but shall provide professional technical advice.

25. CONSTRUCTION SUPERVISION

Following award of the construction contract, the Consultant shall provide full-time or appropriately structured professional supervision throughout construction. The full-time should include but not limited to the team Leader/Resident Engineer, Site Engineers, QA/QC Engineer, HSE Officer and Quantity Surveyor/Contract Engineer.

The supervision services shall include:

25.1 Mobilization

The Consultant shall review the contractor's mobilization plans, work program, method statements, construction health and safety plans, environmental and social management plans, quality-assurance plans, and material submittals, and shall establish appropriate project controls.

25.2 Construction Monitoring

The Consultant shall monitor:

- **Construction Quality and Methods:** Workmanship, materials, construction methods, dimensional accuracy, and overall quality control.

- **Laboratory and Structural Works:** Laboratory installations, structural works, MEP works, HVAC systems, electrical systems, plumbing, and fire-protection systems.
- **ICT, Security, and External Works:** ICT/security systems, external works, and compliance with approved drawings and specifications.

25.3 Quality Assurance

The Consultant shall:

- Inspect materials, witness tests, review test certificates, and verify laboratory and equipment installations.
- Maintain inspection records, issue inspection requests/approvals, and maintain a quality-control register.
- Identify defects, issue instructions within delegated authority, and verify corrective actions to ensure compliance.

26. CONTRACT ADMINISTRATION

Subject to the authority delegated by NaFAA, the Consultant shall assist with:

- Contract administration, measurement of works, verification of interim payment applications, variation assessment, and claims assessment.
- Extension-of-time assessments, progress monitoring, preparation of progress reports, and review of contractor's programs.
- Risk management, contract correspondence, and preparation of completion documentation.

All recommendations affecting cost or contract duration shall be submitted to NaFAA for approval.

27. TESTING AND COMMISSIONING

The Consultant shall develop and implement a comprehensive testing and commissioning plan covering:

- Building systems, electrical systems, generator, solar/renewable-energy systems, UPS, water systems, drainage, and wastewater systems.
- HVAC, laboratory ventilation, cold rooms, and laboratory equipment interfaces.
- Fire protection, security systems, ICT systems, and other specialist systems as required.

The Consultant shall witness commissioning and verify that all systems perform in accordance with the design requirements.

28. EQUIPMENT INSTALLATION AND ACCEPTANCE

Where laboratory equipment is procured under a separate contract, the Consultant shall coordinate with the equipment suppliers to ensure:

- delivery routes are adequate;
- equipment rooms are ready;
- utilities are available;
- environmental conditions are appropriate;
- equipment interfaces are correct;
- installation requirements are satisfied; and
- equipment commissioning does not conflict with construction activities.

The Consultant shall participate in integrated facility/equipment commissioning.

29. HANDOVER AND CLOSE-OUT

The Consultant shall support NaFAA in obtaining practical completion and final handover.

This shall include:

- Preparation of punch lists, verification of rectification, review of as-built drawings, review of operation and maintenance manuals, and verification of warranties.
- Preparation of asset registers, review of training records, and preparation of commissioning records.
- Conducting the final inspection and providing recommendation for taking-over.

30. DEFECTS LIABILITY PERIOD

During the defects-liability period, the Consultant shall undertake periodic inspections, identify defects, review the contractor's corrective actions, verify rectification, advise NaFAA on outstanding obligations, assist with final acceptance, and prepare a final completion report.

31. CAPACITY BUILDING AND TRAINING

The Consultant shall provide appropriate technical orientation/training to designated NaFAA personnel on:

- Interpretation of the design, operation of building systems, and laboratory engineering systems.

- Maintenance requirements, equipment interfaces, preventive maintenance, and facility management.
- Emergency systems and energy systems to ensure safe and efficient facility performance.

Where appropriate, the Consultant shall prepare training materials and maintenance checklists.

32. DELIVERABLES

The Consultant shall produce, at a minimum, the following deliverables.

Deliverable 1 – Inception Report

Deliverable 2 – Verified Site and Technical Investigation Report

Deliverable 3 – Functional and Concept Design

Deliverable 4 – Detailed Design

Deliverable 5 – Tender Documentation

Deliverable 6 – Procurement Support Report

Deliverable 7 – Construction Supervision Reports

Deliverable 8 – Commissioning Report

Deliverable 9 – Completion and Handover Report

Deliverable 10 – Final Consultancy Report

33. DRAWING AND DOCUMENTATION STANDARDS

All drawings shall be prepared using recognized computer-aided design/BIM software and submitted in the formats to be specified by NaFAA.

All engineering calculations shall be submitted in editable format where practicable.

A complete document-control system shall be established.

34. APPLICABLE STANDARDS AND REGULATORY REQUIREMENTS

The Consultant shall comply with applicable laws, regulations, codes and standards of Liberia.

The design shall also consider applicable international standards and good international industry practice, including, as relevant:

- ISO/IEC 17025 – General requirements for the competence of testing and calibration laboratories;
- applicable ISO laboratory quality-management standards;

- Codex Alimentarius standards and codes of practice relevant to fish and fishery products;
- applicable sanitary and phytosanitary requirements;
- applicable WHO/FAO laboratory guidance;
- applicable electrical and fire-safety standards;
- relevant international mechanical/HVAC standards;
- relevant laboratory safety and biosafety guidance;
- applicable occupational health and safety standards; and
- applicable environmental and social standards under the project's financing arrangements.

Where Liberian requirements and international standards differ, the Consultant shall identify the difference and obtain NaFAA's direction on the applicable requirement.

35. INSTITUTIONAL AND STAKEHOLDER COORDINATION

The Consultant shall coordinate closely with NaFAA, the LIFSSP Project Management Unit, relevant Government ministries and agencies, the Liberia Environmental Protection Agency, municipal and local authorities, utility providers, laboratory and food-safety authorities, fisheries processors and industry representatives where appropriate, laboratory personnel and technical specialists, equipment suppliers, the construction contractor, and any other stakeholders identified by NaFAA. Such coordination shall ensure that all technical, regulatory, and operational requirements are effectively integrated into the project design and implementation process.

In addition, the Consultant shall organize and facilitate technical design-review workshops at appropriate stages of the project. These workshops shall serve as structured platforms for stakeholder engagement, validation of design outputs, and resolution of technical issues, thereby supporting timely decision-making and ensuring that the project objectives are achieved in compliance with applicable standards and stakeholder expectations.

36. CONSULTANT'S TEAM

The Consulting Firm shall provide a multidisciplinary team with qualifications and experience appropriate to the assignment.

The proposed core team should include:

No.	Position	Qualification
KE - I	Team Leader/Project Manager	Advanced degree in engineering, architecture or related field; Preferably professionally registered; Minimum [15] years of relevant professional experience; demonstrated experience managing multidisciplinary infrastructure projects (including concept/detailed design); experience in laboratory (at least 2 comparable laboratory projects), healthcare, food-processing or other technically complex facilities preferred; demonstrated experience in construction supervision.

KE - 2	Laboratory Design Specialist	Degree in laboratory science, laboratory engineering, architecture, engineering or related discipline; minimum [10] years' relevant experience; demonstrated experience in laboratory planning and design; experience with ISO/IEC 17025 environments preferred; experience with food, fisheries, veterinary, environmental or public-health laboratories preferred.
KE - 3	Senior Architect	Degree in architecture; professionally registered/licensed where applicable; minimum [10] years' experience; experience designing specialized institutional/laboratory facilities.
KE - 4	Senior Civil/Structural Engineer	Degree in civil/structural engineering; professionally registered where applicable; minimum [10] years' relevant experience; experience in complex institutional buildings.
KE - 5	Mechanical/HVAC Engineer	Degree in mechanical engineering; minimum [10] years' experience; demonstrated laboratory HVAC experience preferred.
KE - 6	Electrical Engineer	Degree in electrical engineering; minimum [10] years' experience; experience with critical power, standby generation and specialized facilities preferred.
KE - 7	Quantity Surveyor/Cost Engineer	Relevant professional qualification; minimum [10] years' experience; experience in preparation of BOQs and construction cost estimates.
KE - 8	Environmental and Social Specialist	Master's Degree in Environmental Science, Environmental Engineering, Natural Resources Management, Social Sciences, Sociology, Development Studies, Anthropology, Community Development, or related discipline or related field; Minimum [8] years' experience; Demonstrated experience implementing the applicable Environmental and Social Framework (ESF), including preparation or supervision of Environmental and Social Management Plans (ESMPs). The candidate should also have experience in implementing the applicable Environmental and Social Standards (ESSs), including labor management, stakeholder engagement, and grievance redress. The specialist is expected to be stationed at the site during the entire construction phase. It is very important to note that his/her level of effort is expected to cover the entirety of the construction phase and some part of the design phase for E&S inclusion.

36.1 Additional Specialists

The Consultant shall propose additional specialists as necessary.

37. FIRM'S QUALIFICATION REQUIREMENTS

The Consulting Firm or consortium shall demonstrate:

1. at least 10 years of experience providing multidisciplinary engineering consultancy services;
2. demonstrated experience in detailed design of specialized laboratory facilities;
3. demonstrated experience in construction supervision;
4. experience in laboratory planning and design;
5. experience integrating laboratory equipment and building services;
6. experience with laboratory accreditation requirements, preferably ISO/IEC 17025;
7. experience in food, fisheries, veterinary, environmental, public-health or similar analytical laboratories;
8. demonstrated experience in preparing construction tender documents;
9. demonstrated experience in projects of comparable complexity and value;
10. experience working in Liberia or West Africa is desirable; and
11. adequate financial and organizational capacity to undertake the assignment.

38. PROJECT MANAGEMENT AND REPORTING

The Consultant shall report to the Project Manager NaFAA/LIFSSP.

39. DURATION AND IMPLEMENTATION SCHEDULE

The assignment is expected to be implemented over approximately **36 months**, structured broadly as follows:

Phase	Indicative Duration
Mobilization/Inception	2–4 weeks
Site investigations and functional planning	1–2 months
Concept design	1–2 months
Detailed design	2–3 months
Tender documentation	1 month
Procurement support	2–3 months, as required

Construction supervision	12–18 months, subject to contractor's program
Commissioning and handover	1–2 months
Defects-liability support	As per construction contract

The final schedule shall be proposed by the Consultant and agreed with NaFAA.

40. CLIENT'S RESPONSIBILITIES

NaFAA/LIFSSP shall, to the extent available, provide the Consultant with all relevant documentation and support necessary for the effective execution of the assignment. This shall include the provision of available feasibility and ESIA documentation, site information, laboratory functional requirements, and equipment lists. NaFAA/LIFSSP shall further facilitate access to the project site, coordinate with stakeholders, provide timely review and comments on submissions, and facilitate statutory approvals within its mandate. In addition, NaFAA/LIFSSP shall ensure that decisions required for timely implementation are provided without undue delay.

The Consultant, in turn, shall clearly identify any information required from the Client that is not available, thereby enabling NaFAA/LIFSSP to take appropriate measures to secure such information. This reciprocal obligation ensures that both parties maintain transparency and accountability, thereby supporting the efficient and compliant delivery of the project objectives.

41. Payment Schedule and Milestones

The Consultant shall be remunerated in accordance with the Consultancy Contract and the approved Financial Proposal. Payments shall be linked to the successful completion and acceptance of specific deliverables and milestones identified in these Terms of Reference.

Payments shall be made upon submission, review, and written acceptance of the relevant deliverables by the NaFAA. The NaFAA shall process payments in accordance with the payment provisions specified in the Consultancy Contract and applicable OPEC Fund procurement requirements.

The Consultant's remuneration shall include all costs associated with the performance of the Services.

41.1 Payment Methodology

The Consultancy Contract shall generally be structured as:

1. **Lump-Sum Payments** for design, procurement support, and defined deliverables; and
2. **Time-Based Payments** or agreed monthly payments for construction supervision and Defects Liability Period services, depending on the procurement approach adopted by the NaFAA.

The final payment mechanism shall be confirmed during contract negotiations and reflected in the signed Consultancy Contract.

42. LOCATION: Monrovia, Liberia

43. PROCUREMENT METHOD: Quality and Cost-Based Selection (QCBS)