REPUBLIC OF LIBERIA
ENVIRONMENTAL PROTECTION AGENCY (EPA)
Bright Building 302-A Old CID Road, Mamba Point
1000 Monrovia, 10 Liberia
P.O. Box 4024

Consultancy Services
Request for Expression of Interest

Job Title		Engineering Firm **(National)**	
Division/Department		Project: Enhancing the Resilience of Vulnerable Coastal Communities in Sinoe County, Liberia (ERVCCS)	
Program/Project Number/ GEF Project ID number		10376	
Activity Result		Detailed Design of Hybrid-Adaptation Coastal Structures (1.5km revetment and five 20m groynes)	
Assignment		To conduct assessments and design coastal structures that will protect Downtown Mississippi and Seebeh from coastal erosion	
Location		Greenville, Sinoe County	
Reports to	**ERVCCS Project Manager under the supervision of the Energy & Environment (E&E) Coordinator**	Consultancy Duration:	Six (6) months over a 3 year period

1.0 PROJECT BACKGROUND:

The EPA is Liberia's principal authority for environmental management. It coordinates, monitors, supervises, and consults with relevant stakeholders and sector Ministries, Agencies, and Commissions (MACs) on all activities related to protecting the environment and sustainable use of its natural resources.

The Government of Liberia (GoL), through the EPA and the United Nations Development Program (UNDP), and with funding from the Global Environmental Facility (GEF), received funding for the project "Enhancing Resilience of Vulnerable Coastal Communities in Sinoe County of Liberia (ERVCCS)." EPA is the project's Executing Entity. It is financed by a GEF Trust Fund grant and co-financed by UNDP and the GoL.

The project aims to build on existing projects to strengthen the resilience of vulnerable coastal communities and their livelihoods to the impacts of climate change, focusing on women and youths. Specifically, project interventions include 1) Strengthening Institutional Capacity for Climate Change Adaptation Planning, 2) Supporting Innovative Technologies for Climate Information and Communication Management, 3) Introducing Hybrid Adaptation Solutions, and 4) Supporting Resilient Livelihood Diversification through Training and Improved Access to Finance. The majority of the above interventions will target all coastal counties in Liberia. In contrast, hybrid adaptation interventions will be explicitly implemented in Sinoe County, one of the country's most vulnerable coastal counties.

The impacts of climate change, combined with non-climatic drivers, such as sand mining, the expansion of agricultural areas, unsustainable fishing, pollution, and inadequate drainage systems, compromise the

resilience of Liberian communities' ecosystems along the coastline. Consequently, local communities and ecosystems are experiencing increased coastal flooding and erosion, saltwater intrusion into groundwater supplies, waterlogging of inland areas, and sedimentation of rivers and freshwater resources due to Sea Level Rise (SLR) and higher-intensity rainfall events. The vulnerability of communities and ecosystems occurs through I) inundation and consequent damage of coastal infrastructure, II) loss of fishery and agriculture-dependent livelihoods, III) decrease in stable income generation for coastal communities, IV) increase in conflict and competition over resources within communities, V) decrease in food and nutrition security, VI) increased risk of vector- and waterborne diseases through waterlogging, and VII) increased pressure on surrounding ecosystems to compensate for the reduced provision of services from coastal, wetland and mangrove ecosystems. In addition, the vulnerability of Liberia's coastal communities and their resilience to climate change, particularly in Sinoe County, is exacerbated by the limited capacity of GoL to provide essential services and adequate support for, among other things, water and sanitation, healthcare, utility-scale energy, and road infrastructure.

As a result, coastal communities in Liberia are threatened by damaging floods and erosion, both of which are increasing due to sea level rise and other impacts of climate change, such as increasingly intense rainfall events and the current limited financial and technical capacity at the national and county levels to address these threats.

2.0 SCOPE OF WORK

Under component three of the project, two revetments, 800m and 700m, are required to be constructed in Downtown Mississippi and Seebeh, respectively. In addition to the revetments, five groynes, each measuring 20m, will also be constructed perpendicular to the coastline. The task of the consultant spans the development of a detailed design of the coastal protection structures, as mentioned above, in addition to developing a construction management plan and providing quality control and quality assurance throughout the construction period. The design must be backed by scientific research/study conducted, as stipulated under subsection 4 of this Term of Reference (ToR), and must meet the technical specifications and social requirements while being environmentally friendly. The following contains the detailed scope of work of the consultant:

I. Detailed Design

A comprehensive design, generated from the collection of wave and tidal data, near-shore bathymetric data, etc., will be developed by the consultant in alignment with the project's goal. The design must contain a layout of the structures, elevations, perspective, and longitudinal cross-sections. Additionally, a perspective of the finished hybrid–*engineering and green*–adaptation structure must be included.

II. Site Topography Studies

The topographic survey must be tied to the beach profiling levels and correlate to the specific geographic reference system used within Liberia and the Marine Datums. These data include the following:

- Mean Sea Level (MSL): The average level of the sea's surface, used as a reference point for elevation.
- Chart Datum: The reference point used for nautical charts, typically related to the lowest astronomical tide (LAT).

The topographic survey should extend along the beaches and reach a water depth of up to 5 meters Chart Datum (CD) or approximately 50 meters from the coastline.

III. Bathymetry

The survey must cover the area up to 25 meters offshore.
The survey may extend into the Sinoe River if necessary. The consultant will need to determine the appropriate type, extent, and boundary of this extension to achieve the project's objectives.

IV. Wave Model

Both design and wave conditions will be determined by the wave model and used as inputs to assess the shape and movements of the sediments.

The wave study will incorporate pertinent evaluations and analyses of long-term statistics utilizing well-known statistical data-fitting distribution approaches (Weibull, Gumbel, Maximum Likelihood, Pareto, etc.) under extreme conditions (using a peak over threshold, annual maxima, etc.).

Sound engineering conclusions can be drawn to guide the choice of long-term design statistics for the design by appropriately comparing and assessing the wave data gathered at the offshore location with data from other online databases (such as NCEP).

V. Geotechnical Studies

The geotechnical investigation must include the following: soil classification, grain size, plasticity index, moisture contents, shear strength, and other tests suitable to the design.

VI. Quality Control (QC) and Quality Assurance (QA)

A full-fledged quality control, beginning from day one of construction, must be carried out. This includes monitoring the construction procedure so that it aligns with the specifications and follows the construction management plan developed by the consultant.

VII. Environmental and Social Management Plan (ESMP) and Construction Management Plan (CMP)

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The consultant shall update the project's ESMP and shall develop a construction management plan that will be used throughout the construction process. The ESMP and CMP shall be compliant with the Environmental Protection Management Law of Liberia and the UNDP Social and Environmental Standards (SES). The SESs applicable to this project include SES 1, SES 3, SES 7, and SES 8. Hence, the CMP must present prevention and mitigation strategies for the above standards and the Labor Law of Liberia. For the building phase, a site layout plan that includes laydown places, rock stockpile locations, and suggested office space areas must be created. Above all, sanitary and safety measures should also be inclusive.

VIII. Provision Daily Sustenance Allowance (DSA) for Seconded Engineers

The consultants shall provide DSA for four (4) engineers, seconded from the Ministries of Public Works and the Mines and Energy, respectively based on the construction schedule. These engineers will be responsible for constructing the structures required to be designed by the consultant.

3.0 KEY EXPECTED OUTPUT

i) The detailed hybrid engineer design will be a comprehensive design report that includes layouts, perspectives, elevations, and cross-sections of the drawing.
ii) A bill of quantities to accuracy of +/- 10-15% will be developed and presented in the Final Design Report
iii) Wave Data Report and Geotechnical Investigation Report
iv) Construction Management Plan
v) Routine QC and QA Report of Construction

4.0 PAYMENT SCHEDULE

No.	Output	Payment Plan
1.	Inception Report	10%
2.	Submission of First Draft Design	30%
3.	Submission of Final Design	40%
4.	Submission of Bi-annual QC/QA Report	20%

5.0 EVALUATION CRITERIA

5.1	**Expertise of Firm**	**10 marks**
	i. Specific Experience	
	ii. General Organization Capability	
5.2	**Proposed Methodology, Approach, and Implementation Plan**	**35 marks**
	i. Quality of technical methods	
	ii. Delivery Schedule	
	iii. Level of innovation	

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5.3	**Key Personnel Qualification**	**25 marks**
	i. Team Lead-Civil Engineer	
	ii. Met-Ocean Specialist	
	iii. Coastal Structure Engineer	
	iv. Construction Expert	
	v. Quantity Surveyor	
	vi. Environmental, Social, Health, and Safety Expert	
5.3	**Key Personnel Specific Experience**	**30 marks**
6.0	**A summary of any other information that would be relevant to the contract**	
7.0	**Total**	**100mark**

8.0 CONTRACT AND REPORTING REQUIREMENTS:

The consultant shall report directly to the Project Manager under the supervision of the Energy and Environment Program Coordinator of the Environmental Protection Agency. Regular updates and meetings shall be held for effective collaboration and supervision.

The consultant shall be recruited for six (6) months over a three (3) year period under a Service Contractual agreement. The EPA reserves the right to rescind the contract during that period should the performance of the Gender expert not meet its requirements.

SUBMISSION OF APPLICATION

Interested Engineering firm should submit their Proposal including, a one-page cover letter, Technical & Financial Proposal, Business Registration & Tax Clearance, Past Performance record in designing Hybrid-Adaptation Coastal Structures, PPCC Vendor Certificate, Article of Incorporation, CVs of all personnel, to the below address, or by email at maldonakarway1@gmail.com indicating in the subject area **"Engineering Firm To Conduct Assessments and Design Coastal Structures that will protect Downtown Mississippi and Seebeh from Erosion"**. All interested firms are to address their applications to the following address:

Maldona K. Karway
Procurement Officer
Project Management Unit
Enhancing the Resilience of Vulnerable Coastal Communities in Sinoe County Project
Environmental Protection Agency
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A hard copy of your Proposal should be delivered to the Procurement Officer of the Sinoe Coastal Project at the EPA head office in Mamba point. The closing date for the submission of proposals is 4 PM, April 14, 2025. Any submission coming/received after this deadline will not be given consideration. Only submissions meeting the requirements/criteria in the RFP will be considered for evaluation.

NOTE: This information is posted on https://www.emansion.gov.lr, https://www.epa.gov.lr, https://www.undp.org, and can be found in the News Newspaper.

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