

# **Enhancing the Resilience of Vulnerable Coastal Communities in Sinoe (EVCS-MME)**

**Ministry of Mines & Energy  
Republic of Liberia  
P. O. Box 10-9024  
UN Drive, Capitol Hill**

## **REQUEST FOR EXPRESSIONS OF INTEREST**

**Issuance Date: April 24, 2023**

### **CONSULTANCY OPPORTUNITIES FOR THE FOLLOWING ROLES:**

- A. International Specialist on Integrated Coastal Zone Management(ICZM)**
- B. International Specialist to conduct multi criteria analysis to select site-specific, viable nature-based and engineered adaptation solutions**
- C. International Climate Change and Coastal Adaptation Specialist to conduct mapping of vulnerable assets, livelihood and ecosystem**

### **I. Background**

Liberia's coastal zone is adversely affected by several climate change impacts, including increases in i) sea level rise (SLR) of 20–30 cm by 2040–2059 resulting from rising temperatures; ii) the frequency of high-intensity coastal storms caused by strong winds blowing over the surface of the ocean; iii) the intensity of rainfall events, demonstrated by an increase in precipitation on the maximum rainfall day of 9–18% by 2041–2060; and iv) rainfall variability, with wet season rainfall increasing by 1–2% and dry season rainfall decreasing by 4–13% by 2040–2059. These climatic changes, which are projected to continue to intensify in the future under a range of SSP scenarios, exacerbate the impacts of heavy rainfall, storm surges, and wave action on the country's coastal areas. 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 ecosystems and Liberian communities situated 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 as a result of SLR and higher-intensity rainfall events. The vulnerability of communities and ecosystems occurs through the: 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

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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 the Liberian government to provide basic services and adequate support for, inter alia: i) water and sanitation; ii) healthcare; iii) utility-scale energy; and iv) road infrastructure.

As a result of coastal communities in Liberia being threatened by damaging floods and erosion – both of which are increasing as a result of sea level rise as well as 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, the project has now been approved for implementation. The Environmental Protection Agency of Liberia (EPA) is the Executing Entity for the Project which is financed by a GEF Trust Fund grant and co-financed by UNDP and the Government of Liberia (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 youth. Specifically, project interventions include: i) strengthening institutional capacity for climate change adaptation planning; ii) supporting innovative technologies for climate information and communication management; iii) introducing hybrid adaptation solutions, and iv) supporting resilient livelihood diversification through training and improved access to finance. The majority of the above interventions will target all coastal counties in Liberia, while hybrid adaptation interventions will be implemented specifically in Sinoe County, one of the country's most vulnerable counties.

## **II. Invitation**

The Ministry of Mines and Energy hereby invites individuals to submit Expressions of Interest for the three positions below:

### **1. INTERNATIONAL SPECIALIST ON INTEGRATED COASTAL ZONE MANAGEMENT (ICZM)**

#### **1.1 CONSULTANCY OBJECTIVES**

The main beneficiaries of this activity are the Ministry of Mines and Energy, Environmental Protection Agency, Forestry Developmental Authority, the Project Management Unit (PMU), Sinoe, Montserrado, Grand Bassa, Rivercess, Grand Cape Mount, Maryland, Grand Kru, Bomi, and Margibi Counties.

The objective is to develop nine climate-responsive ICZM plans for all coastal counties with stakeholders. The consultancy is in two phases: **PHASE 1** of the consultancy will begin in **May of 2023** and will incorporate the development of the nine ICZM plans, using a participatory and

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consultative approach that will ensure that marine and coastal terrains are fully integrated into the legal and administrative planning framework. **PHASE 2** of this consultancy focuses on updating the ICZM plans and will begin **three years after** the development of the plans. This Activity is for the development of the Nine Climate Responsive ICZM plans. (Completion of Phase One only).

The nine climate-responsive ICZM plans will build on the national ICZM plan formulated by the GCF-funded ‘Monrovia Metropolitan Climate Resilience Project’ by mainstreaming the climate-resilient ICZM approach presented in this national plan at the county level. Specifically, elements of the GCF-supported national ICZM plan that will inform the county-level ICZM plans include: i) providing guidelines for integrating climate change risks into planning and coastal resource use; ii) supporting integrated development planning; iii) developing linkages between government institutions, local research bodies, the private sector and civil society groups through an ICZM Committee and Cross-Sectorial Working Group; iv) facilitating the incorporation of climate change considerations into coastal zone management; and v) a national high resolution, multi-criteria vulnerability map.

Additionally, the ICZM plans will include the Sea and River Defence and Risk Management (SRDRM) which will outline the necessary visions, goals, policies, and objectives to manage flooding and erosion defense mechanisms and infrastructures in Liberia. On this account, the document will support planners at the national, county, and local levels to formulate Sea and River Defence and Risk Management Plans (SRDRMPs) under the ICZM framework that incorporate climate information and outline adaptation options to address coastal development risks. The Sea and River Defence Investment Management Plan (SRDIMP) will contribute to the overall ICZM planning framework. Specifically, the SRDIMP will provide development standards for implementing a new adaptation development approval process. These development standards will not only include climate change adaptation considerations but will also focus on addressing the challenge of illegal coastal reclamation, wetland degradation, and sand mining, which aggravate current and future climate change impacts. The SRDIMP will ultimately assist the Ministry of Mines and Energy (MME), Environmental Protection Agency (EPA), Ministry of Agriculture (MOA), and the Forestry Development Authority (FDA) in demonstrating a transparent process towards setting priority adaptation intervention measures based on effective and sustainable engineering best practices.

## **1.2 Scope of Works**

The specific tasks to be performed by the consultant shall be but not limited to the following:

- a) This activity will include the desk review of national instruments and reports – such as ICZM plans, and the Climate Hazard and Vulnerability Report on Liberia, etc. – relating to the development of county-level ICZM plans to enhance the baseline data—whether quantitative or qualitative. In collaboration with county stakeholders, the nine climate-responsive plans will be developed to ensure that marine, coastal biodiversity, and gender-related policies are fully integrated into the legal and administrative planning framework. The work will be undertaken using a participatory and consultative approach.
- b) Carry out the relevant surveys to complete the baseline information required on the coastal and marine resources of the area in all nine coastal counties.
- c) The consultants will identify and assess the anthropogenic pressures on coastal resources as a result of socio-economic and other human activities. The features and structures that are

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impacting the coastal environment will also be assessed. Conflicts in the coastal zone between activities of different interest groups and the environment will be identified, evaluated, and addressed.

- d) Identify and assess all Environmental Sensitive Data (ESA) found in the area while using **GIS and Remote Sensing software** and provide appropriate recommendations for their protection and sustainable management taking into consideration ecological linkages and flow.
- e) Identify measures and interventions for the management and protection of all areas including options for potential development.
- f) The consultant will include recommendations on the measures and actions which shall be taken to protect the natural resources based on their vulnerabilities. Achievable targets shall be formulated in the plan and the proposed measures will be phased into the short, medium, and long term. Implementation mechanisms with clear responsibilities for the different stakeholders will be proposed.
- g) Develop appropriate management and planning tools to enable appropriate management of the marine environment in all coastal counties. The priority environmental problems in the areas that directly affect human health, economic productivity, social well-being, and environmental quality will have to be portrayed in GIS format. An updated database in GIS format will be produced before and after validation. It will be a tool for the assessment and reporting on the state of these areas.
- h) Integrate the Community Action Plan into the ICZM for all areas. The consultants will prepare an Action Plan for activities and measures that will be needed for integrated management of the areas, including implementation schedules, log-frames, and financial strategies and options to fund proposed activities. The activities should be geared towards actions and measures and sustain facilities resulting from the implementation of the Integrated Management Plan. A cost-benefit analysis will be carried out for the proposed measures.
- i) Make any other inputs that are relevant for the development of the ICZM plan that will encompass socio-economic development and inter-sectorial approach in all coastal zones.
- j) Incorporate the optimization of the long term economic benefits to the society from the marine area under national jurisdiction.
- k) Facilitate a one-day Inception Workshop and a validation workshop at different periods.
- l) Perform any other functions relative to the consultancy as required.

## **1.3 Duties/Tasks/ Responsibilities**

- a) Lead the consultation process at national and sectorial levels to develop ICZM plans for the coastal counties. S/he will carry out desk review, along with national consultants, of existing

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information, formulate options, and develop guidelines concerning ICZM planning and Management.

- b) Attend task team meetings with PMU, MME, EPA, and UNDP
- c) Carry out the relevant surveys to complete the baseline information required on coastal and marine resources of the areas.
- d) Identify and assess pressures on coastal resources, and develop a management policy that will serve as a roadmap for the development of the SRDRMPs.
- e) Assess the environmental sensitivity of the areas for future development.
- f) Formulate Integrated Management plans for ESA, gender responses, and the protection and sustainable management of natural resources, including marine and coastal ecosystems in all coastal counties.
- g) Develop appropriate management and planning tools to enable sound management of areas.
- h) Develop Action Plan for all areas.
- i) S/he will be the team lead and will therefore be responsible for the organization, coordination of all works, compilation, and timely submission of deliverables in a written report.
- j) Develop nine climate-responsive ICZM plans that incorporate climate information and outline adaptation options to address coastal development risks.
- k) Develop Watershed and vegetation maps for all nine coastal counties.
- l) Plan and facilitate a 1-day inception workshop for the ICZMP
- m) Lead the facilitation of a 2-day working session intended to integrate gender into the ICZMP and the Sea and River Defence and Risk Management Plans (SRDRMPs).

## 1.4. Duration of the assignment / Time Frame

This Consultant shall be hired to execute phase one of this activity and his/her contract period shall not exceed 100 days.

## 1.5 Travel and Duty Station

The consultant will work in and travel to all the coastal counties (Montserrado, Grand Bassa, Grand Cape Mount, Bomi, Sinoe, Grand Kru, Rivercess, Maryland and Margibi).

## 1.6 Academic Qualification

A minimum of Master's Degree or its equivalent in coastal management, environmental science, environmental engineering, environmental law and policy, ICZM, or Management of Marine and Coastal Biodiversity.

## 1.7. Required Experience for Role

- a) At least 5 years of professional experience in conservation, sustainable use and management of marine and coastal biodiversity.
- b) At least 3 years of proven experience at international level in Integrated Coastal Zones Management planning, and must have done similar work.
- c) Experience in using GIS and Remote Sensing and experience in watershed and other maps making; as well as coastal and marine biodiversity assessment and management using GIS and Remote Sensing Software.

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- d) Experience in the assessment and evaluation of the status the coastal zone, identifying the main causes of impacts and proposing remedial measures.
- e) Experience in creating “gender inclusive” ICZM plans is an advantage.
- f) Experience in serving on a UNDP/GEF funded project or other donor projects of similar nature.

## 2. International Climate Change and Coastal Adaptation Specialist to conduct mapping of vulnerable assets, livelihood and ecosystem

### 2.1 Consultancy Objectives

The objective of the consultancy is to conduct a **mapping exercise of vulnerable assets, livelihood and ecosystems** to inform the adaptation option in Sinoe County. The expected results of the consultancy shall be coastal erosion, livelihood, assets, and ecosystem vulnerability mapping.

### 2.2 Scope of Work

The assessment will focus on vulnerability of all six coastal communities in Sinoe County, and will mainly be focus on flooding and erosion, assets and livelihood with highlights on food security, health, coastal and marine ecosystems, agriculture and biodiversity sensitive areas, cultural sites, and fishery, etc. Sectors to be covered and the inter-sectorial linkages are found in the Table below:

S/No.	Sectors	Inter-sectorial Linkage
1.	Agriculture ( Fisheries, livestock and crops)	1. Forestry 2. Water 3. Livelihood
2.	Infrastructure ( Built and Environment Transport )	1. Water Supply 2. Human Health
3.	Forestry	1. Livestock 2. Fisheries 3. Agriculture 4. Wildlife 5. Human Health 6. Water Resource
4.	Coastal/Marine	1. Infrastructure 2. Assets 3. Fisheries 4. Wetland 5. Mangroves

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## **2.3 Duties/Tasks/Responsibilities**

The consultant shall complete the following tasks:

1. Conduct desk review of all relevant documents, and situational analysis (socio-economic and environmental assessment);
2. Attend meetings with the Environmental Protection Agency, the Ministry of Mines and Energy, the UNDP, and the Project Management Unit (PMU);
3. Conduct stakeholders' engagement plan mainstreaming gender and mapping the vulnerability of the project communities;
4. Conduct focus group discussion in most vulnerable communities based on exposure;
5. Conduct empirical data analysis to deduce evidence of vulnerability of coastal communities and recommend mitigation and/or remedial approach that will offset the vulnerability project location.
6. Collecting baseline data on a range of environmental resources, related to (but not limited to) air quality, soil, agriculture, socio-economy, waste and sanitation, ecology, forestry etc., using GIS and Remote Sensing software.
7. Undertake risks, vulnerability and flood/erosion hazard mapping, using GIS and Remote Sensing software.
8. Predict future vulnerability of livelihood, assets and ecosystem;
9. Provide relevant support to all works leading to the achievement of expected result

## **2.4 Duration of Assignment/Timeframe**

The Assignment shall run for a period that won't exceed three months.

## **2.5 Travels and Duty Station**

The Consultant shall be based in Sinoe County but shall make occasional trips to Monrovia.

## **2.6 Academic Qualifications**

A Master's degree in Environmental Science, Engineering, Coastal and Marine Engineering, Geology, Social Sciences and other fields relevant to vulnerability mapping in similar area of the world is required; a PhD shall be an added advantage.

## **2.7 Required Experience for the Role**

- a) At least 3 prior roles in mapping vulnerable assets of coastal communities or in a related activity.
- b) Experience in working under pressure with minimum supervision;
- c) Experience in working in a multi-cultural environment
- d) Experience in working in remote areas while meeting tight deadlines
- e) Experience in the usage of GIS and Remote Sensing software
- f) Demonstrate knowledge in vulnerability assessment, policy analysis, and data-



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based analysis for evidence, livelihood and assets vulnerability mapping.

- g) Experience in working on UNDP, GEF or other large skill donor funded project will be appreciated;
- h) Experience in undertaking sustainable development issues, climate modeling and vulnerability and adaptation policy.

## **3. International Specialist to conduct multi criteria analysis to select site-specific, viable nature-based and engineered adaptation solutions**

### **3.1 Consultant Objectives**

The objective of the consultancy is to conduct a multi-criteria analysis to select site-specific, viable nature-based, engineered adaptation solutions, including details on costing, implementation and maintenance.

### **3.2 Scope of Work**

The scope of this activity shall cover all the activities that will lead to the preparation of the final report referred to as Task 12 in the next section (Section 3.3).

### **3.3 Duties/Tasks/Responsibilities**

The specific tasks to be performed by the consultant are as follows:

1. Conduct desk review/analysis of all relevant documents;
2. Conduct several stakeholders' engagement meetings, including the UNDP, the EPA, and the MME and all project affected communities to Identify and develop stakeholders' engagement plan
3. Collect quantitative and qualitative baseline data on the assessment of engineered nature-based solutions, and assess the effectiveness, political viability, cost, sustainability, and maintenance of each option, considering the expert analysis and stakeholders' engagement process;
4. Prepare relevant maps, graphs, charts, and diagrams, where necessary, for the site-specific selection
5. Conduct situational analysis (socio-economic and environmental), while mainstreaming gender;
6. Assess the need for viable adaptation intervention for reduction of vulnerability of coastal communities to climate-induced sea level rise impacts through hybrid solutions at project location;
7. Design multi criteria matrix for selecting site-specific option for the application of nature-based and engineered adaptation solutions;



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8. Assess the effectiveness, impact potential, political viability, maintenance option, and cost analysis of the grey infrastructure intervention and the hybrid solution (nature-based engineered adaptation option), based on combination of expert analysis and a rigorous stakeholder engagement process;
9. Provide relevant costing on implementation and costing on selected options;
10. Develop and design a resilient solution while using multi-criteria assessment through a participatory process for planning and identifying the adaptation option;
11. Facilitate a validation workshop along with the Climate Change and Coastal Adaptation Specialist to finalise the feasibility assessment and selection of adaptation solutions with relevant stakeholders;
12. Prepare a comprehensive and analytical report that presents the best site for the implementation of nature-based and adaptation solutions as well as the cost required for application and maintenance of the solution. Note that the final report shall take all stakeholders comments from the validation workshop into account.
13. Perform all necessary tasks in line with your functions as required by the PMU

## **3.4 Duration of Assignment**

The Duration of this Assignment shall not exceed 100 days.

## **3.5 Travels and Duty Station**

The Consultant shall be based in Sinoe County, Liberia and will have to make occasional trips to Monrovia.

## **3.6 Academic Qualifications**

A Master's degree in Environmental Science, Climate Science, Engineering, Coastal and Marine Management, Geology, Natural Science, Civil Engineering, Economics, and other related fields are required. A PhD will be an added merit.

## **3.7 Required Experience for the Role**

- 1) Must have at least 7 years of experience in performing a similar task.
- 2) Must have experience in conducting multi-criteria analysis in Sub-Saharan Africa or related terrains
- 3) Must have the ability to achieve results within time and budget
- 4) Must have experience in conducting stakeholders' engagement while mainstreaming gender in a remote environment;
- 5) Must have experience in working in harsh and multi-cultural environment
- 6) Proven strong analytical skills and relevant professional experience in conducting gender assessments;

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- 7) Computer literacy, especially Microsoft Office, GIS, and MCA software
- 8) Excellent team building and interpersonal skills
- 9) Tolerant and culturally sensitive, knowledgeable in dealing with local environment.
- 10) Strong networking skills and the ability to transfer knowledge to people from diverse backgrounds.
- 11) Working knowledge of UNDP, GCF, AFDB, World Bank or GEF Climate Change, Conservation or Coastal related projects.

### III. Shortlisting Criteria and Applicable Guidelines

The Applicable procedure for this recruitment is the Selection of Individual Consultant (IC) as outlined in Regulation 41(3) of the Public Procurement and Concessions Amended Regulations, June 2014 of the Republic of Liberia.

Candidates who meet the Academic Qualifications and Required Experience of each role shall be shortlisted. Candidates will also be assessed for their fluency in English, as every report required must be submitted in English.

### IV. How To Apply

Interested Candidates must submit a cover letter and CV to the address below or by Email to [sinoecoastalproject@gmail.com](mailto:sinoecoastalproject@gmail.com). **Deadline for application is May 8, 2023 by 4pm, Liberia Time. Females are encouraged to apply. Please indicate the position you are applying for in the Subject Line of your Email and Cover Letter.** The address for application and clarification is:

Omilford Saye Nyah, Jr.  
Procurement Specialist  
Enhancing the Resilience of Vulnerable Coastal Communities Project (EVCS)  
Liberia Hydrological Services Building, Old Road  
[sinoecoastalproject@gmail.com](mailto:sinoecoastalproject@gmail.com)  
231-886-471-572/ 231-777-471-572

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