

INCEPTION WORKSHOP REPORT



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1. Background of the Project

The coastal zone of Sierra Leone is one of the most densely populated areas of the country. Quite a large percentage of the population is found in the coastal area and up to 55% of them make substantial use of the coastal resources. Sierra Leone's coastline reaches 560km much of which is sheltered. The sheltered coast is dominated by extensive mangrove systems (230 km) and mud flats. Only about 150 km of the coastline is significantly developed and this includes Freetown (the capital). Over the time, vegetative cover alongside the coastline in the identified hotspots have been degraded for several (climate- and anthropogenic-driven) reasons. On the one hand, anthropogenic activities, particularly due to fuel wood demands leading to mangrove deforestation to smoke fish and construction have reduced mangrove cover that otherwise function as a natural protective barrier to coastline erosion. In addition the mining of sand is a current practice along the coastline of Sierra Leone contributing to coastal/beach erosion by disturbing the surface and exposing the substrate to rain, rivers and wave action. The IPCC predicts that, by 2100, the global sea level could rise by up to one metre (IPCC 2001a) and Sierra Leone is already suffering from the impact of Climate Change with a number of natural and man-made hazards taking place including, inundations from the major rivers flowing through and to the coast of Sierra Leone, (notably in the Pujehun district); flash floods which come down from a number of rivers during the monsoon period; saline intrusions due to decreased river water flows in the dry season e.g. along the Scarcies river as well as aggravated coastal erosion.

It is under this background that the Government of Sierra Leone (GoSL) has requested the Least Developed Countries Fund (LDCF) to support this Full-Sized Project (FSP) in order to implement Sierra Leone's number 14 priority NAPA intervention: "Development of an Integrated Coastal Zone Management Plan for Sierra Leone". Therefore, in this context, Global Environment Facility (GEF), through the Least Developed Countries Fund (LDCF), recently approved the Project Identification Form (PIF) that was presented by UNDP on behalf of the Environment Protection Agency of Sierra Leone (EPA-SL) on "Adapting to Climate Change Induced Coastal Risks in Sierra Leone". A Project Preparatory Grant (PPG) has also been approved by the GEF council for the preparation of an integrated proposal for a full-sized project document to be submitted for CEO endorsement within 12 months commencing with a Project Preparation Phase.

1.1 Project Details

The Project Objective is to "strengthen the ability of coastal communities to systematically manage climate change risks and impacts on physical infrastructure and economic livelihoods". To attain the set objective the PIF presents three Components and respective Outcomes shown on Table 1.

Project Components

Project Components	Expected Outcomes	Indicative Grant Amount (\$)
1. Generating sound scientific knowledge and access to information;	Enhance the availability of high quality climate risk information that is critical for development decision-making in the coastal zone	2,500,000
2. Climate information "internalized" into coastal development policy processes;	Develop appropriate protection measures, policy/legal tools and integrated coordination mechanisms to improve /support policy design and implementation in dealing with current and long-term coastal challenges	2,000,000

3. Awareness and alternative, innovative activities to support adaptation in the coastal zone	Public awareness enhanced and climate resilient alternatives to sand mining promoted for better adhesion of policy makers and communities on adaptation.	5,000,000
TOTAL		9,500,000

The indicative GEF grant amount totalize 9.5 million USD distributed over the three Components so to support the development of the proposed Outputs shown on Table 2.

Project Expected Outputs

Outcome Nº	Expected Outputs
Outcome 1	<p>Output 1.1: Climate and oceanographic monitoring equipment's (e.g. tidal gauging, Kalesto radar gauge; pressure sensors; Logosens-2 datalogger; OTT HDR DCP satellite transmitter for the Meteosat, weather monitoring network, etc.) and related data processing systems installed along the coastal zone for measuring climate and sea level rise parameters to improve the knowledge base for future climate risks;</p> <p>Output 1.2: Probabilistic modelling and assessment of natural hazard risk and vulnerability to climate change impacts undertaken;</p> <p>Output 1.3: Economic impact modelling on the projected costs of climate change impacts and costs and net benefits of adaptation options;</p> <p>Output 1.4: Design and implement a National Coastal Risk Information and Planning Platform that will facilitate decision-making on coastal development based on objective assessment of natural hazards and climate change risk criteria.</p>
Outcome 2	<p>Output 2.1. Engineering Designs for Coastal Stabilization structures realised for further integration into the coastal urban planning and tourism development plan on the basis of technical, climatic, environmental and socioeconomic criteria;</p> <p>Output 2.2. Integrated Coastal Management Plans taking into account sea level rise and coastal erosion impacts developed for further integration into Urban and districts development plans;</p> <p>Output 2.3. Guidelines & recommendations developed to revise the EIA procedures, upgrading technical norms for infrastructure and properties taking into account climate risks and coastal erosion assessments;</p> <p>Output 2.4: Establish a dedicated budget (including budget management capacities) for the realization and sustainability of the Coastal Stabilization structures.</p>
Outcome 3	<p>Output 3.1. An outreach program designed and implemented to improve decision-making, strengthen information access and data resources for key stakeholders, disseminate project-generated data and information, and foster public awareness about the potential impacts of climate change;</p> <p>Output 3.2. Means and capacities (business development & management skills, access to micro-credit, etc.) provided to at least 2 sand miner youth associations on the Western Area Peninsula to pursue relevant and profitable climate resilient alternative livelihoods (ecotourism, agro-business, beach rehabilitation, etc.) to reduce pressure on the beach.</p> <p>Output 3.3. Participatory implementation of urgent and priority medium-scale soft (non-structural) and hard (structural) coastal adaptation works undertaken to protect coastal community at risks.</p>

2. Objectives of the Mission

The mission was undertaken between 15th and 25th May 2016 in the framework of the consultancy contract signed to support the UNDP Country Office to engage with the Government of Sierra Leone through Environment Protection Agency and other key stakeholders in the design of a project on “adapting to climate change induced coastal risks in Sierra Leone” to be financed by the Least Developed Country Fund (LDCF) resources.

The primary tasks of this mission were:

- 1) To facilitate the kick-off meeting for the design phase gathering the information needed and data to complete the project document and support the approved indicative outcomes and outputs;
- 2) To develop the work plan for the technical assessments that will be undertaken during the PPG contributing to development of the UNDP project documents for the LDCF financed project on “adapting to climate change induced coastal risks in Sierra Leone”; and
- 3) To understand and consult with on-going development initiatives (both public and externally-funded) to fully align the proposed LDCF financed project with those already on-going/planned, making sure to identify all relevant on-going initiatives in the country on Coastal Climate Change Adaptation (CCA) initiatives in the coastal zones of Sierra Leone that must be born in mind in the design. Annex I provides the full mission schedule.

These tasks were addressed by: i) holding a workshop among the stakeholders, including the Government Institutions, NGOs/CBOs, donors and UNDP; ii) and conducting bilateral meetings with key representatives of bilateral/multilateral organizations represented in Sierra Leone; and iii) carrying out site visits for identification of potential Project implementation pilot sites. Potential co-financing sources, including Sierra Leone’ Government Institutions, projects and organizations managing/developing relevant on-going/planned costal adaptation related initiatives were also consulted to ensure the UNDP-GEF/LDCF project can leverage and mutually support (and be supported by) other projects.

3. Activity 1: Inception Workshop

An interactive national workshop on climate information and Coastal Adaptation was held on Wednesday 19th May 2016 at the Hill Valley hotel Conference Centre, Freetown, Sierra Leone to bring together the Government Institutions, NGO’s, CBO’s, key representatives of bilateral/multilateral organizations and Academia to contribute towards the design phase of this LDCF initiative and endorse the Project Identification Form (PIF) which include among other activities the collection of information and useful data for project design, the validation of the indicative outcomes and outputs, and baseline information necessary to develop a participatory plan to involve communities as well as the identification of implementing partners and negotiation pertaining to implementation arrangements and co-financing.

The workshop was also used to present the intended scope of the project (as cleared by LDCF/Council) to the technical and financial partners and to exchange ideas on strategies to elaborate, implement and develop a sustainable activities towards strengthening the ability of coastal communities to systematically manage climate change risks and impacts on physical infrastructures and economic livelihoods in Sierra Leone. Annex II shows the agenda for the workshop.

The workshop was organized by the UNDP and hosted by EPA-SL and involved fifty three participants (Annex II) from organizations ranging from government agencies with key roles to play in the LDCF

project, experts working on marine and coastal biodiversity, academics and civil society organizations as well as UN agencies, the local Universities, local Press and bi-lateral cooperation Partners. The Workshop included a Working session during the second part involving all participants divided into three Working Groups (Annex III).

3.1 Opening Statements and Presentations

Prior to the start of the function there were opening Statements delivered by the *UNDP Resident Representative, Dr Saskia Marijnissen* and *UNDP Programme Officer, Ms Mariatu Swaray*. Summary of these Statements can be found in Annex IV.



Plate 1. Opening Statements delivered by the *UNDP Resident Representative, Dr Saskia Marijnissen*.

The event was facilitated by Mr. Bob Jones, who introduced the speakers, chaired the deliberations and facilitated discussions on the following presentations:

1st Presentation: UNDP Programme Specialist (Ms Mariatu Swaray) and Mr Paul A. Lamin) EPA-SL Deputy.

Title Presentation on Project Identification Form (PIF)

2nd Presentation: Lead Local Consultant, Dr Raymond Johnson.

Title Existing and completed relevant initiatives relevant to the project

3rd Presentation: Team Leader International Consultant, Dr Timóteo C. Ferreira.

Title: *“Adapting to Climate Change induced coastal risks in Sierra Leone”. An initiative financed by UNDP – LDCF and led by the GoSL.*



Plate 2. Delivery of technical presentation by Dr Raymond Johnson, the Lead Local Consultant.

Just after the Presentations there was a Question (Q) and Answers (A) Session during which several participants have expressed their views and ask for clarifications. Again, a summary of the contents of these Presentations and minutes of the Q&A Session can be also found in Annex IV.

3.2 Results from Inception Workshop Group Discussion

Each of the three Working Groups were set up with Experts dealing with different project baseline issues which were grouped into three main themes. The summary results obtained from each of the three working groups on the discussion conducted around each of themes proposed are shown below. Full report is found in **Annex IV**.

Group 1.

Theme: *Climate change Adaptation baseline*: including Identification of current and past Projects addressing climate change coastal adaptation and Responsible Institutions and respective project sites.

Institutions	Identified Projects	Project sites
EPA-SL	“Coastal and marine oil spill sensitivity and mapping”.	Coast of SL
EPA-SL	“Integrated coastal zone management plan”	Coast of SL
EPA-SL	“State of the marine environment”	Coast of SL
EPA-SL	“Land use/land cover mapping for SL”	Nation wide
EPA-SL	“Revegetation of the Aberdeen creek”	Aberdeen Ramsar site
SLMA	“National oil spill contingency plan”	Coast of SL
MET	“Early warning system on climate change”	Nation wide
MAFFS/NPAA	“Wetlands conservation Project”	SL River Estuary Wetlands/
CEFCON-SL/CAN-SL	“Awareness Raising on adaptation measures to climate change”	Magazine wharff, Congo Town Wharff, Regent, Ogo Farm, Laka
ENFORAC	WAPFOR “Responsible Eco Tourism” “Sea Turtle and migratory birds nesting project” “Mangrove planting”	SL River Estualries, Tombo, John obay/Bureh Town, Hamilton/Sussex, Yelibuya and Shabro Island

Group 2.

Theme: *Land-Use and Policies*: including Identification of Main issues in Land-Use/Planning in coastal zones; appropriate Engineering Designs for Coastal Stabilization; Gaps in current Policies; Main vulnerabilities to be addressed by the coastal erosion risk Profiles; training needs for policy-makers.

Identified Issues for Discussion	Working Group 2. Discussion Results
Land –use planning guidelines	<ul style="list-style-type: none"> • <i>There is a land-use policy that can be accessed from the Ministry of Lands, Country Planning and Environment.</i>
Main Vulnerabilities to be addressed by the coastal erosion risk profiles	<ul style="list-style-type: none"> • <i>Coastal infrastructural damage</i> • <i>Sand mining</i> • <i>Coastal deforestation</i> • <i>Flooding</i> • <i>Wind & storm</i> • <i>Seaweeds</i>
Key legislations to be reviewed	<ul style="list-style-type: none"> • <i>Draft Wetlands Act, 2015</i>

	<ul style="list-style-type: none"> • <i>Crown Lands Ordinance, 1961</i>
Existing Preliminary assessment of appropriate Engineering Designs for Coastal Stabilization	<ul style="list-style-type: none"> • <i>Not aware of any preliminary assessment of appropriate engineering designs for coastal stabilization</i>
Gaps in current Policies/Coordination Mechanisms for Coastal Adaptation	<ul style="list-style-type: none"> • <i>Weak institutions/implementation mechanisms</i> • <i>Poor enforcement of policies</i> • <i>Conflicting mandates i.e. EPA and Ministry of Lands, Country Planning and Environment</i> • <i>Weak and out-dated policies</i>
Key training needs for policy – makers.	<ul style="list-style-type: none"> • <i>Capacity building</i>
Identification of Potential Project Sites – selection and justification	<ul style="list-style-type: none"> • <i>Western Area Peninsular Coastline – due to sand mining</i> • <i>Yawri Bay - coastal biodiversity conservation</i>

Group 3.

Theme: *Gender issues*: including Identification of Projects involving gender mainstreaming, Proposal for Potential Indicators for Gender mainstreaming; identification of potential project risks.

Identified Projects involving gender mainstreaming	Institutions involved
“Aberdeen creek project planting of mangrove”	<ul style="list-style-type: none"> • Implementing Agency: EPA and partners (forestry/Agriculture, tourism, MFMR, NPAA.
“Mangrove project of Orugu Project”	<ul style="list-style-type: none"> • implanted by FAO, Ministry of Agriculture
“Awareness raising project on climate change adaptation in Tombo fishing communities on the use of mangrove as source of energy for fish processing”	<ul style="list-style-type: none"> • Implementing partners: Ministry of Agriculture and Fisheries
“Sea weed project”	<ul style="list-style-type: none"> • Implementing partners: (NTB, MTCA, EPA, NPAA, MFA,
DEPHE project (Alleviating poverty and enhancing gender Quality in coastal communities in Sierra Leone:	<ul style="list-style-type: none"> • Implementing partners: British council and IMBO)
Lumley beach reclaim nation project:	<ul style="list-style-type: none"> • Implementing partners: (NTB, MTC). <p>Women united project: implementer- Girl child Network sierra Leone.</p>
Project development issues	Contributions from the 3rd Working Group
Proposed Potential Indicators for Gender mainstreaming	<ul style="list-style-type: none"> • Acreage of mangrove planted • Acreage of ecosystem restoration • Number of women and men employed by the project • Level of diversification in farming system • Number of women using domestic plants as energy for fish processing • Number of gender tourist guards. Change in number of tourist guards • Change in number of tourist activities per communities

	<ul style="list-style-type: none"> • Acreage of fire wood plantation created for domestic energy • Level of diversity in art and craft articles
Assessment of project feasibility	<ul style="list-style-type: none"> • Project is feasible because it has been successively implemented by other organizations mentioned above.
Assess and identify risk of the project	<ul style="list-style-type: none"> • Availability of fund • Political will • Capacity of the communities to adapt to the project • unfavourable natural conditions: • Instability (civil unrest)

4. Activity 2: Stakeholders Consultations

Prior to the Inception Workshop a stakeholders’ consultation was carried out through bilateral meetings with key representatives of bilateral/multilateral organizations represented in Sierra Leone. Therefore, the following stakeholders were approached:

- United Nations Development Programme, UNDP
- The Ministry of Local Government and Rural Development
- The Ministry of Youths and Sports
- The Sierra Leone Tourist Board
- The Ministry of Tourism
- National Protected Area Authority
- The Ministry of Fisheries and Marine Resources
- The Office of National Security
- The Sierra Leone Maritime Administration
- The Meteorological Department, Sierra Leone
- The Environmental Protection Agency, Sierra Leone
- The Office of the European Community Delegation in Sierra Leone
- The Institute of Marine Biology and Oceanography



Plate 3. Meeting at the Ministry of Fisheries and Marine Resources with Ag Director of Fisheries Mr Mohamed Cole and Ag. Deputy Director of Fisheries Mrs Kadijatu Jalloh.

The purpose of these meetings was to inform the relevant institutions and departments of the scope of the proposed LDCF project, to understand the role of key information and coastal adaptation actors, elicit details that could be factored into the LDCF project during the design phase so as to ensure that the LDCF financed project coordinates and complements other ongoing and planned initiatives. Full report is found in **Annex V**.

5. Activity 3: Site Assessment - Field Visits

A two days field trips to potential project sites were undertaken by the International and National Consultants. The objective of the field trips was to assess the physical and socio-economic conditions of two of the potential sites identified during the PIF development.

The PIF proposed project sites in the northern coast include Konakridee, in the Port Loko district, Bailor and Yelliboya Island around Kambia, the Western Area Peninsular and the Yawri Bay. The sites assessed during the field trips were:

- a) The Freetown Peninsula
- b) Konakridee in the Kaffo Bullom

These site visits were carried out on the 20th and 21th May respectively with the objective of carrying assessment missions to proposed project sites in the northern coast and beaches along the Western Area Peninsula, and Yawri Bay. These particular sites were selected as they appear to be those highly impacted by coastal erosion processes and also heavily populated where community livelihoods are directly linked to fishing, sand mining and mangrove use.



Figure 1. Map with location of the potential project pilot sites visited: 1. The Freetown Peninsula (Aberdeen Creek, Lakka, Hamilton and Tombo); 2. Konakridee in the Kaffo Bullom.

On arrival, at each site, the climatic coastal risks, CC impact on community's livelihood and community vulnerability, as well as the indicative adaptive requirements were assessed through visual reconnaissance and discussion with community leaders. Full report is found in **Annex VI**.

6. Key Findings

6.1 Inception Workshop

Ministry of Fisheries and Marine Resources:

The Ag. Deputy Director of Fisheries in the Ministry of Fisheries and Marine Resources welcomed the development of the project. She informed that her ministry had set up *Community Management Associations* within the various declared Marine Protected Areas (MPAs) facilitated by the *WARF project*. She highlighted the *need to train women in fish processing techniques* and indicated her desire to see the return of the Cooperatives.

The Sierra Leone Tourist Board:

The General Manager of the SL-TB raised concern about the *recent occurrence of the sargassum seaweed on the Sierra Leone shores* which poses a serious threat to the tourism industry.

There were general concerns on the co-financing aspect from other donors/Agencies. It was explained that donor engagement and commitment was crucial.

6.2 Stakeholders Consultations

- United Nations Development Programme, UNDP

The UNDP Resident Representative, Dr Saskia Marijnissen stressed the need to *focus on the ecosystem based approach* on setting up coastal adaptation strategy rather than on "hard measures". She also advised the Team to try and *engage with UNEP* on pursuing this endeavour during the project development.

- The Ministry of Local Government and Rural Development

The Ministry welcomes the support of the project for the development and delivery of climate change awareness campaign strengthening the Ministry *paradigm shift in the management of natural resources* to local communities which requires their involvement in the protection of the environment;

- The Ministry of Youths and Sports

The Ministry acknowledges the activities of youths regarding sand mining and mangrove cutting amongst others and the risks climate change pose to their wellbeing and the need to adapt to the adverse consequences. In addition, in their view the implementation of this LDCF project would help his ministry in their efforts to *sensitize the local populace about the threats posed by climate change risks to the coastal zone*.

- The Sierra Leone Tourist Board

The Tourist Board informed about their *plans to develop tourist facilities all along the coastline* and the wish to *target ecotourism products* in particular. They also informed that their main concerns rests on the widespread *sand mining, mangrove cutting and in particular the periodic invasion of our beaches by the sargassum seaweed* which poses a serious threat to the industry.

- National Protected Area Authority

The National Protected Area Authority (NPAA) informed of their plans to carry out *rehabilitation of degraded mangrove areas along parts of the Sierra Leone River estuary and Aberdeen Creek* in collaboration with the Environment Protection Agency, Sierra Leone. NPAA also expressed the need for the LDCF project to *identify alternative livelihood to sand mining from the beaches*. Finally, the Director of NPAA informed that there is *no mapping of risk zones and vulnerability to sea level rise and coastal erosion*.

- The Ministry of Fisheries and Marine Resources

The Ministry informed on the setting up of *Community Management Associations* within the various declared Marine Protected Areas (MPAs) facilitated by the WARF project also the *Women in Fisheries Initiative*. The Deputy Director of fisheries informed their intention to *train women in fish processing techniques* and indicated her desire to see the return of the Cooperatives and *make available* for women fisher folk *more efficient fish drying facilities* to reduce the pressure on the mangroves for firewood.

- The Office of National Security

ONS is extremely concerned about the rate and level of degradation in the coastal area of the country and the challenges faced by the law enforcement agencies in protecting the environment and ready to cooperate.

- The Sierra Leone Maritime Administration

The Executive Director SLMA highlighted the importance of monitoring the coastline of the country for Climate Change Adaptation initiatives. He reaffirmed their readiness and willingness to *collaborate with the project intention to set up monitoring facilities in the coastal zone including water quality*, stating that their office was strategically placed in a location that may *offer protection to any equipment that might be installed* in that location.

- The Meteorological Department, Sierra Leone

The SLMD has expressed the willingness to support the LDCF project, sharing some of the *training and monitoring initiatives* with their own sister LDCF as well as the intended idea of *extending the Early Warning System to the coastal zones*.

- The Environmental Protection Agency, Sierra Leone

The Executive Chairperson, EPA expressed her satisfaction for the initiation of the LDCF and solicit that the *project may contribute to Vulnerability and climate change coastal erosion risks using GIS systems to support mainstreaming of Climate Change onto key country legislation*. Also informed that EPA will need support on the *training programme* for their staff. She advised that the LDCF should put **emphasis on the Ecosystem-Based Approach** (naturalised, domesticated, native, and non-evasive) on Coastal Adaptation rather than on the “hard measures”. She also disclosed her concern on the *invasion of our beaches by the sargassum seaweed* and wished that the LDCF could contribute to an adaptation solution in the coastal zone.

- The Office of the European Community Delegation in Sierra Leone

The EU representative informed of all EU funded projects in Sierra Leone and also Regional for co-financing mechanisms. It was also informed that EU is supporting the Regional Decade for West Africa which focuses on natural resources and the fight against desertification, *restoration of the mangroves and the coastal region and climate change related projects within the context of regional collaboration*¹.

- The Institute of Marine Biology and Oceanography (IBMO)

Senior officials of IBMO informed the Consultants of their willingness to cooperate with the LDCF particularly in matters related to *sea costal monitoring and vulnerability and risk assessment and sensitivity analysis*. They also expressed their full support for the extension of *Costal Early Warning System* that the LDCF is prepared to carry out. However, IBMO lacks resources for *key monitoring equipment, scientific material and training* for their technical staff.

6.3 Site Assessment - Field Visits

1. The Freetown Peninsula

Aberdeen Creek site: The Team observed how community members led by EPA and other Institutions are trying to carry out mangrove reforestation. However, the conditions under which these activities are being carried out and the magnitude need to be supported by the LDCF project so to *extend the*

¹ https://ec.europa.eu/europeaid/sites/devco/files/eeas-2015-rip-west-africa_fr.pdf

target area in terms of size and also set up nurseries for replication of vegetative material as well as increase the number of community members involved with youths and women.



Plate 4. View of the mangrove forestation area (left) and; current structure for replication of vegetative material (right).

Key Findings and Specific Needs:

- *Ecosystem Based Approach Adaptive measures (establishment of native, locally adapted local vegetative species (grass and plants)*
- *Extension of the target area for mangrove reforestation in terms of its size*
- *Nurseries for replication of vegetative material*
- *Increase the number of community members*
- *Awareness raising and community sensitization*
- *Technical guidance*

Lakka and Hamilton sites: It was confirmed in Lakka the existence of serious degradation and a massive sea coastal erosion due to long time sand extraction. Clear signs of coastal zone retreat and eating up of infrastructures.



Plate 5. View of the degree of coastal zone retreat and eating up of infrastructures (left) and; natural wave breakers made of rocks (right) at Lakka.

This is clearly threatening general communities' livelihood as they have been losing revenue due to low touristic activity. Increasing risk of beach loss as a result of inadequate beach protection measures. Interestingly some natural wave breakers made of rocks can be seen in one side of the beach.

Hamilton. The same pattern of coastal degradation with signs of Intensive erosion due to sand extraction. Fish was being unloaded at beach with no access to landing site for fishermen.



Plate 6. View of the degree of coastal zone retreat and eating up of infrastructures (left) and; Intensive beach erosion due to sand extraction and sea level rise (right) at Hamilton.

At both sites the Consultants were informed of the current acute youth unemployment leading to adherence to sand mining activities.

Key Findings and Specific Needs:

- *A combination of hard and soft measures to arrest the coastal erosion threat*
- *Require some kind of protection to stabilize the beach. Perhaps some kind of **wave breakers** at the coastal waters.*
- *Awareness raising and community sensitization*
- *Alternative livelihoods for youths and women groups*
- *Mini landing sites for the fishermen particularly at Hamilton*
- *Alternative livelihoods by setting up a Centre for Skills Development (CSD's).*

Tombo: This was the fourth site to be visited and the coastal scenery and problems were similar to those observed at Lakka and Hamilton sites: intense degradation of the coastline by both anthropogenic activities (mangrove cutting and sand mining) and also sea level rise wave activity with severe beach erosion. However, the key detail is the great number of community members using coastal resources through fishing related activities which lacks supporting infrastructures. There are about 250 large boats each carrying on average 25 fishermen (6,250) and almost a similar number of people from Bo, Kenema, Makene (including women and youths) involved in the handling, transaction and transformation of the product. They are all organized within an Umbrella Union (The Sierra Leone Artisanal Fishermen Union – SLAFU). Some of these fishermen stay at sea for 3-4 days in open sea and exposed to extreme weather conditions. The population have tried to fight against coastal erosion with their own resources using large stones, an insufficient measure to deter sea water wave activity. There are also a considerable number of youths unemployed with no skills dedicating entirely to sand mining. Therefore, there is a need to support with creativity this community with alternative livelihoods.



Plate 7. View of the community attempt to fight against coastal/beach erosion (left) and; the lack of supporting infrastructure to fishing activities with the product being unloaded onto the soil (right) at Tombo.

Key Findings and Specific Needs:

- *Semi- hard measures to complement the community's own initiative of coastal protection and arrest the coastal erosion threat*
- *Installation of an extended fishing landing point along 500m of coastline*
- *Awareness raising and community sensitization*
- *Alternative livelihoods for youths and women groups including microfinance products if possible*
- *Infrastructures to support fishing communities to enhance their livelihoods such as solar powered cold storage facilities to preserve the surplus, fish stands, hygienic fish cleaning facilities, etc.*
- *Extension of Coastal Early Warning System (CEWS) with strong response/recovery component.*
- *CEWS dissemination component strengthened with support of solar powered local FM Radios.*

2. Konakridee

Konakridee, in the Port Loko: This was the fifth site to be visited located further north. Similar to Tombo this is an essentially fishing community with about 275 fishing vessels of mix size. Some large one carrying a crew of 30 and other smaller ones (canoes) carrying 3-4 people. On average it is estimated that the average size of the fishing community is around 2,000 fishermen plus about 1,000 other people involved in the handling, transaction and transformation of the product. Additionally, there are a significant amount of people dedicated to rice farming and vegetable gardening. There is a strong Women & Fisheries Association Unit dedicating to fish smoking using mangrove logs. FAO have in recent past years built a small fish smoking house where they work. However, there are serious concern amongst the community on the continuation of using such facilities and the mangrove logs due to Polycyclic Aromatic Hydrocarbons (PAH) which are released when mangrove logs are burnt for fish smoking. This is extremely hazardous as these PAH can stick on the fish and it can cause cancer related health issues to women exposed and to those eating the product². Therefore, there is a need to support this community to try and lessen the impact of this activity, perhaps through a better ventilated premises and/or use of alternative fuel material (seaweed/sargassum briquettes) or even use of filters to minimize the impact³.

² Stołyhwo, A., and Sikorski, Z. E. (2005). Polycyclic aromatic hydrocarbons in smoked fish – a critical review. *Food Chemistry* 91, 303-311.

³ Essumang, D. K., Dodoo, D. K., and Adjei, J. K. (2014). Effective reduction of PAH contamination in smoke cured fish products using charcoal filters in a modified traditional kiln. *Food Control* 35, 85-93.



Plate 8. View of the beach with some of the community fishing fleet (left) and; the coastal erosion signs where the landing point use to stand (right) at Konakriddie.

This community has also seen the involvement of Community Action for Restoration of Life (CARL) in some kind of microfinance activity. Other supporting actions that the LDCF could eventually contribute are similar to Tombo in relation to Infrastructures to support fishing communities to enhance their livelihoods such as solar powered cold storage facilities to preserve the surplus, fish stands, hygienic fish cleaning facilities, etc. In addition, given that the nearest local FM radio is at Yongro near Lungi About 16km away the Extension of Coastal Early Warning System (CEWS) should also be considered the provision of signal strengthening devices so to be able to disseminate warnings and weather alerts to the fishing community at Konakriddie.

Key Findings and Specific Needs:

- *Semi- hard measures to complement the community's own initiative of coastal protection and arrest the coastal erosion threat*
- *Installation of an extended fishing landing point along 500m of coastline*
- *Awareness raising and community sensitization*
- *Alternative livelihoods for youths and women groups including microfinance products if possible*
- *Infrastructures to support fishing communities to enhance their livelihoods such as solar powered cold storage facilities to preserve the surplus, fish stands, hygienic fish cleaning facilities, etc.*
- *Extension of Coastal Early Warning System (CEWS) with strong response/recovery component.*
- *CEWS dissemination component strengthened with support of solar powered local FM Radios.*

7. Conclusions

The Inception Mission has given the opportunity to launch the activities of the project and to be able to have the LDCF initiatives identified in the PIF endorsed by the bilateral/multilateral organizations and Academia contributing towards the design phase of the project.

The Inception Mission has also allowed to understand and consult with the identified key Stakeholders about the on-going development initiatives to fully align the proposed LDCF financed project. Therefore, the large amount of information gathered will assist in the development of specific activities to be included in the approved indicative outcomes and outputs.

Some key findings were identified which have not been fully explicated in the PIF and are worth to be considered here for their importance in the design of the project namely:

A.4. Coordination. Outline the coordination with other relevant GEF financed and other initiatives:

The results from the discussion that took place by the Working Groups during the Inception Workshop indicate that the following additional initiatives should be considered for co-financing purposes and be object of a follow-up by the National Consultants to gather supplementary information to feed into the design of the project:

1. *“Integrated coastal zone management plan”*. Implementing Agency: EPA and partners;
2. *“Revegetation of the Aberdeen creek”* - Implementing Agency: EPA and partners (forestry/Agriculture, tourism, MFMR, NPAA);
3. *“Awareness raising project on climate change adaptation in Tombo fishing communities on the use of mangrove as source of energy for fish processing”*. Implementing partners: Ministry of Agriculture and Fisheries;
4. *DEPHE project: “Alleviating poverty and enhancing gender Quality in coastal communities in Sierra Leone”*. Implementing partners: British council and IMBO);
5. *“Mangrove planting”*. NFORAC

B.1: National strategies and plans or reports and assessments under relevant conventions, if applicable.

The results from the Group discussion at the Inception Workshop has indicated two additional National strategies which PIF has not been able to identify and need to be explored their importance for the inclusion in the design of the project:

- *Draft Wetlands Act, 2015*
- *Crown Lands Ordinance, 1961*

Gaps in current Policies/Coordination Mechanisms for Coastal Adaptation

- *Conflicting mandates i.e. EPA and Ministry of Lands, Country Planning and Environment*
- *Weak and out-dated policies*

Main Vulnerabilities and identify risk of the project

The same results from the discussion that took place by the Working Groups during the Inception Workshop indicate *that there is an additional vulnerability to be considered in the project and this is: Seaweed/Sargassum invasion of the beaches in Sierra Leone.*

Similarly, an additional risk not explicitly considered in the PIF has been identified and need to be considered in the design of the project as well as the Level and Mitigation measures:

Risk:Capacity of the communities to adapt to the project

Key Issues proposed to be addressed by the LDCF

	Key Issues proposed to be addressed by the LDCF	Institution
1.	Community Management Associations within the various declared Marine Protected Areas (MPAs)	Ministry of Fisheries and Marine Resource
2.	Women in Fisheries Initiative	Ministry of Fisheries and Marine Resources
3.	Training women in fish processing techniques	Ministry of Fisheries and Marine Resources

4.	More efficient fish drying facilities to reduce the pressure on the mangroves for firewood:	Ministry of Fisheries and Marine Resources
5.	Recent occurrence of the sargassum seaweed on the Sierra Leone shores.	The Sierra Leone Tourist Board
6.	Need to focus on the ecosystem based approach on setting up coastal adaptation strategy rather than on “hard measures”	UNDP
7.	Shift in the management of natural resources to local communities requiring their involvement in the protection of the environment	The Ministry of Local Government and Rural Development
8.	Sensitize the local populace about the threats posed by climate change risks to the coastal zone	The Ministry of Youths and Sports
9.	The Tourist Board plans to develop tourist facilities all along the coastline and target ecotourism products in particular	The Sierra Leone Tourist Board
10.	Identification of alternative livelihood to sand mining from the beaches	National Protected Area Authority
11.	Mapping of risk zones and vulnerability to sea level rise and coastal erosion	National Protected Area Authority
12.	Rehabilitation of degraded mangrove areas along parts of the Sierra Leone River estuary and Aberdeen Creek	National Protected Area Authority
13.	Collaboration with the project intention to set up monitoring facilities in the coastal zone including water quality	The Sierra Leone Maritime Administration
14.	Sharing of training and monitoring initiatives on extending the Early Warning System to the coastal zones	The Meteorological Department, Sierra Leone
15.	Contribution to Vulnerability and climate change coastal erosion risks using GIS systems to support mainstreaming of Climate Change onto key country legislation	The Environmental Protection Agency, Sierra Leone
16.	Restoration of the mangroves and the coastal region and climate change related projects within the context of regional collaboration	The Office of the European Community Delegation in Sierra Leone
17.	Cooperation and Leadership in matters related to sea costal monitoring and vulnerability and risk assessment and sensitivity analysis	The Institute of Marine Biology and Oceanography (IBMO)
18.	Extension of Costal Early Warning System	The Institute of Marine Biology and Oceanography (IBMO)

Proposed Adaptive initiatives

Proposed Pilot Site	Proposed Adaptive initiatives
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<p>1. Aberdeen Creek</p>	<ul style="list-style-type: none"> • <i>Ecosystem Based Approach Adaptive measures (establishment of native, locally adapted local vegetative species (grass and plants)</i> • <i>Extension of the target area for mangrove reforestation in terms of its size</i> • <i>Nurseries for replication of vegetative material</i> • <i>Increase the number of community members</i> • <i>Awareness raising and community sensitization</i> • <i>Technical guidance</i>
<p>2. Lakka</p>	<ul style="list-style-type: none"> • <i>A combination of hard and soft measures to arrest the coastal erosion threat</i> • <i>Require some kind of protection to stabilize the beach. Perhaps some kind of wave breakers at the coastal waters.</i> • <i>Awareness raising and community sensitization</i> • <i>Alternative livelihoods for youths and women groups</i> • <i>Mini landing sites for the fishermen particularly at Hamilton</i> • <i>Alternative livelihoods by setting up a Centre for Skills Development (CSD's).</i>
<p>3. Hamilton</p>	<ul style="list-style-type: none"> • <i>A combination of hard and soft measures to arrest the coastal erosion threat</i> • <i>Require some kind of protection to stabilize the beach. Perhaps some kind of wave breakers at the coastal waters.</i> • <i>Awareness raising and community sensitization</i> • <i>Alternative livelihoods for youths and women groups</i> • <i>Mini landing sites for the fishermen particularly at Hamilton</i> • <i>Alternative livelihoods by setting up a Centre for Skills Development (CSD's).</i>
<p>4. Tombo</p>	<ul style="list-style-type: none"> • <i>Semi- hard measures to complement the community's own initiative of coastal protection and arrest the coastal erosion threat</i> • <i>Installation of an extended fishing landing point along 500m of coastline</i> • <i>Awareness raising and community sensitization</i> • <i>Alternative livelihoods for youths and women groups including microfinance products if possible</i> • <i>Infrastructures to support fishing communities to enhance their livelihoods such as solar powered cold storage facilities to preserve the surplus, fish stands, hygienic fish cleaning facilities, etc.</i> • <i>Extension of Coastal Early Warning System (CEWS) with strong response/recovery component.</i> • <i>CEWS dissemination component strengthened with support of solar powered local FM Radios.</i>
<p>5. Konakride</p>	<ul style="list-style-type: none"> • <i>Semi- hard measures to complement the community's own initiative of coastal protection and arrest the coastal erosion threat</i> • <i>Installation of an extended fishing landing point along 500m of coastline</i> • <i>Awareness raising and community sensitization</i> • <i>Alternative livelihoods for youths and women groups including microfinance products if possible</i> • <i>Infrastructures to support fishing communities to enhance their livelihoods such as solar powered cold storage facilities to preserve the surplus, fish stands, hygienic fish cleaning facilities, etc.</i> • <i>Extension of Coastal Early Warning System (CEWS) with strong response/recovery component.</i> • <i>CEWS dissemination component strengthened with support of solar powered local FM Radios.</i>

8. Recommendations

The main recommendation is the need for a swift follow-up by the National Consultants of all these issues presented in the above Conclusions section so to confirm the information before this can be considered in the project design. These follow-up activities should be in line with the Work Plan shown in Annex VII and complemented by the inputs from the various National Experts particularly in issues linked to Gender, Vulnerability Capacity Assessment of the proposed pilot sites and a feasibility study.

9. Annexes

Annex I. Details of Inception Mission activities in Sierra Leone.

Date	Period	Activity	Meeting attendance, Field Visit Team composition
15 th May		Arrival	
16 th May	Morning	Meeting at UNDP	Timoteo Ferreira,
	Afternoon	Meeting at EPA	Timoteo Ferreira,
17 th May	Morning	Meeting at EPA	Timoteo Ferreira, Maria Fernandez Marcos, National consultants, Melissa
	Afternoon	Meeting with the Director of Protected Marine Areas	Timoteo Ferreira, Maria Fernandez Marcos, , National consultants
	Afternoon	Meeting at the National Tourism Board	Timoteo Ferreira, Maria Fernandez Marcos, , National consultants
	Afternoon	Meeting at the Tourism Ministry	Timoteo Ferreira Maria Fernandez Marcos, , National consultants
18 th May	Morning	Meeting at the Local Government Ministry	Timoteo Ferreira, Maria Fernandez Marcos, National consultants
	Morning	Meeting at the Ministry of Fisheries and Marine Resources	Timoteo Ferreira, Maria Fernandez Marcos, s, National consultants
	Afternoon	Meeting at the Ministry of Youth Affairs	Timoteo Ferreira, Maria Fernandez Marcos, , National consultants
	Afternoon	Meeting at the ONS	Timoteo Ferreira Maria Fernandez Marcos, National consultants
19 th May		Inception Workshop	Timoteo Ferreira, Maria Fernandez Marcos, National consultants
20 th May		Field visit	Timoteo Ferreira Maria Fernandez Marcos, Dr Johnson, Melissa, Sheku
21 th May		Field visit	Timoteo Ferreira, Maria Fernandez Marcos, Dr Johnson, Melissa, Sheku
23 th May	Morning	Ministry of local Government	Timoteo Ferreira, Maria Luisa Fernandez Marcos, Dr Johnson
	Afternoon	Ministry of Marine Affairs	Timoteo Ferreira, Maria Fernandez Marcos, Dr Johnson
24 th May	Morning	Ministry of Agric. & Fisheries,	Timoteo Ferreira, Maria Luisa Fernandez Marcos, Dr Johnson, Melissa, Sheku

	Afternoon	UNDP debriefing session	Timoteo Ferreira, Maria Luisa Fernandez Marcos, Dr Johnson
25th May		Departure	

[Annex II.](#) List of participants attending the Inception Workshop Agenda

GLOBAL ENVIRONMENT FACILITY

INVESTING IN OUR PLANET

ADAPTING TO CLIMATE CHANGE INDUCED COASTAL RISKS IN SIERRA LEONE

Stakeholder Consultation Workshop

Hotel Hill Valley Conference Room

Thursday 19th May, 2016

09:00am

NO.	NAME	INSTITUTION	DESIGNATION	EMAIL	CONTACT NUMBER
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53.	Mustapha Kamokai	Moyamba Dist. Council	ESO Moyamba	Mkemokai207@yahoo.com	076-820692

[Annex III.](#) The Inception Workshop Agenda.

Time	Programme	Action
09:30-10:00	Arrival participants	
10:00 – 10: 40	Official Opening (Introduction of chairperson/Chairman’s opening statement)	
	Statements <ul style="list-style-type: none"> i. UNDP Country Director ii. GEF Operational Focal Point Official Opening Statement The Executive Chairperson, EPA	Chairman
10:40 – 11:10	Tea Break	
Session 1 – Project background and ongoing activities		
11:10 – 11:30	Presentation on Project Identification Form (PIF)	EPA / UNDP
11:30 -12:00	Existing and completed initiatives relevant to the project	National consultant (& participants)
12:00- 12:45	Introduction to coastal Management to climate change impact in the African context, gaps, needs and outline of the project aims and outcomes	International consultant
12:45-1:45	Lunch	
Session 2 – Review of project design and planning key activities		
1:50-2:20	Project components and timeline - the local approach and potential benefits	International consultant
2:20 – 3:00	Working Groups on three components: <ul style="list-style-type: none"> • Component review: develop key activities to achieve outcomes, milestones, key stakeholders and implementation partners, identify key vulnerable populations, areas at risk, private sector interests, innovative communication channels etc 	Participants/ International & Local Consultants
	Tea Break	
3:00 – 3:40	Group Presentations	Group leads
3:40 – 4:00	Close of workshop	UNDP Focal & Consultants

[Annex IV.](#) The Summary of these Statements can be found in Annex III.

Report on the Inception workshop “Adapting to Climate Change Induced Coastal Risks in Sierra Leone”

***Hill Valley hotel conference centre
Freetown, Sierra Leone 19 May 2016.***

By

Dr. Reynold G. Johnson

(Rapporteur)

INTRODUCTION/Overview

Project context and objective

The Global Environment Facility (GEF), through the Least Developed Countries Fund (LDCF) approved the Project Identification Form (PIF) in October 2015 that was presented by UNDP on behalf of the Environment Protection Agency of Sierra Leone on “Adapting to Climate Change Induced Coastal Risks in Sierra Leone”.

This project, which is one of the key instruments for implementing the adaptation priorities identified during the National Adaptation Programme of Action (NAPA), aims at strengthening the ability of coastal communities to systematically manage climate change risks and impacts on physical infrastructures and economic livelihoods. This LDCF project will also strengthen government institutions and local coastal communities’ resilience through the development of climate-proof socio-economic development.

The project has 3 components:

Component 1: Generating sound scientific knowledge and access to information through the enhancement of the availability of high quality climate risk information that is critical for development decision-making in the coastal zone;

Component 2: Climate information “internalized” into coastal development policy processes: Develop appropriate protection measures, policy/legal tools and integrated coordination mechanisms to improve policy design and implementation in dealing with current and long-term coastal challenges; and

Component 3: Reduced socioeconomic losses due to coastal erosion through the piloting of adaptation investments in high risks areas to protect coastal infrastructures and communities assets while enhancing public awareness for better adhesion of communities and policy makers on adaptation.

It is against this project background that a project inception workshop was held which officially signaled the start of the project preparatory stages.

The inception workshop “Adapting to Climate Change Induced Coastal Risks in Sierra Leone” took place at the Hill Valley hotel conference centre in Freetown on the 19th of March, 2016. This meeting which was organized by the UNDP and hosted by EPA-SL.

OBJECTIVES AND EXPECTED OUTCOMES OF THE WORKSHOP

The inception workshop is organised to:

1. Presentation of the PIF: Objectives, outcomes and Outputs; budget, institutional arrangement etc
2. Inform participants about the process of the preparation activities:
3. Proposition and discussions on national steps of the Preparatory Phase;
4. Linkages with on-going initiatives, stakeholder’s engagement and partnership

The expected outcome of the inception workshop is as follows:

This inception workshop will start the preparatory phases for the development and eventual endorsement of the project document which include among other activities the collection of information and useful data for project design, the validation of the indicative outcomes and outputs, the development of a full M&E plan including appropriate indicators and baseline, a participatory plan to involve communities as well as the identification of implementing partners and negotiation pertaining to implementation arrangements and co-financing.

Participation

Participants to the workshop were experts working on marine and coastal biodiversity, academics and civil society organizations, Government Ministries, NGOs and Development Partners.

Opening

The workshop was called to order by Mr. Bob Jones **who chaired the deliberations.**

Chairperson’s Opening Remarks

As part of his opening remarks, he expressed gratitude to the various and sponsors and underscored the purpose of the workshop and called for the adoption of the agenda. The agenda was adopted by consensus. He outlined the matters related to the modus operandi of the workshop.

Statements

First Statement by the UNDP Programme Officers

She started her statement by giving a background and the components of the project. She said amongst other things that this workshop was to develop a project based on the Project Identification Form that was developed out of projects identified in the National Adaptation Programme of Action.

She expressed the hope that this forum will provide information that will contribute to the development of the expected project document.

Second Statement by the UNDP Resident Representative

In her statement she highlighted the importance of this workshop and the fact that Sierra Leone is vulnerable to climate change although the major course is not clear. She said the coastline of the country is open to the consequences of climate change such as flooding and erosion as a result of accelerated sea level rise. She also raised the issue of quality of data for proper assessments. She reminded the audience that the mission of the UNDP is to empower people and ended her statement by wishing all a successful meeting.

First Presentation by the Lead Local Consultant

In his presentation, Dr. Raymond Johnson started by giving a brief introduction, the geography of her country including physical characteristics such as hydrology and climate and then went on to describe the various morphological units into which the Sierra Leone coastline had been divided for the purpose of project.

Dr. Johnson said that the various units were exposed to the aggressive forces of the adjacent marine environment such as waves, tides, sea level rise and currents. He then touched on the sensitivity of the coastline to these forces as a result of their morphological, geological and geomorphological makeup e.g. sandy beaches, rocky shores or vegetated coastline. By the same token he said, that the coastline is equally vulnerable to climate change aggravated by unsustainable exploitation of coastal resources, such as sand mining and mangrove cutting. He concluded by urging participants to help identify interventions whether past, present or future that are geared towards the adaptation of local communities to the negative impacts of climate change in the coastal zone.

Second Presentation by the International consultant

In his presentation, Prof. Timoteo Ferreira informed participants that the objectives of the workshop was to make presentation of the PIF; objectives, outcomes, outputs, budgets, partnerships etc, the process of the preparation of activities ;proposition and discussion on national steps of the preparatory phase; linkages with on-going initiatives, stakeholder's engagement and partnerships for co-financing.

The Q and A session

First Presenter

The following questions and answers followed the presentations.

The deputy director of fisheries in the Ministry of Fisheries and Marine Resources welcomed the development of the project. She informed the meeting that her ministry had set up Community Management Associations within the various declared Marine Protected Areas (MPAs) facilitated by the WARF project. She underscored the need to train women in fish processing techniques and indicated her desire to see the return of the Cooperatives.

Mr. Basir wanted to know which criteria were used to delineate the morphological units.

The presenter responded by saying that a multi-criteria approach was adopted and included morphological as well as socio-economic criteria.

Another participant was concerned about the issue of alternative livelihood especially with regards sand mining. The presenter in his response said that there were several ways to approach the issue but that community engagement was the best.

The General Manager of the Tourist Board wanted to know more about the use of hard structures for coastal protection. She also raised concern about the regular occurrence of the sargassum seaweed on our shores which she said poses a serious threat to the tourism industry.

She noted that the coastline is a tourism demarcated area and that this enterprise has the potential to offer alternative livelihood opportunities.

The presenter informed the gathering, that the issue of the seaweed is being addressed making reference to the Sub-Regional work shop held in Freetown last year.

Other concerns raised related to the budget and micro-financing mechanisms for women in the project affected communities.

The Q and A session

Second Presenter

The following questions and answers followed the presentation.

The comments and questions following this presentation related to;

- Budgetary considerations
- Community livelihood
- Project preparation process

In his response to the questions posed, the presenter said that the co-financing aspect was a concern and that donor engagement and commitment was crucial.

After lunch break, break out groups were formed:

Reports from the various groups are annexed.

Annex 1.

Group 1 report

GROUP ONE

BASELINE INFORMATION

INSTIUTIONS	PROJECTS	PROJECT SITES	CHALLENGES	BEST PRACTICES	EXPERIENCES
EPA	Coastal and marine oil spill sensitivity and mapping	Coast of SL	Lack of integrated MDAs coordination Population pressure Inadequate legislations	Community outreaches Formulation of community bi-laws	Able to know the of the marine, protected areas, ecological sensitive areas
	Integrated coastal zone management plan	Coast of SL	Inadequate funding		

	State of the marine environment	Coast of SL			
	Land use/land cover mapping for SL	Nation wide			
	Revegetation of the Aberdeen creek	Aberdeen Ramsar site			
SLMA	National oil spill contingency plan	Coast of SL			
MET	Early warning system on climate change	Nation wide			
MAFFS/NPAA	Wetlands conservation	SL River Estuary Wetlands/			
CEFCO-SL/CAN-SL	Awareness Raising on adaptation measures to climate change	Magazine wharff, Congo Town Wharff, Regent, Ogo Farm, Laka			
NFORAC	WAPFOR	SL River Estuaries, Tombo, John obay/Bureh Town, Hamilton/Sussex, Yelibuya and Shabro Island			
	Responsible Eco Tourism				
	Sea Turtle and migratory birds nesting project				
	Mangrove planting				
IMBO					

PROJ

Group 2 report

Group two was asked to look at questions 7 to 12 – please find below our response to questions 7 to 12.

7. Land –use planning guidelines.

There is a land-use policy that can be accessed from the Ministry of Lands, Country Planning and Environment.

8. Main Vulnerabilities to be addressed by the coastal erosion risk profiles:

- Coastal infrastructural damage
- Sand mining
- Coastal deforestation
- Flooding
- Wind & storm
- Seaweeds

9. Review of current coastal land use planning legislation (identify key legislations to be reviewed).

- Draft Wetlands Act, 2015
- Crown Lands Ordinance, 1961

10. Preliminary assessment of appropriate Engineering Designs for Coastal Stabilization.

We are not aware of any preliminary assessment of appropriate engineering designs for coastal stabilization.

11. Discuss the gaps in current Policies/Coordination Mechanisms for Coastal Adaptation.

- Weak institutions/implementation mechanisms
- Poor enforcement of policies
- Conflicting mandates i.e. EPA and Ministry of Lands, Country Planning and Environment
- Weak and out-dated policies

Discuss key training needs for policy – makers.

- Capacity building

Component A: Technical Review

Baseline Studies: EPA has conducted a few studies including Coastal Sensitivity Mapping, ICZM Plan, seaweed studies, etc

Project Sites – selection and justification of specific target sites

- Western Area Peninsular Coastline – due to sand mining
- Yawri Bay - coastal biodiversity conservation

Group 3 report

Task: Define Gender Mainstreaming plan

Outline the principles and guidelines for mainstreaming gender in individual outputs , in order to ensure the equal participation of women and men.

Identified Projects

1) Aberdeen creek project planting of mangrove

- Implementing Agency: EPA and partners (forestry/Agriculture, tourism, MFMR, NPAA.)

2) Mangrove project of Orugu Project: implanted by FAO, Ministry of Agriculture

3) Awareness raining project on climate change adaptation in Tombo fishing communities on the use of mangrove as source of energy for fish processing.

4) Sea weed project: implementing partners (NTB, MTCA, EPA, NPAA, MFA,

5) DEPHE project (Alleviating poverty and enhancing gender Quality in coastal communities in Sierra Leone: implemented by British council and IMBO)

6) Lumley beach reclaim nation project: Implementing partners: (NTB, MTC Women united project: implementer- Girl child Network Sierra Leone.

Indicators:

- ❖ Hectorage of mangrove planted
- ❖ Hectorage of ecosystem restoration
- ❖ Number of women and men employed by the project
- ❖ level of diversification in farming system
- ❖ Number of women using domestic plants as energy for fish processing
- ❖ Number of tourist guards
- ❖ Change in number of tourist guards
- ❖ Change in number of tourist activities per communities
- ❖ Hectorage of fire wood plantation created for domestic energy
- ❖ level of diversity in art and craft articles

Assessment of project feasibility

- Project is feasible because it has been successively implemented by other organizations mentioned above.

Assess and identify risk of the project

- Availability of fund
- Political will
- Capacity of the communities to adapt to the project
- unfavourable natural conditions:
- Instability (civil unrest)

Closing Courtesies

Statement by Mr. Bob Jones

The closing ceremony was chaired by **Mr. Bob Jones**. The Chairman in his closing remarks expressed gratitude to all. He also expressed hope that the workshop was useful and provided additional clarification on issues surrounding the project. As part of the closing remarks, he echoed the importance of ambition at the international stage and mentioned that this workshop is the start of the project proper.

Mr. Bob Jones again apologized for the absence of Chairlady of EPA-SL to perform the closing ceremony as per programme and proceeded to ask the EPA representative to read the speech given to him by the Chairlady of EPA-SL after observing all protocols. The highlights of the speech included the following;

She expressed her commitment to the project and emphasized the need to act in concert to bring the project to fruition. She thanked all participants, and in particular the international consultants for honoring Sierra Leone's invitation. He commended the various organizations that collaborated to make this activity possible,

Closing Remarks– International Consultant

After the observations of all protocols, – International Consultant expressed his joy for being given the privilege to extend his thanks on behalf of their colleagues. They noted the vanguard role of the UNDP in driving the process that culminated in the success of the workshop. He expressed his thanks to the Coordinator and his staff for their effort as well as to the Executive Chairperson of the EPA-SL and her

staff for their hard work to ensure the success of this activity. Finally, thanks were given to all the various national experts as well as to all participants for their various contributions.

Vote of Thanks

The vote of thanks was delivered by a staff member of the Environment Protection Agency Sierra Leone. Words of appreciation were directed towards the EPA, UNDP, Donor organizations and all participants who contributed to the success of the workshop. Special thanks went to the sponsors and the international consultants who travelled to Sierra Leone for the workshop. Last but not least, she thanked the Chairman, Mr. Bob Jones for chairing the sessions.

Closing

[Annex V.](#) Full National Consultant’s report on Stakeholders Consultations.

The Development of a GEF LDCF Project on Climate Change Adaptation and Coastal Zone Management in Sierra Leone.

By

Dr. Raymond G. Johnson

(Local Consultant)

Report on Stakeholder Consultations

Introduction

The Global Environment Facility (GEF) recently approved the Project Identification Form (PIF) that was presented by UNDP on behalf of the Environment Protection Agency on “adapting to climate change induced coastal risks in Sierra Leone”. This project will be one of the key instruments for implementing the adaptation priorities identified in the National Adaptation Programme of Action (NAPA). It aims to strengthen the ability of coastal communities to systematically manage climate change risks and impacts on coastal infrastructure and local livelihoods. The project will also strengthen government institutional capacity for the development of climate-resilient socio-economic development.

With support from Least Developed Country Fund (LDCF) resources, measures will be taken to improve policy design and implementation to deal with current and long-term climate change-induced risks to sustainable coastal management through the development of appropriate protection measures, policy/legal tools and establishment of integrated coordination mechanisms. It will (1) Enhance the availability of high quality climate risk information that is critical for improving the decision-making process in the coastal zone (2) Develop appropriate protection measures, policy/legal tools and integrated coordination mechanisms to improve and support design as well as implementation of relevant policies (3) Enhance public awareness and promote sustainable alternative livelihoods.

Following the approval of the PIF, a full project document should be developed through the LDCF Work Programme which includes a project preparatory phase that foresees the collection of information and gathering of useful data for project design, the validation of the indicative outcomes and outputs contained in the PIF, the development of a full M&E plan including appropriate indicators and baseline, a participatory plan to involve communities as well as the identification of implementing partners and the negotiations pertaining to the implementation arrangements and co-financing.

The services of a national expert on climate change adaptation are sought to contribute to the development of a comprehensive Project Document (Prodoc) as described above, by facilitating the integration of Coastal Protection and Adaptation Planning sensitive components in the project document.

National Context

The coastal zone of Sierra Leone extends 155km² from Kiragba in the north, to Mano in the south. Sierra Leone's coastline measures 560km much of which is sheltered. The sheltered coast is dominated by extensive mangrove systems (230 km) and mud flats. Only about 150 km of the coastline is significantly developed and this includes Freetown (the capital).

The coastal area contains a substantial number of hotels and tourist resorts. Elsewhere the coastline is largely underdeveloped except for some fish landing sites and cold storage infrastructure used to process and store fish and shrimps. The contribution of the coastal zone of the national economy is significant.

The coastal zone of Sierra Leone is one of the most densely populated areas of the country and is already vulnerable to a number of natural and man-made hazards including, inundations from the major rivers flowing through Sierra Leone to the coast of Sierra Leone,(notably in the Pujehun district); flash floods which come down from a number of rivers during the monsoon period, saline intrusions due to decreased river water flows in the dry season e.g. along the Scarcies river as well as aggravated coastal erosion. Because of all these characteristics the coastal zone of the country will be particularly vulnerable to climate change and its related consequences such as an accelerated sea level rise and an increase in the intensity or frequency of natural climate related hazards.

Quite a large percentage of the population is found in the coastal area of Sierra, may be up to 55% and make substantial use of the coastal resources. As the coastal population continues to grow, these resources correspondingly experience an increasing stress. However, the degree of coastal resources exploitation is to a large extent influenced by the population of the entire country in general and by the coastal population in particular.

The coastal population is not uniformly distributed. With an annual growth rate of about 2.5% it is important that efforts be made to improve the resilience of our people in the face of growing threats from climate change related hazards. Sound policies aligned with the Agenda for Prosperity and the Sustainable Development Goals of the United Nations for the exploitation of the coastal resources should be pursued with the parallel development of appropriate institutional framework.

Over the years, the UNDP has been supporting the GoSL in developing strategies to address the challenges of climate change on sustainable national development.

The Global Environment Facility (GEF), through the Least Developed Countries Fund (LDCF) approved the Project Identification Form (PIF) in October 2015 that was presented by UNDP on behalf of the Environment Protection Agency - Sierra Leone on "Adapting to Climate Change Induced Coastal Risks in Sierra Leone".

This project, which is one of the key instruments for implementing the adaptation priorities identified during the National Adaptation Programme of Action (NAPA), aims at strengthening the ability of coastal communities to systematically manage climate change risks and impacts on physical infrastructures and economic livelihoods. This LDCF project will also strengthen government institutions and local coastal communities' resilience through the development of climate-proof socio-economic development.

.Consultative Meetings

The consultants held meetings with a number of key stakeholders which include the following;

The Ministry of Local Government and Rural Development

The Ministry of Youths and Sports

The Sierra Leone Tourist Board

The Ministry of Tourism

National Protected Area Authority

The Ministry of Fisheries and Marine Resources

The Office of National Security

The Sierra Leone Maritime Administration

The Meteorological Department, Sierra Leone

The Environmental Protection Agency, Sierra Leone

During these meetings, the consultants explained the purpose of their mission, which they said was to develop a project document emanating from the earlier developed Project Identification Form for the project titled 'Adapting to Climate Change Related Risks in the Sierra Leone Coastal Zone.' The consultants went on to explain the components of the project being developed and told the stakeholders they wanted to know whether or not any interventions have been made by them that would complement the objectives of the project.. The consultants also enquired about existing plans of these stakeholders to see whether or not they will be complementary.

Responses

The Ministry of Local Government and Rural Development

The team of consultants was met by Albert Koroma, a senior officer in the ministry. After introductions, the discussions focused on the issues identified above. In response Mr. koroma thanked the consultants for their visit and went on to catalogue the challenges they face as a ministry. He acknowledged the presence of threats to our environment and spoke about the devolution of powers to the local government and their mandate. He welcomed the development of the project which he said would help his ministry in their efforts to sensitize the local populace about the threats posed by climate change risks to the coastal zone. He told his visitors that there are plans to develop the rural areas including the coastal area and to strengthen local administration. He spoke about the paradigm shift in the management of natural resources to local communities which requires their involvement in the protection of the environment.

The ministry expressed showed support for the project and expressed their willingness to contribute to the successful development of the project document. They thanked the consultants for raising their awareness on the environment and in particular on those issues relating to the project they were implementing.

The Ministry of Youths and Sports

The team of consultants were met by a team of senior officers in the ministry. After introductions, the discussions focused on the issues identified above. In response team leader thanked the consultants for their visit and went on to catalogue the challenges they face as a ministry. He acknowledged the presence of threats to our environment and spoke about the involvement of youths in coastal resources exploitation. He cited their activities regarding sand mining and mangrove cutting amongst others. He indicated that the youth development plan takes cognizance of their activities in the coastal zone and the risks climate change pose to their wellbeing and the need to adapt to the adverse consequences. He welcomed the development of the project which he said would help his ministry in their efforts to sensitize the local populace about the threats posed by climate change risks to the coastal zone.

The National Tourist Board

The team of consultants was met by the Deputy General Manager of the National Tourist Board who welcomed them and explained the mandate of her organization. She also spoke about their plans to develop tourist facilities all along the coastline as well as ecotourism. Their main concerns she said, was the rampant sand mining, mangrove cutting and in particular the periodic invasion of our beaches by the sargassum seaweed which poses a serious threat to the industry.

Their interventions she said have taken the form of collaborative efforts with other ministries, departments and agencies as well as with non-governmental and community-based organisations.

Ministry of Tourism and Culture

The team of consultants was met by the Director of Tourism who welcomed them and explained the mandate of his organization. He also like the Deputy General Manager of the Tourist Board, spoke about their plans to develop tourist facilities all along the coastline as well as ecotourism. Their main concerns he said, were similar to those expressed by the Tourist Board, which include the rampant sand mining, mangrove cutting and in particular the periodic invasion of our beaches by the sargassum seaweed which poses a serious threat to the industry.

National Protected Area Authority

The team of consultants was met by the Deputy Director of the National Protected Area Authority who welcomed them and explained the mandate of her organization. She spoke about their plans to rehabilitate degraded mangrove areas along parts of the Sierra Leone River estuary. She complained about the lack of funds to implement their plans. She also spoke of their effort to rehabilitate the degraded mangrove sites of the Aberdeen Creek in collaboration with the Environment Protection Agency, Sierra Leone. She said there was need to identify alternative livelihood to sand mining from the beaches. She informed her guests, that they have not done any mapping of high risk zones to sea level rise and coastal erosion. She also said, that rampant sand mining, mangrove cutting and in particular the periodic invasion of our beaches by the sargassum seaweed was amongst their main concerns.

The Ministry of Fisheries and Marine Resources

The Deputy Director of fisheries in the Ministry of Fisheries and Marine Resources welcomed the consultants and informed them about the mandate of the ministry. She welcomed the development of the project. She informed the meeting that her ministry had set up Community Management Associations within the various declared Marine Protected Areas (MPAs) facilitated by the WARF project. She underscored the need to train women in fish processing techniques and indicated her desire to see the return of the Cooperatives. She spoke about the Women in Fisheries Initiative and the plan to provide more efficient fish drying facilities for women fisher folk to reduce the pressure on the mangroves for firewood.

The Office of National Security

The consultants were met by the Deputy Director who expressed appreciation for the visit. He said that his institution is concerned about the rate and level of degradation in the coastal area of the country. His office he said was also worried about the challenges faced by the law enforcement agencies in protecting the environment. Presently, there is no initiative to adapt to the risks of climate change in the coastal communities from the perspective of his organization. He expressed the desire to cooperate with the project and other stakeholders in order to increase the adaptability of these communities to the adverse effects of climate change.

The Sierra Leone Maritime Administration

The consultants were met by the Executive Director, his deputy and other directors, who expressed appreciation for the visit. He said that his institution welcomed the development of this project as their focus is to administer maritime affairs which can be jeopardized by climate change and its related risks. He also referred to the aspect of marine protection which is also a part of their mandate. Presently, there is no initiative to adapt to the risks of climate change in the coastal communities from the perspective of his organization he said. He however expressed the desire to cooperate with the project and other stakeholders in order to increase the adaptability of these communities to the adverse effects of climate change. He underscored the importance of monitoring and expressed their willingness to collaborate with the project on that component, as their office was strategically placed in a location that may offer protection to any equipment that might be installed in that location. He said they were also concerned about the rate and level of degradation in the coastal area of the country.

The Meteorological Department, Sierra Leone

The Environmental Protection Agency, Sierra Leone

Consultations with the Donor Community

The European Union

The consultants were met and welcomed by a representative of the European Delegation. Discussions held covered a range of issues including collaboration amongst the Ministries, Departments and Agencies; the lead agency in the project, overlapping mandates, EU funded projects, co-financing mechanisms etc. It was noted that activities of the project will be spread out amongst the MDAs in

accordance to their mandates. It was reported that the EU was supporting the Regional Decade for West Africa which focuses on natural resources and the fight against desertification, restoration of the mangroves and the coastal region and climate change related projects within the context of regional collaboration. Overall the EU is handling some eleven projects.

Inception Workshop

As required, the inception workshop will kick start the preparatory phase for the development and eventual endorsement of the project document which include among other activities the collection of information and useful data for project design, the validation of the indicative outcomes and outputs, the development of a full M&E plan including appropriate indicators and baseline, a participatory plan to involve communities as well as the identification of implementing partners and negotiation pertaining to implementation arrangements and co-financing.

Results of Site Assessment missions

The consultant undertook assessment missions to proposed project sites in the northern coast which include Konakridee, in the Port Loko district, Bailor and Yelliboya Island around Kambia, the Western Area Peninsular and the Yawri Bay.

Konakridee

Bailor/Kambia

Low beaches of the along the Western Area Peninsular

Yawri Bay

Evaluation of the current availability of climate information for decision-making and other relevant target groups

Gaps

Project interventions.

Evaluation of climatic coastal risks in Konakridee

Evaluation of climatic coastal risks in Kambia

Evaluation of climatic coastal risks in Low beaches of the along the Western Area Peninsular

Evaluation of climatic coastal risks in Yawri Bay

Field Excursion Report

A two days field was undertaken to the following locations:

- c) The Freetown Peninsula
- d) Konakridee in the Kaffo Bullom
- The visits were carried out on the 20th and 21th respectively with the purpose of undertaking assessment missions to proposed project sites in the northern coast and beaches along the Western Area Peninsula, and Yawri Bay.
- Evaluate climatic coastal risks in the different project sites and determine the level of risk for each of these sites through a detailed risk analysis. This will include risks of coastal erosion, sea level rise and impacts of these climatic changes on livelihoods, tourism potential, and local infrastructure.

Provide recommendations to the Lead Consultant about the feasibility of achieving the desired project outcomes in these sites, recommend potential additional vulnerable coastal areas, and provide a prioritisation based on urgency of intervention and feasibility of achieving meaningful longer-term impacts.

Visit to the Aberdeen Creek, Lakka, Hamilton and Tombo

Visit to the Aberdeen Creek

The first site the team visited was the Aberdeen Creek. The highlights of the visit was to observe the replanting of the degraded mangroves and to obtain firsthand information on the success of the project.

Visit to the Lakka

The second site the team visited was the Lakka beach.

Welcome

The consultants were welcomed by prominent members of the village. The consultants thanked the community representatives for welcoming them.

Purpose of the visit

The Consultants explained that the purpose of the visit was to identify and assess the climatic coastal risks and determine the level of risk for the site. The consultants also told the representatives of the community that they wanted to know about how the community manages the problems associated with the above risks.

Community response

Responding, the community representatives said that the sea level rise created a number of problems, prominent amongst which were coastal erosion which was threatening their general livelihood as they have been losing revenue due to low touristic activity. They also highlighted the increasing risk to beach loss as a result of inadequate beach protection measures. The main method of coastline protection along this strip is through the planting of beach stabilizing vegetation.

Identified Needs

- Need to raise awareness and sensitize the community on climate change related issues.
- Need to halt coastal erosion and protect lives and property.

Proposed Measures

- A combination of hard and soft structures should be considered as a measure to arrest the threat.

Visit to the Hamilton

The second site the team visited was the Hamilton beach.

Welcome

The consultants were welcomed by prominent members of the village. The consultants thanked the community representatives for welcoming them.

Purpose of the visit

The Local Consultant explained that the purpose of the visit was to identify and assess the climatic coastal risks and determine the level of risk for the site. The consultants also told the representatives of the community that they wanted to know about how the community manages the problems associated with the above risks.

Community response

Responding, the community representatives said that the sea level rise created a number of problems, prominent amongst which were coastal erosion which was threatening their general livelihood as they have been losing revenue due to low touristic activity. They also highlighted the increasing risk to beach loss as a result of rampant sand mining, lack of awareness of the consequences and inadequate beach protection measures. The main method of coastline protection along this strip is through the planting of beach stabilizing vegetation.

Identified Needs

- Need to raise awareness and sensitize the community on climate change related issues.
- Need to halt coastal erosion and protect lives and property.
- Need to establish a skills training workshop to target the youths.

Proposed Measures

- A combination of hard and soft structures should be considered as a measure to arrest the threat.

Visit to the Tombo

The fourth site the team visited was Tombo.

Welcome

The consultants were welcomed by prominent members of the village. The consultants thanked the community representatives for welcoming them.

Purpose of the visit

The Local Consultant explained that the purpose of the visit was to identify and assess the climatic coastal risks and determine the level of risk for the site. The consultants also told the representatives of the community that they wanted to know about how the community manages the problems associated with the above risks.

Community response

Responding, the community representatives said that the sea level rise created a number of problems, prominent amongst which were coastal erosion which was threatening their general livelihood. The main method of coastline protection along this strip is through the laying of boulders.

Identified Needs

- Need to raise awareness and sensitize the community on climate change related issues.
- Need to halt coastal erosion and protect lives and property.
- Need to pave the affected area.

Proposed Measures

- A combination of hard and soft structures should be considered as a measure to arrest the threat.

[Annex VII.](#) Proposed Work Plan

May	Initial meeting + Pre-Inception Consultations + bilateral meetings NC's gathers information (managed by IC)
June	<i>Stakeholder Analysis, Project Strategy & Project Baselines details developed (resulting from NC fine-tuned in country consultations);</i> <ul style="list-style-type: none"> • Follow-up meeting/stakeholder consultation • Vulnerability Capacity Assessment is carried out • Site identification and characterization • Target to have obtained the majority of the first draft information • Development of Output Activities • Begin writing document.
July	<i>List of - Atlas Account Code 2016 discussed with CO. Budget assessments & Equipment list developed by NC.</i> <i>Capacity assessment results should also be sent to Team Leader</i> <i>Development of contribution of National Experts to the development of a GEF LDCF Project</i> <ul style="list-style-type: none"> • Pre-Feasibility Assessment and institutional analysis • Gender Specialist • Monitoring and Evaluation Expert • Social and Environmental Impact Assessment Expert • Economist to provide inputs <i>1st Draft of PRODOC with Output/Activities Results Framework (SMART indicators/targets), Risk Plan, Institutional Arrangements.</i>
August	<ul style="list-style-type: none"> • Outputs/Activities fully developed and fine tuning adjustments in-country by the Lead NC • Institutional arrangements cleared • Budget and Work Plan fully developed <i>2nd Draft of PRODOC with Output/Activities Results Framework (SMART indicators/targets), Risk Plan, Institutional Arrangements and Total Budget & Work Plan.</i>
September	<ul style="list-style-type: none"> • Fine tuning of Output Activities carried out by the NC's through stakeholders consultation • Peer review to verify project activities (UNDP) • Second draft completed • Validation meeting and in-country stakeholders consultation • Obtain sign-off from government • Start obtaining co-finance letters <i>Incorporation of Validation Stakeholders Comments as well as RTA, UNDP CO and Stakeholders comments & suggestions to 2nd Draft of PRODOC addressing also to PIF Comments from GEF Council Members.</i>
October	<i>3rd Draft PRODOC including Annexes of Stakeholders involvement Plan and Risk Analysis submitted.</i> <i>Fine-tune adjustments with inclusion of further comments and suggestions.</i> <ul style="list-style-type: none"> • Final UNDP review • Preparation of CEO endorsement
November	<i>All co-finance letter obtained with signatures</i> <i>UNDP Environmental and Social Screening signed</i> <i>Implementing Partner Checklist signed</i>

	<p><i>CC-A Tracking Tool STP unlocked with RTA Indicators</i></p> <p>Submission to GEF/GEF review</p> <ul style="list-style-type: none"> • GEFSec takes 10 days to respond • 10 days allocated for the revisions.
December	<ul style="list-style-type: none"> • PD revisions in line with GEF comments • Project completion



Local vegetative species found that help in binding process in beach/dune rehabilitation.



Salt water invasion into coastal neighboring community houses. View of sand mining at the river bank