Enhancing the resilience of vulnerable coastal communities in Sinoe County of Liberia

Part I: Project Information

GEF ID
10376

Project Type
FSP

Type of Trust Fund
LDCF

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Enhancing the resilience of vulnerable coastal communities in Sinoe County of Liberia

Countries
Liberia

Agency(ies)
UNDP

Other Executing Partner(s)
Environmental Protection Agency (EPA)

Executing Partner Type
Government

GEF Focal Area
Climate Change

Taxonomy
Focal Areas, Climate Change, Climate Change Adaptation, Disaster risk management, Climate information, Least Developed Countries, Climate resilience, Sea-level rise, Private sector, Ecosystem-based Adaptation,

Livelihoods, Influencing models, Stakeholders, Gender Equality, Capacity, Knowledge and Research, Sustainable Development Goals, Strengthen institutional capacity and decision-making, Deploy innovative financial instruments, Transform policy and regulatory environments, Indigenous Peoples, Beneficiaries, Local Communities, Type of Engagement, Information Dissemination, Consultation, Participation, Communications, Awareness Raising, Private Sector, Individuals/Entrepreneurs, SMEs, Financial intermediaries and market facilitators, Gender Mainstreaming, Gender results areas, Access to benefits and services, Capacity Development, Knowledge Exchange, Knowledge Generation, Learning

Sector
Mixed & Others

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 0

Climate Change Adaptation
Climate Change Adaptation 2

Submission Date
11/26/2021

Expected Implementation Start
6/27/2022

Expected Completion Date
6/26/2028

Duration
72In Months

Agency Fee($)
848,580.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCA-1	Outcome 1.1: Technologies and innovative solutions piloted or deployed to reduce climate-related risks and enhance resilience Outcome 1.2: Innovative financial instruments and investment models enabled or introduced to enhance climate resilience	LDCF	6,056,138.00	6,404,750.00
CCA-2	Outcome 2.1: Strengthened cross-sectoral mechanisms to mainstream climate adaptation and resilience Outcome 2.2: Increased ability of the country to access climate finance or mainstream adaptation in large-scale, programmatic investment	LDCF	728,554.00	2,927,360.00
CCA-3	Outcome 3.2: Institutional and human capacities strengthened to identify and implement adaptation measures	LDCF	2,147,728.00	2,141,400.00
		Total Project Cost($)	**8,932,420.00**	**11,473,510.00**

B. Project description summary

Project Objective

To protect coastal communities and their assets from future climate change while enhancing their income streams through livelihood diversification by implementing sea and river defence and risk management approaches.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 1: Institutional capacity strengthening for climate change adaptation planning in Liberia?s coastal counties.	Technical Assistance	Outcome 1: Strengthened capacity of all Liberian coastal counties' planning institutions to assess climate change risks and integrate into county development frameworks.	Output 1.1: County-level ICZM plans prepared for all coastal counties to address climate hazard risks on infrastructure, livelihoods and health, as well as to enable adaptation planning, monitoring, protection and the maintenance of sea and river defence.	LDCF	700,000.00	3,618,810.00
			Output 1.2: Identified climate change risks and adaptation priorities incorporated into coastal County Resilience Plans as well as county and national planning and budgeting processes.			
			Output 1.3: Cross-sectoral climate change information and risk management focal points and working			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 2: Innovation, technologies and climate information introduced for coastal adaptation planning.	Investment	Outcome 2: Innovative technologies ? including response planning and communication mechanisms ? introduced to support coastal adaptation.	Output 2.1: Coastal flood and erosion early warning and risk management systems supported to provide climate information, products and services that meet the needs of end users.	LDCF	1,100,000.00	996,300.00
			Output 2.2: Existing EPA Environmental Knowledge Management System enhanced to support the collection and dissemination of lessons learned on sea and river defence based on Sinoe County adaptation solutions.			
			Output 2.3: Community Action Plans developed for all coastal districts of Sinoe County.			
			Output 2.4: Guidance Manuals for integrated coastal			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 3: Solutions for reducing vulnerability to climate change-induced sea level rise and coastal erosion.	Investment	Outcome 3: Reduced vulnerability of Sinoe County coastal communities to climate-induced sea level rise impacts through hybrid solutions (nature-based and engineering).	Output 3.1: Viable solutions to address climate vulnerabilities in Sinoe County developed and designed using multi-criteria and participatory processes for identifying, prioritising and planning adaptation and resilience solutions.	LDCF	3,608,000.00	2,733,050.00
			Output 3.2: Coastal- and catchment-level adaptation solutions implemented to improve the resilience of communities to the impacts of climate change in Sinoe County.			
			Output 3.3: Best practices on adaptation solutions documented and disseminated to other coastal counties for adoption and upscaling, including engagement			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 4: Livelihood diversification for climate resilience.	Investment	Outcome 4: Gender-responsive options for climate-resilient income and livelihood diversification introduced to climate-vulnerable communities in coastal counties.	Output 4.1: Business identification, development and management training programmes designed and delivered to communities and Micro, Small and Medium Enterprises in coastal counties, targeting women and the youth.	LDCF	3,099,100.00	3,557,550.00
			Output 4.2: Opportunities for integrated farming systems, fisheries, compressed stabilised earth blocks and their value chains created for coastal communities.			
			Output 4.3: Access to finance and technologies to develop livelihood and income diversification enterprises of coastal livelihoods and resources facilitated in collaboration with national and county			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
				Sub Total ($)	**8,507,100.00**	**10,905,710.00**
Project Management Cost (PMC)						
				LDCF	425,320.00	567,800.00
				Sub Total($)	**425,320.00**	**567,800.00**
				Total Project Cost($)	**8,932,420.00**	**11,473,510.00**

Please provide justification

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Government of Liberia	In-kind	Recurrent expenditures	1,700,000.00
GEF Agency	UNDP	Grant	Investment mobilized	200,000.00
Donor Agency	Conservation International	In-kind	Recurrent expenditures	1,500,000.00
Recipient Country Government	Government of Liberia	Public Investment	Investment mobilized	803,000.00
GEF Agency	UNDP	In-kind	Investment mobilized	7,270,510.00
			Total Co-Financing($)	**11,473,510.00**

Describe how any "Investment Mobilized" was identified

The identification of co-financing from UNDP, Conservation International (CI) and the Government of Liberia (Environmental Protection Agency (EPA)) ? through the projects ?Livelihood and Employment Creation in Liberia?, ?Monrovia Metropolitan Climate Resilient Project?, ?Conservation and sustainable use of Liberia?s Natural Capital? and ?Enhancing climate information systems for Resilient Development in Liberia? respectively ? was initiated by listing all initiatives relevant to the proposed project. This was followed by discussions with the EPA to select current projects that had the greatest degree of synergy with the proposed project?s expected objectives. Identified projects were then reviewed, including specific discussions held with representatives from CI and EPA as the responsible organisations for each project. These discussions included details on which outputs of each project would contribute to the proposed project?s objectives, as well as potential co-financing amounts that could be attributed to these outputs. Co-financing letters were issued once agreement was reached between UNDP and the responsible organisations.

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNDP	LDCF	Liberia	Climate Change	NA	8,932,420	848,580	9,781,000.00
			Total Grant Resources($)		**8,932,420.00**	**848,580.00**	**9,781,000.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

200,000

PPG Agency Fee ($)

19,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNDP	LDCF	Liberia	Climate Change	NA	200,000	19,000	**219,000.00**
			Total Project Costs($)		**200,000.00**	**19,000.00**	**219,000.00**

Meta Information - LDCF

LDCF true
SCCF-B (Window B) on technology transfer false
SCCF-A (Window-A) on climate Change adaptation false

Is this project LDCF SCCF challenge program?
false

This Project involves at least one small island developing State(SIDS). false

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This Project involves at least one fragile and conflict affected state. false

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This Project will provide direct adaptation benefits to the private sector. true

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This Project is explicitly related to the formulation and/or implementation of national adaptation plans (NAPs). false

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This Project has an urban focus. false

This Project covers the following sector(s)[the total should be 100%]:*

Agriculture	**20.00%**
Natural resources management	**10.00%**
Climate information Services	**40.00%**
Costal zone management	**0.00%**
Water resources Management	**0.00%**
Disaster risk Management	**30.00%**
Other infrastructure	**0.00%**
Health	**0.00%**
Other (Please specify:)	**0.00%**
Total	**100%**

This Project targets the following Climate change Exacerbated/introduced challenges:*
Sea level rise true
Change in mean temperature false
Increased Climatic Variability false
Natural hazards true
Land degradation false
Costal and/or Coral reef degradation true
GroundWater quality/quantity false

To calculate the core indicators, please refer to Results Guidance

Core Indicators - LDCF

CORE INDICATOR 1	Total	Male	Female	% for Women
Total number of direct beneficiaries	570,969	282,466	288,503	50.53%

CORE INDICATOR 2	
Area of land managed for climate resilience (ha)	830.00

CORE INDICATOR 3	
Total no. of policies/plans that will mainstream climate resilience	19

CORE INDICATOR 4		Male	Female	% for Women
Total number of people trained	13,590	4,499	9,091	66.89%

OUTPUT 1.1.1

Physical and natural assets made more resilient to climate variability and change

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		Male	Female
Total number of direct beneficiaries from more resilient physical assets	**7,487**	**3,827**	**3,660**

Ha of agriculture land	Ha of urban landscape	Ha of rural landscape	No. of residential houses
204.00	**264.00**	**362.00**	**0**

No. of public buildings	No. of irrigation or water structures	No. of fishery or aquaculture ponds	No. of ports or landing sites
0	**0**	**0**	**0**

Km of road	Km of riverban	Km of coast	Km of storm water drainage
		13.00	

Other	Other(unit)	Comments
0		**Coastal protection through hybrid interventions including restoration of ecosystems and engineered revetments and groynes**

OUTPUT 1.1.2

Livelihoods and sources of income of vulnerable populations diversified and strengthened

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	Male	Female

Total number of direct beneficiaries with diversified and strengthened livelihoods and sources of income	**2,640**	**1,294**	**1,346**

Livelihoods and sources of incomes strengthened / introduced			
Agriculture	Agro-Processing	Pastoralism/diary	Enhanced access to markets
true	**true**	**false**	**true**
Fisheries /aquaculture	Tourism /ecotourism	Cottage industry	Reduced supply chain
true	**false**	**false**	**false**
Beekeeping	Enhanced opportunity to employment	Other	Comments
false	**false**	**false**	

OUTPUT 1.1.3

New/improved climate information systems deployed to reduce vulnerability to climatic hazards/variability

		Male	Female
Total number of direct beneficiaries from the new/improved climatic information systems	**560,362**	**277,110**	**283,252**

Climate hazards addressed

Flood	Storm	Heatwave	Drought
true	**true**	**false**	**false**

Other	Comments
false	**/**

Climate information system developed/strengthened

Downscaled Climate model	Weather/Hydromet station	Early warning system	Other
false	**true**	**true**	**false**

Comments

Climate related information collected

Temperature	Rainfall	Crop pest or disease	Human disease vectors
true	**true**	**false**	**false**

Other	Comments
false	

Mode of climate information disemination

Mobile phone apps	Community radio	Extension services	Televisions
true	**true**	**false**	**false**

Leaflets	Other	Comments

true **false**

OUTPUT 1.1.4

Vulnerable natural ecosystems strengthened in response to climate change impacts

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Types of natural ecosystem

Desert	Coastal	Mountainous	Grassland
false	**true**	**false**	**false**

Forest	Inland water	Other	Comments
true	**false**	**false**	

OUTPUT 1.2.1

Incubators and accelerators introduced

		Male	Female
Total no. of entrepreneurs supported	**0**	**235**	**245**

Comments

No. of incubators and accelerators supported	**3**	**Compressed stabilised earth blocks (CSEBs): technologies for the construction of CSEBs (including brick presses) replace existing brick making techniques that are more expensive, use more cement and cause beach degradation through increased beach sand demands. This technique assists in increasing coastal resilience to climate change by reducing beach degradation and providing cheaper brick construction alternatives. Integrated Farming Systems (IFS): Compared with subsistence farming of monoculture crops, IFS increases the efficiency of farmlands by allowing multiple crops or livestock to be farmed together that are additionally designed to support each other. This**

	Comments
No. of adaptation technologies supported **0**	

OUTPUT 1.2.2

Financial instruments or models to enhance climate resilienced developed

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Financial instruments or models			
PPP models **false**	Cooperatives **false**	Microfinance **true**	Risk insurance **false**
Equity **false**	Loan **false**	Other **false**	Comments

OUTPUT 2.1.1

Cross-sectoral policies and plans incorporate adaptation considerations

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Will mainstream climate resilience	Of which no. of regional policies/plans	Of which no. of national policies/plan

0	**0**	**0**

Sectors

Agriculture **true**	Fishery **true**	Industry **false**	Urban **false**
Rural **false**	Health **false**	Water **false**	Other **true**

Comments

Coastal management

OUTPUT 2.1.2

Cross sectoral institutional partnerships established or expanded

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No. of institutional partnerships established or strengthened	**0**

Comments

OUTPUT 2.1.3

Systems and frameworks established for continuous monitoring, reporting and review of adaptation

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No. of systems and frameworks **0**

Comments

OUTPUT 2.1.4

Systems and frameworks established for continuous monitoring, reporting and review of adaptation

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No. of systems and frameworks **0**

Comments

OUTPUT 2.2.1

No. of institutions with increased ability to access and/or manage climate finance

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No. of institution(s)

Comments

OUTPUT 2.2.2

Institutional coordination mechanism created or strengthened to access and/or manage climate finance

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No. of mechanism(s)

Comments

OUTPUT 2.2.3

Global/regional/national initiatives demonstrated and tested early concepts with high adaptation potential

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No. of initiatives or technologies

Comments

OUTPUT 2.2.4

Public investment mobilized

Amount of investment
(US$)

Comments

OUTPUT 2.2.5

Private investment mobilized

Amount of investment
(US$)

Comments

OUTPUT 2.3.1

No. of people trained regarding climate change impacts and appropriate adaptation responses

		Male	Female
Total no. of people trained	**0**	**0**	**0**
		Male	Female
Of which total no. of people at line ministries	**0**		
		Male	Female
Of which total no. of community/association	**0**		
		Male	Female
Of which total no. of extension service officers	**0**		
		Male	Female
Of which total no. of hydromet and disaster risk management agency staff	**0**		
		Male	Female
Of which total no. of small private business owners	**0**		
		Male	Female
Of which total no. school children, university students or teachers	**0**		
Other	Comments		

OUTPUT 2.3.2

No. of people made aware of climate change impacts and appropriate adaptation responses

	Male	Female
No. of people with raised awareness	**0**	
Please describe how their awareness was raised		

OUTPUT 3.1.1

National climate policies and plans enabled including NAP processes by stronger climate information decision-support services

No. of national climate policies and plans	
Comments	

OUTPUT 3.1.2

Systems and frameworks established for continuous monitoring, reporting and review of adaptation

No. of systems and frameworks

Comments

OUTPUT 3.1.3

Vulnerability assessments conducted

No. of assessments conducted

Comments

OUTPUT 3.2.1

No. of institutions with increased ability to access and/or manage climate finance

No. of institution(s)

Comments

OUTPUT 3.2.2

Institutional coordination mechanism(s) created or strengthened to access and/or manage climate finance

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No. of mechanism(s)

Comments

OUTPUT 3.2.3

Global/regional/national initiative(s) demonstrated and tested early concepts with high adaptation potential

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No. of initiative(s) or technology(ies)

Comments

OUTPUT 3.3.1

No. of people trained regarding climate change impacts and appropriate adaptation responses

Total no. of people trained	**13,590**	Male **4,499**	Female **9,091**
Of which total no. of people at line ministries	**500**	Male **245**	Female **255**
Of which total no. of community/association	**400**	Male **196**	Female **204**
Of which total no. of extension service officers	**600**	Male **294**	Female **306**
Of which total no. of hydromet and disaster risk management agency staff	**450**	Male **220**	Female **230**

		Male	Female
Of which total no. of small private business owners	**11,640**	**3,544**	**8,096**

		Male	Female
Of which total no. school children, university students or teachers	**0**	**0**	**0**

Other	Comments

OUTPUT 3.3.2

No. of people made aware of climate change impacts and appropriate adaptation responses

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		Male	Female
No. of people with raised awareness	**560,362**	**283,252**	**277,110**

Please describe how their awareness was raised

Part II. Project Justification

1a. Project Description

describe any changes in alignment with the project design with the original pif

No major changes in alignment with the project design of the original PIF have been made. Output 1.2 has been changed to develop County Resilience Plans instead of contributing to the revision of County Development Agendas (CDAs). This is because the CDAs are not anticipated to be updated under the current government. The wording of most project outcomes and outputs has been altered to make them more specific and details have been added, specifically by defining activities for each output. However, all altered outputs still link and contribute to their respective outcomes and are based on the same underlying principles. The reworded outcomes, outputs and changes from the PIF are listed in Table 2 below.

Table 2. Changes to the outcomes and outputs from the PIF made during the PPG phase.

Outcome/Output as written in the PIF	Outcome/Output revised during PPG and changes made
Outcome 1. Capacity of all coastal counties? planning institutions to assess climate change risks and to consider into County Development Agendas strengthened.	Outcome 1. Strengthened capacity of all Liberian coastal counties' planning institutions to assess climate change risks and integrate into county development frameworks.
Output 1.1. County level ICZM plans prepared for all coastal counties to address climate hazard risks on infrastructure, livelihoods, health, and enable adaptation planning and monitoring, protection and maintenance of sea/river defence.	Output 1.1. County-level ICZM plans prepared for all coastal counties to address climate hazard risks on infrastructure, livelihoods and health, as well as to enable adaptation planning, monitoring, protection and the maintenance of sea and river defence. The formulation of Sea and River Defence and Risk Management Plans (SRDRMPs) across all coastal counties and a pilot Sea and River Defence Investment Management Plan (SRDIMP) in Sinoe County have been incorporated more clearly into the output?s description.

Output 1.2 Identified climate related risks and adaptation priorities are incorporated into Coastal County Development Agendas, and and incorporated into county and national planning and budgeting processes.	Output 1.2. Identified climate change risks and adaptation priorities incorporated into coastal County Resilience Plans as well as county and national planning and budgeting processes. The updating of CDAs has been replaced by developing County Resilience Plans for the counties of Sinoe, Grand Bassa and Maryland. This is because there are currently no plans to update the existing CDAs. The output will also focus on incorporating climate risk and adaptation priorities into development planning processes and budgets, and not include policy updates which will be implemented under other projects.
Output 1.3. Cross-sectoral climate change information and risk focal points and working groups established and trained for all coastal counties.	Output 1.3. Cross-sectoral climate change information and risk management focal points and working groups established and trained in all coastal counties.
Outcome 2. Innovative technologies to support coastal adaptation introduced, including response planning and communication mechanisms.	Outcome 2. Innovative technologies ? including response planning and communication mechanisms ? introduced to support coastal adaptation.
Output 2.1. Coastal flood and erosion early warning and risk management systems supported to provide climate information, products and services that meet the needs of end-users.	Output 2.1. Coastal flood and erosion early warning and risk management systems supported to provide climate information, products and services that meet the needs of end users. The focus of this output has been refined in the PPG phase by identifying specific needs and gaps within the current ?Enhancing Climate Information Systems for Resilient Development in Liberia (Liberia CIS)? project.
Output 2.2. County level knowledge hubs to collect and disseminate lessons learned on Sea & River Defence information to support ICZM supported in all Coastal counties, based on Sinoe pilot.	Output 2.2. Existing EPA Environmental Knowledge Management System enhanced to support the collection and dissemination of lessons learned on sea and river defence based on Sinoe County adaptation solutions. The Environmental Protection Agency (EPA) already houses a national knowledge hub through the Environmental Knowledge Management System (EKMS). To avoid duplication of efforts by developing additional knowledge hubs, Output 2.2 will enhance the existing EKMS at the national level to specifically support the dissemination of information related to sea and river defence and climate change adaptation across all coastal counties.
Output 2.3. Community Action Plans developed and implemented in all districts of Sinoe County.	Output 2.3. Community Action Plans developed for all coastal districts of Sinoe County.

Output 2.4. Guidance manuals for integrated coastal adaptation practices developed and disseminated to all coastal and riverine counties.	Output 2.4. Guidance Manuals for integrated coastal adaptation practices developed and disseminated to all coastal counties.
Outcome 3. Reduced vulnerability of Sinoe County coastal communities to climate-induced sea level rise impacts through hybrid solutions (nature based and engineering).	Outcome 3. Reduced vulnerability of Sinoe County coastal communities to climate-induced sea level rise impacts through hybrid solutions (nature-based and engineering).
Output 3.1. Viable solutions to address climate vulnerabilities in Sinoe County developed and designed using multi-criteria and processes for identifying, prioritizing and planning adaptation and resilience solutions, in consultation with local stakeholders.	Output 3.1. Viable solutions to address climate vulnerabilities in Sinoe County developed and designed using multi-criteria and participatory processes for identifying, prioritising and planning adaptation and resilience solutions. Following a site selection process including site assessments, stakeholder consultations and considerations of future climate impacts, the initial intervention sites within Sinoe County identified in the PIF have been revised. The potential sites to be further assessed under Output 3.1 include Tournata, Bafu Bay, Pungbor, Nanakru, Downtown Greenville/Mississippi Street and Sebeh, of which the latter two will be the primary sites for implementing hybrid nature-based and engineered interventions.
Output 3.2. Coastal and catchment level adaptation solutions implemented to improve resilience of communities the impacts of climate change in Sinoe County, targeting 80,000 beneficiaries and 20,000 ha.	Output 3.2. Coastal- and catchment-level adaptation solutions implemented to improve the resilience of communities to the impacts of climate change in Sinoe County. The number of beneficiaries and area in the output wording have been omitted. This was done because the number of beneficiaries and hectares have been adjusted from the PIF stage. The adjustment followed the change in proposed sites ? which was done after verification that the initial sites were unsuitable for the project ? combined with recent population estimates and site assessments. The site assessment indicated that the initial population and required area totals from the PIF were an overestimate. Moreover, additional details on the specific hybrid interventions proposed for implementation have been included.
Output 3.3. Best practices on adaptation solutions documented and disseminated to other coastal counties for adoption and scaling up including through the engagement of private sector.	Output 3.3. Best practices on adaptation solutions documented and disseminated to other coastal counties for adoption and upscaling, including engagement with the private sector.
Outcome 4. Gender-responsive options for climate-resilient income and livelihood diversification introduced to climate-vulnerable communities in coastal counties.	Outcome 4. Gender-responsive options for climate-resilient income and livelihood diversification introduced to climate-vulnerable communities in coastal counties.

Output 4.1. Business identification, development and management training programmes designed and delivered to communities and Small Micro and Medium Enterprises (SMMEs) in coastal counties targeting youths and women?s groups targeting 70,000 beneficiaries.	Output 4.1. Business identification, development and management training programmes designed and delivered to communities and Micro, Small and Medium Enterprises in coastal counties, targeting women and the youth. The number of beneficiaries in the output wording from the PIF has been omitted. In addition, the number of direct beneficiaries for the output has been reduced to align with more realistic population and budgeting estimates, given that the values included in the PIF were an overestimate.
Output 4.2. Integrated Farming Systems, Fisheries and Compressed Stabilised Earth Blocks and their value chains ?opportunities for coastal communities are created and implemented targeting 30,000 beneficiaries.	Output 4.2. Opportunities for integrated farming systems, fisheries, compressed stabilised earth blocks and their value chains created for coastal communities. The number of beneficiaries in the Output wording from the PIF has been omitted. In addition, the number of direct beneficiaries for the output has been reduced to align with more realistic population and budgeting estimates, given that the values in the PIF were an overestimate.
Output 4.3. Access to finance and technologies to develop livelihood and income diversification enterprises of coastal livelihoods and resources facilitated in collaboration with national and county financial institutions.	Output 4.3. Access to finance and technologies to develop livelihood and income diversification enterprises of coastal livelihoods and resources facilitated in collaboration with national and county financial institutions.

1a. *Project Description*. Elaborate on: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description); 2) the baseline scenario and any associated baseline projects; 3) the proposed alternative scenario with a brief description of expected outcomes and components of the project; 4) alignment with GEF focal area and/or Impact Program strategies; 5) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing; 6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF); and 7) innovativeness, sustainability and potential for scaling up. ?

The *Project Description* section from the PIF has been restructured and considerably expanded into three new sections within the Project Document, namely: i) Development Challenges; ii) Strategy; and iii) Results and Partnerships. These sections can be briefly summarised as follows:

Development Challenges ? This section is divided into the following sub-sections: i) Country context; ii) Root causes of vulnerability and baseline drivers of degradation; iii) Climate change and hazards; iv) Problem statement; v) Preferred solution; vi) Barriers; and vii) National strategies and plans. In comparison with the PIF, this section expands more on the geographic and environmental, socio-

demographic, institutional and economic contexts. It also provides a more detailed analysis of the baseline drivers of degradation and vulnerability, current and predicted climate change and their impacts. This analysis is used to develop a problem statement which highlights the interactions between baseline drivers, climate change impacts and the effect on coastal communities and ecosystems. Finally, barriers as well as national strategies and plans that the project aligns to are expanded on from those identified in the PIF.

Strategy ? This section is divided into the following sub-sections: i) Theory of change; ii) Strengthened institutional capacity to assess climate change risk and climate adaptation; iii) Innovative sea and river defence response planning and communication mechanisms; iv) Hybrid climate change adaptation solutions; v) Gender-responsive and climate resilient livelihood options; vi) Assumptions; and vii) Contributions to the GEF7 climate change adaptation focal area strategy. This section includes a description of the preferred solution, theory of change and a solution tree to address the impacts listed in the Development Challenges section. Additionally, details on how the project outcomes will address the identified impacts and barriers is provided in this section.

Results and Partnerships ? This section is divided into the following sub-sections: i) Expected results; ii) Partnerships; iii) Risks; iv) Stakeholder engagement and South-South cooperation; v) Gender equality and women?s empowerment; and vi) Innovativeness, sustainability and potential for scaling up. Under the Expected results section, the proposed solution is considerably expanded through descriptions of the outcomes and outputs.

Country Context

Liberia is a West African coastal country located in the equatorial region, on the borders of Sierra Leone to the northwest, Guinea to the northeast, C?te d?Ivoire to the east and the North Atlantic Ocean to the south[1][1]. The country has four distinct elevation zones, namely the coastal belt (0?60 metres above sea level [masl] and ~40 km wide), rolling hills (60?150 masl), plateaus (150?500 masl) and northern highlands (>500 masl, peaking at 1,380 masl). The coastal belt, which extends up to 65 km inland, includes coastal and marine ecosystems, open savannas and degraded forests. Project sites which will be targeted for on-the-ground coastal resilience and livelihood interventions under Components 3 and 4, respectively ? including Downtown-Mississippi (Greenville), Sebeh, Nanakru, Tournata, Bafu Bay and Pungbor ? are all located along the coastal belt within Sinoe County and are characterised by mangrove and coconut forests.

Liberia?s total population is approximately 5.2 million people, of which ~51% are women[2][2],[3][3]. More than half of Liberia?s population lives in urban areas, and this trend has placed increasing pressure on urban infrastructure to meet the needs of its growing population. Liberia is a low-income country with a total GDP of USD3.07 billion and one of the lowest GDP *per capita* scores globally (ranked 222 out of 228 countries in 2019 at USD1,498/annum)[4][4],[5][5]. The country?s services sector has the largest contribution to GDP (~52%), followed by agriculture (~34%) and industry (~19%). Despite agriculture?s relatively lower contribution to economic development, ~70% of Liberians are economically active in the sector, followed by 22% in services and 8% in industry[6][6].

Between 1989 to 1995, the economic growth of Liberia ? measured in GDP ? declined by ~90%, one of the largest global declines in history. This decline was primarily attributable to the civil war from 1989 to 1996[7][7]. Although the economy has begun to recover from these conflicts, recovery has been slowed by the 2007?2008 global financial crisis and an Ebola outbreak in 2014. As a result, the GDP growth has fluctuated considerably over the last two decades[8][8]. The current Covid-19 pandemic, in a similar way to the Ebola outbreak, is projected to have considerable negative impacts on Liberia?s economy by reducing demand for the country?s exports and disrupting investment in the mining, agriculture and forestry sectors[9][9]. GDP in 2020 declined by ~2.9%, largely as a result of the Covid-19 pandemic[10][10].

Root causes of vulnerability and baseline drivers of degradation

The socioeconomic challenges described above have contributed to numerous non-climatic impacts that have, in turn, driven the increasing degradation of Liberia?s coastal, riparian and forest ecosystems. These drivers include sand mining, overfishing, pollution of water resources, encroachment into the coastal zone, as well as the impacts of the 1989 to 1996 and 1999 to 2003 civil wars on the country.

Sand mining

Sand mining along the Liberian coastline is often poorly regulated and at times entirely illegally practiced. In recent years, both regulated and illegal sand mining have increased in intensity because of the greater demand for construction sand linked to population growth in coastal settlements. Sand mining has resulted in widespread negative environmental and socioeconomic impacts in Liberia. For example, the removal of natural coastal barriers, such as dunes, has led to increased beach degradation in the form of erosion as well as flooding in coastal areas. These impacts have, in turn, resulted in damage to houses and other critical infrastructure while also undermining the future potential for tourism in affected natural areas. Consequently, the vulnerability of residents in coastal settlements to climate hazards has increased

Overfishing

Overfishing and unsustainable fishing practices have been identified as driving factors in the degradation of Liberia?s fish stocks. The use of unsustainable fishing practices causes declines in the available breeding population for affected fish species. If unmanaged, this could result in the depletion of the breeding population beyond a point of recovery, ultimately leading to extinction and substantially impacting the Liberian fishery industry. These baseline activities will increase the vulnerability of Liberian fisherfolk to climate change impacts such as increased sea surface temperatures and a greater frequency of extreme storm events[11][11].

Pollution of water resources

Liberia?s existing sanitation system has been poorly maintained since the end of the civil war in 2003, resulting in its inability to sufficiently meet the current needs of the country?s population[12][12]. These systems are prone to frequent clogging during high-intensity rainfall events, contributing to increased flooding when stormwater drains overflow ? particularly in urban areas[13][13],[14][14]. Consequently, Liberia?s inadequate WASH systems result in increased water contamination during flooding events, presenting a considerable health risk to affected residents[15][15]. Climate change hazards, particularly an increased incidence of high-intensity rainfall events and associated flooding, is projected to considerably exacerbate this health risk.

Encroachment into coastal zones for food, land and natural resources

The expansion of coastal settlements has increased human development requirements in these areas, placing greater pressure on natural resources[16][16] by: i) converting natural areas into housing, infrastructure and agricultural land; and ii) unsustainably utilising natural resources, which includes excessive sand mining as well as overharvesting of mangroves for wood fuel and other uses. The urban expansion also causes increased pollution of water resources as a result of inadequate systems for the disposal of liquid waste (Section II.2.3). This pollution drives habitat loss, coastal erosion and ecosystem degradation in the country[17][17].

Deforestation

Total forest cover in Liberia has declined considerably from ~90% of total land area in 1959 to ~32% in 2009[18][18], and the current rate of deforestation is ~0.5% *per annum*. The primary drivers of

deforestation include logging, mining, charcoal production, inadequate enforcement of relevant legislation and the expansion of agro-industrial crop plantations[19][19],[20][20]. One of the primary impacts of deforestation at the community level is the loss of forest ecosystem services, including provisioning services such as fuelwood, bushmeat and plant medicine[21][21],[22][22]. Communities located within 2.5 km of forests in Liberia reported relying on the sale of forest products for ~35% of total household income, and for meeting subsistence needs, including food, energy and shelter. By reducing the availability of forest resources, deforestation will further increase the vulnerability of communities to climate change by undermining the incomes, food security and other needs of households, consequently reducing their adaptive capacity.

Civil war

Liberia has recently emerged from an extended period of civil war between the periods 1989?1996 and 1999?2003[23][23]. These events resulted in extensive loss of infrastructure and environmental degradation, both of which resulted in the displacement of civilians.

The intersection of pandemics and climate change

The social, economic and fiscal impacts of pandemics can increase the vulnerability of affected communities to climate change. For example, the Ebola Virus Disease (EVD) outbreak in 2014 resulted in the loss of ~USD113 million in fiscal revenues for Liberia, which equated to ~5% of GDP[24][24]. These revenue shortfalls often require governments to readjust their budgets and may potentially impact long-term development spending in favour of more immediate priorities[25][25],[26][26]. The resulting loss of incomes and livelihoods drive rising climate change vulnerability, as the adaptive capacity of affected workers and communities is undermined.

Climate change and hazards

Baseline climate conditions

Liberia has a predominantly tropical climate, with localised climatic variations resulting largely from differences in altitude. Rainfall in Liberia is highest along the coastal belt (4,770 mm/yr average) and

decreases toward the interior plateaus and mountains, where the average annual precipitation is 2,030 mm/yr[27][27]. Most of Liberia experiences two seasons: a wet season (?summer?) between May and November, when temperatures average 25?C; and a dry season (?winter?) between December and April, However, rainfall and temperatures are relatively uniform throughout Liberia?s coastal zone, including Sinoe County[28][28].

Observed and projected climate change and associated hazards

General trends of projected temperature and precipitation changes for coastal Liberia over the 21st century indicate a warmer and wetter climate. While temperature projections are more certain, rainfall uncertainty will increase along with rainfall variability in terms of both rainfall seasonality and the intensity of rainfall events. The principal climate hazards resulting from these climate changes, many of which are currently affecting communities and ecosystems in Sinoe County, are: i) extreme temperatures, with potential increases in drought in the future; ii) flooding caused by heavy rainfall events; and iii) sea level rise (SLR), and its resultant coastal erosion and inundation of coastal areas during coastal storms. These trends are projected to increase in intensity in the future.

Temperature

There is increasing evidence of warming over terrestrial regions across Africa, consistent with anthropogenic climate change. Since 1960, Liberia has experienced an increase in the average annual temperature of 0.18?C per decade[29][29], along with a 16% increase in the average number of ?hot nights?[30][30] per year between 1960 and 2003[31][31]. In Liberia, the average annual temperature is projected to increase by 0.7?C, 1.2?C or 1.7?C for the period 2040?2059 for the Shared Socioeconomic Pathways (SSPs) SSP1-1.9, SSP24.5 and SSP5-8.5, respectively[32][32]. Temperatures are predicted to rise by 0.5?C, 2.0?C or 3.6?C for the period 2080?2099 under the same SSPs[33][33]. This increase in temperature will be greater in the dry season (December?April) compared with the wet season (May?November) for both the periods 2040?2059 and 2080?2099.

Increasing global temperatures have and will continue to contribute to rising sea levels. Sea level anomalies have been steadily increasing along Liberia?s coastline over the last 20 years. Despite a limited climate data in Liberia, satellite observation of sea surface height, which began in 1993, has provided a robust evidence base to increase the confidence of these observations. In 2015, the sea level anomaly along the country?s coast was ~63 mm. Sea levels are predicted to continue to rise in the future, with West Africa regional estimates for the 2041?2060 period predicting a rise of 20 cm, 30 cm

and 30 cm under the SSP1-2.6, SSP2-4.5 and SSP5-8.5 scenarios, respectively[34][34]. Long-term estimates for the period from 2081?2100 predict sea level rise of 50 cm, 60 cm and 70 cm for the same SSP scenarios. By the end of the century, sea level rise is predicted to reach 84 cm. This rise in sea level will exacerbate current levels of inundation in coastal areas and contribute to increased coastal erosion by aggravating the impact of storm surges.

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Rainfall

There has been an observable increase in the frequency and unpredictability of intense rainfall events since 1960 throughout Liberia, which has, in turn, resulted in, *inter alia,* an increase in the incidence of extreme flooding events[35][35]. Almost 90% of the national population lives in areas at risk of flooding from the sea, river systems and swamplands, with flood risk exacerbated by baseline drivers such as inadequate drainage systems and the degradation of ecosystems. Within Greenville, the settlement of Sebeh is particularly vulnerable to both coastal and riverine flooding, given its geographical position adjacent to the Sinoe River and the Atlantic Ocean. The projected increase in heavy rainfall events may, in turn, result in greater flood risk for vulnerable communities[36][36].

Liberia is predicted to experience a slight overall decrease in precipitation in the future. By the 2040?2059 period, precipitation is predicted to decline by 3%, 0% and 5% under the SSP1-1.9, SSP2-4.5 and SSP5-8.5 scenarios, respectively[37][37]. For the period from 2080?2099, precipitation is expected to decrease on average by 2%, 0% and 6% for the SSP1-1.9, SSP2-4.5 and SSP5-8.5 scenarios, respectively. The decline in rainfall is not consistent across the year or across the country, with precipitation in the wet season expected to increase slightly by 1?2% and rainfall in the dry season predicted to decline by 4?13% for the period 2040?2059 under the SSP1-1.9, SSP2-4.5 and SSP5-8.5 scenarios. The variability in rainfall throughout the year will by coupled with an increase in the frequency and unpredictability of intense rainfall events which has been observed since the 1960s[38][38], leading to an increased likelihood of flooding events. The continuation of this rainfall variability trend in the future is demonstrated by increases in the maximum 1-day precipitation, which is predicted to increase by 9%, 11% and 18% between 2041?2060 under SSP1-2.6, SSP2-4.5 and SSP5-8.5 respectively and by 7%, 15% and 36% by 2081-2100 under the same SSP scenarios[39][39].

The impact of increased air temperatures and greater incidences of flood events on agriculture and fisheries

Climate change-induced increases in air temperature under all SSP scenarios in the medium- and long-term future will place stress on many of the crops grown in Liberia. Rice, which is currently cultivated by ~74% of Liberian farmers and is the country?s primary staple crop, is particularly sensitive to increasing humidity and temperatures, intense rainfall and the pests associated with warmer conditions[40][40]. Projected increases in the incidence of extreme precipitation events under all SSP

scenarios, and resultant flooding, will further affect the productivity of the agricultural sector. The increased frequency of intense rainfall events leads to a reduced growing season, maturation and drying period for crops, as well as accelerated erosion of topsoil and waterlogging, which reduce the total arable land area.

The fisheries sector will also be adversely impacted by climate change, particularly as a result of: i) rising sea temperatures caused by increasing global air temperatures; and ii) a greater frequency of extreme storm events. Rising sea temperatures, among other factors such as overexploitation, have led to a decline in fish stocks[41][41],[42][42]. Accordingly, global climate models simulate a redistribution of fish stocks toward cooler temperate countries, undermining the fisheries industry in tropical countries such as Liberia. Relative to 2005 levels, the maximum potential catch along the West African coast is projected to decline by 30?50% by 2050 under an extreme climate change impact scenario ? the SRES A1B scenario. This is projected to considerably impact food security, as fish is an important component of the Liberian diet and the primary source of protein in coastal areas[43][43]. An increased frequency of extreme storm events is also projected to cause more frequent loss of fishing days and increased costs from loss of fishing gear[44][44]. Without intervention, these climate hazards are projected to considerably undermine ~29% of the population in Sinoe County who depend on fisheries for their livelihoods.

Sea level rise

Like most coastal nations, Liberia is exposed to coastal erosion and shoreline recession resulting from the action of destructive ocean waves on the shore[45][45] combined with a rising sea level. Considerable shoreline recession has already been observed in the cities of Buchanan, Greenville, Harper, Monrovia and Robertsport, with the extent of beach loss estimated to be as high as 3 m/yr in extreme circumstances[46][46]. While sand mining has been responsible for much of this beach loss, climate change-induced SLR has also exacerbated the rate of coastal erosion, which is projected to continue increasing in the future[47][47].

SLR is a significant threat to coastal communities, in which ~60% of Liberia?s population resides. A vertical rise of sea level by 1 cm has a horizontal extent of 100 cm on sandy beaches, meaning that any additional SLR under the SSP scenarios would impact Liberia?s coastal communities. In particular, a vertical rise in sea levels of nearly 1 m by 2100 under a SSP5-8.5 scenario would result in the submergence of coastal zones in Liberia?s cities, costing ~USD250 million in infrastructure loss. Vertical SLR exceeding 1 m would also affect agricultural and fisheries livelihoods, as well as important natural resources and ecosystems such as mangroves. Specifically, the inundation of agricultural areas and resulting declines in soil quality and yields will undermine food security[48][48].

Low-income communities, particularly those residing in informal settlements, would be disproportionately affected by these impacts given their low adaptive capacity[49][49].

Greenville, the economic hub and capital of Sinoe County, has been identified as an important area that requires protection from SLR[50][50]. The areas around the Sinoe River delta in particular have experienced flooding caused by a combination of SLR and increasing volumes of freshwater flowing down Sinoe River during the wet season?s intense rainfall events[51][51]. This has led to extensive coastal erosion: a sand bank that used to extend southwards into the river mouth on its western side has been completely eroded away in the last decade, which has led to further coastal erosion on the river mouth?s eastern banks as well as into settlements on its northwestern edge (Figure 1).

Figure 1. Satellite photos of the Sinoe River delta in Greenville taken in February 2012 (left) and March 2018 (right) show sizable erosion of the Greenville peninsula area resulting in more than 50 houses being eroded or incapable of further habitation (red arrow). In addition, the southern tip of the main Mississippi Street and side streets (green arrow) have been completely eroded. The blue arrow represents the main river current direction along the original riverbed. A shipwreck (from 1990s civil war) at the mouth of Sinoe River delta has been encircled yellow and is believed to possibly have a function in redirecting local ocean bay currents towards the Mississippi Street area, which will be exacerbated by projected climate changes including an increased frequency of high-intensity rainfall events[52][52].

The SLR-induced coastal erosion trend is predicted to increase in the future, and climate projections under SSP5-8.5 predict SLR of 84 cm by 2100 along Liberia?s coast and an increase in the frequency of high-intensity storms resulting in an increased offshore significant wave height[53][53]. In addition to increased coastal erosion, SLR will impact vulnerable coastal communities through: i) degradation of the mangrove and coastal ecosystems on which their livelihoods and food security depend[54][54]; and ii) inundation of important infrastructure such as boat-launch sites, dwellings and socioeconomic spaces and amenities such as fish markets.

Problem statement

As stated above, Liberia?s coastal zone is negatively affected by several climate change impacts, including increases in: i) sea level rise (SLR) of 20?30 cm by 2040?2059 resulting from increasing 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, 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. 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 more intense 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 vii) increased pressure on surrounding ecosystems to compensate for the reduced provision of services from coastal, wetland and mangrove ecosystems. In addition, the vulnerability of Liberia?s coastal communities and their resilience to climate change, particularly in Sinoe County, is exacerbated by the limited capacity of 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.

While there is considerable potential for implementing interventions that promote climate change adaptation (CCA) and risk management in Liberia, an enabling environment that maximises the benefits of these interventions is necessary. The preferred solution to overcoming climate change-induced sea level rise, coastal storms and rainfall variability to build Sinoe County?s sustainable coastal resilience requires an integrated management approach involving, *inter alia*, mainstreaming climate change adaptation into development planning and budgeting, enabling the adoption of climate-resilient livelihoods and practices and protecting coastal ecosystems, communities and infrastructure from current and future climate impacts. Implementing a suite of adaptation interventions will positively impact local communities by reducing their vulnerability and increasing their resilience to the impacts of sea level rise, intense coastal storms, as well as increasing rainfall variability. There are several barriers to achieving this in the country, which limit technical and institutional capacity to address the challenges described in the project problem statement. These barriers are summarised below and detailed in Section II.6 of the Project Document.

Barrier 1: Limited data and awareness with regards to climate change-related risk management in coastal counties

There is currently insufficient understanding of Liberia?s present and future climate change risks ? particularly in coastal zones ? among the country?s population and policy- and decision-makers. There

are also limited data and studies available that detail Liberia?s vulnerability to climate change impacts, specifically the effects of inundation, erosion and precipitation variability on coastal areas. Consequently, there is limited knowledge and awareness on appropriate climate change-related sea and river defence measures to support the effective monitoring and management of coastal and river ecosystems, as well as reporting on how these ecosystems are affected by climate change.

Barrier 2: Gaps in local policy and planning to enable integrated coastal resilience

While there are several policies, plans and strategies aimed at supporting the protection of Liberia?s broader ecosystems and biodiversity, few promote the monitoring and conservation of Liberia?s coastal and river ecosystems specifically. This ? combined with policy- and decision-makers? limited understanding of the impacts of climate change on Liberia?s coastal and river ecosystems ? highlights an inadequate enabling environment to support integrated coastal management resilient to climate change in Liberia. Additionally, Liberia has limited financial and human resources in its policy regulation and enforcement agencies to address the country?s climate change-related challenges adequately.

Barrier 3: Limited knowledge-sharing and technical capacity to support the design and implementation of sea and river defence management in coastal communities

There is limited scientific and engineering expertise within the relevant government institutions to identify, design and implement CCA interventions that integrate engineered and nature-based approaches. This challenge is exacerbated by limited capacity and resources to share knowledge and raise awareness on relevant climate risks ? which is necessary for facilitating an improved understanding amongst the public and private sector of ecosystems and the associated services and values thereof.

Barrier 4: Limited institutional capacity and coordination for mainstreaming CCA and planning at national and local levels

There are 10 government institutions involved in the different aspects of coastal zone management in Liberia, resulting in coastal resources managed on a predominantly sectoral basis. This fragmented allocation of resources for coastal management ? along with limited capacities among the different institutions at national and local levels ? constrains the development of integrated and locally appropriate climate-resilient coastal management solutions. As a result, this undermines the sustainability of existing management structures and interventions relating to coastal zone management.

Barrier 5: Limited access to financing for effective sea and river defence management

The Government of Liberia (GoL) has limited financial capacity to invest in medium- to long-term interventions for enhancing climate resilience at a national scale in light of the country?s development needs and low[55][55]. Financing for the protection of coastal ecosystems predominantly comprises short-term grants from private foundations and government aid agencies. This, however, is not sufficient for developing and implementing sustainable sea and river defence management interventions.

Barrier 6: Limited access to training opportunities for local communities on effective coastal adaptation practices in Sinoe County

There is limited awareness of coastal climate change impacts among the relevant vulnerable communities in Liberia, resulting in these communities being unable to adapt to the associated climate change hazards adequately. This is exacerbated by insufficient training initiatives at the local level

aimed at enhancing the awareness of and supporting the implementation of sustainable coastal adaptation measures.

Barrier 7: Access to financing and credit options for low-income coastal communities to diversify income is limited

While several efforts[56][56] have been made to modernise financing mechanisms in Liberia as well as promote inclusive finance options, the Liberian population still experiences numerous challenges in this sector. These challenges continue to limit their ability to diversify their income bases away from climate-sensitive livelihoods or to adopt climate-resilient practices that reduce vulnerability. Such challenges include, *inter alia*: i) limited access points for financial services, particularly in rural areas; ii) high costs associated with digital financial services; and iii) limited infrastructure to support digital services.

The baseline scenario and associated baseline projects

Throughout project implementation, the proposed project will collaborate with and build on several recent and ongoing projects implemented by partner stakeholders that address the same development challenge as the proposed project. This collaboration will broaden the impact of project interventions, avoid duplication of efforts and enable sharing lessons learned throughout implementation. Table 3 below provides the details of these projects and their alignment with the proposed project including the objectives, outcomes and budgets of the baseline projects, as well as the potential co-finance links to the outcomes of the proposed project. Furthermore, a description of all stakeholder partners and their contributions to achieving project intervention results is provided in the Stakeholder Engagement Plan (Annex 9).

Table 3. Recent and ongoing initiatives and alignment with the proposed project.

Project title	Implementation period	Cost	GEF Agency/Executing Entity	Project summary	LDCF project additionality to the baseline
GEF/LDCF-financed projects					

Strengthening National Capacities to Meet Global Environmental Obligations with the Framework of Sustainable Development Priorities (ID 9390)[57][57]	2017?2021	USD3 million total[58][58]	UNDP/GoL (EPA)	The project aims to strengthen a targeted set of national capacities for achieving and sustaining environmental outcomes within the global framework of sustainable development priorities. The Liberian Environment Knowledge Management Systems (EKMS) ? developed under this project and to be supported by the proposed LDCF project ? intends to: i) strengthen institutional coordination; ii) increase access and dissemination of relevant information related to the Rio conventions[59][59]; and iii) promote adequate public awareness and education on climate change-related topics, Liberia?s biodiversity and sustainable development.	Although this project includes some climate change elements, these are more focussed on mitigation and do not address details on SRDRM and coastal adaptation. The proposed LDCF project will build on the interventions of this project to: i) strengthen the EKMS knowledge hub for collecting and disseminating information related to integrated coastal zone management (ICZM) and coastal adaptation to climate change; ii) develop County Resilience Plans (CRPs) that aim to promote climate change adaptation-orientated development at the county level; and iii) develop appropriate coastal adaptation practices for communities under Outcome 2.

Conservation and Sustainable Use of Liberia?s Coastal Natural Capital (ID 9573)[60][60]	2019?2025	USD15 million total[61][61]	Conservation International (CI)/Government of Liberia (Environmental Protection Agency, EPA) and CI Liberia	The objective of this project is to improve sustainable use and conservation of Liberia?s coastal natural capital by mainstreaming the value of ecosystems and their related services into Liberia?s development trajectory, with Sinoe County as one of the target counties. Planned outcomes of the project include, *inter alia*: i) ensuring that the value of biodiversity and ecosystem services ? particularly in coastal areas ? is incorporated into national decision-making and development pathways by developing Liberia?s first national mangrove account under the Natural Capital Accounting (NCA) framework; and ii) developing community incentives for shifting away from unsustainable resource-use practices in favour of preservation, restoration and sustainable management.	The efforts of this project will be synergistic with the interventions under the proposed LDCF project, specifically: i) improving coastal adaptation planning, response and communication mechanisms through capacity-building and awareness-raising initiatives on coastal ecosystem services and their value to communities and stakeholders under Outcome 2; and ii) identifying and implementing sustainable livelihood opportunities for coastal communities to facilitate long-term sustainable practices under Outcome 4. Although the LDCF project will build on this project?s approach to promoting natural capital accounting and the sustainable management of ecosystems and their services in coastal areas, the project will specifically focus on coastal ecosystems such as mangroves and forests that provide adaptation benefits through coastal protection. Sustainable livelihoods will be selected that specifically increase the resilience of these livelihoods to climate change impacts.

Reducing deforestation from palm oil and cocoa value chains	2021?2026	USD74 million total[62] [62]	Conservation International	This project will target the ?Biodiversity? and ?Land Degradation? GEF Focal Areas by combatting the degradation and deforestation of forested areas in northwestern Liberia. Improved land-use management strategies, combined with a focus on ?formal protected areas, community forestry, livelihoods and economic development? will be introduced to achieve this objective[63][63].	The LDCF project will build on the baseline work to be undertaken in the ?Reducing deforestation from palm oil and cocoa value chains? project through activities implemented under Component 4. By creating opportunities for integrated farming systems, fisheries, compressed stabilised earth blocks and their value chains (Output 4.2) the project will complement and draw on the introduction of ?improved sustainable production of food and commodity crops? introduced in the abovementioned deforestation project. Whereas livelihoods under the baseline project do not specifically address climate change risks, livelihoods under the proposed project will be designed to be climate resilient and to reduce the vulnerability of coastal communities to future flooding and erosion. Moreover, by facilitating access to finance for climate adaptation-orientated businesses (Output 4.3) the project will build on the promotion of restoration activities through innovative finance to be introduced in the abovementioned deforestation project[64][64].

Improve sustainability of Mangrove Forests and Coastal Mangrove Areas in Liberia through Protection, Planning and Livelihood Creation as a Building Block Towards Liberia?s Marine and Coastal Protected Areas[65][65]	2016?2019[66][66]	USD4 million total	Conservation International	Participatory land-use planning, in conjunction with establishing coastal protected areas, has been introduced across at least 35% of Liberia?s mangroves under this project. A multifaceted approach has been taken to achieve this objective to: i) create an enabling environment for the establishment of coastal and marine protected areas by ensuring the necessary policies and plans are developed; and ii) reduce anthropogenic pressures on mangroves by introducing integrated land-use planning and sustainable, alternative livelihood strategies within communities in the project area. This project targets the ?Biodiversity? GEF Focal Area[67][67].	There are several synergies between the LDCF project and the ?Improve sustainability of Mangrove Forests and Coastal Mangrove Areas in Liberia through Protection, Planning and Livelihood Creation as a Building Block Towards Liberia?s Marine and Coastal Protected Areas? project (hereafter referred to as the ?Mangrove Restoration Project?), specifically the introduction of additional, climate-resilient livelihoods under Output 4.2, which aligns with the local economic development to be introduced among at least 10 communities living near target mangrove ecosystems. Moreover, the institutional capacity building for climate change adaptation (Output 1.1) will build on the capacity building for the sustainable management of mangrove forests, to be introduced under the Mangrove Restoration Project. Finally, the hybrid adaptation solutions to be introduced under Component 3 will align with, and build on, the mangrove restoration work to be undertaken in the Mangrove Restoration Project with a focus of improving and promoting coastal

Non-GEF projects

UNDP Programme Support	Ongoing	USD60 million per year	UNDP	UNDP plays an extensive supporting role in Liberia?s national development and currently provides ~USD60 million per year in grants[68][68]. Several UNDP programmes pertain to coastal area development ? the most relevant including: ? Liberian Decentralisation Support Programme (LSDP) ? aimed at developing a local government system built on principles and practices of good governance under the leadership of elected local officials; ? Community-Based Recovery and Development; ? Micro-Finance ? Improved Access by Women to Financial Services in Rural Areas; ? Disaster Risk Reduction Programme; and ? Centre Songhai Liberia Initiative.	The LDCF project will build on this initiative by adding climate change capacity development and considerations to the most relevant programmes. This will include: i) increasing the capacity of local governance to consider climate change and SRDRM into development planning through the development of ICZM plans, RCPs and Guidance Manuals; ii) enhancing the climate resilience of communities in Sinoe Country through direct investments in climate change defence infrastructure and awareness-raising of climate change and its impacts; iii) improving access to finance for entrepreneurs ? particularly women ? involved in livelihoods that are adaptation-oriented; and iv) improving disaster risk reduction by promoting SRDRM and climate adaptation principles, as well as by improving early warning systems.

Strengthening of the legal framework for the electricity sector and the hydrometric network to support hydropower development in Liberia[69][69]	2016?2020	USD2.5 million	MME, Norwegian Water Resources and Energy Directorate	The expected outcome of the second phase of this programme that aligns with the proposed project includes supporting the Liberian Hydrological Services (LHS) with the operation, maintenance and further development of their hydrometric network. Specifically, the project procured and installed 15 hydrometric stations and 14 rainfall stations, increasing national weather stations to an amount close to the initial number in Liberia before the civil wars (detailed in Section II.2.6).	This project sets a baseline for the hydrometeorological equipment that provides climate information to support the early warning system to be developed and supported under the GCF project ?Enhancing climate information systems for resilient development in Liberia (Liberia CIS)? and Output 2.1 of the proposed project. Despite setting an effective baseline with regards to technological capacity within the LHS, the project requires funding to continue operation and maintenance of the equipment, given that the project officially ended in 2020. Additionally, although the project procured sufficient equipment to increase Liberia?s hydrometric infrastructure to similar levels to before the civil wars, this may not be adequate for future climate needs under climate change. The Liberia CIS and Output 2.1 of the proposed project will therefore assist in filling this equipment gap to ensure the capacities of the LHS and hydrometric network are sufficient under climate change.

World Bank Forest Sector Project[70][70]	2016?2023	USD37.5 million	Forest Development Authority	The objective of the Forest Sector Project is to improve the management of ? and increase benefit-sharing in ? targeted forest landscapes across Liberia. The three components of the project include: i) strengthened regulatory and institutional arrangements for the implementation of reducing emissions from deforestation and forest degradation (REDD); ii) strengthened capacity for the management of targeted forest landscapes; iii) forest monitoring information system; and iv) project management, monitoring and communication. Accordingly, this project focusses on the expansion of the forest protected area network and the establishment of community forests. Focus is also placed on improving the institutional capacity of government agencies including the Forest Development Administration, EPA, MoA and Liberia Institute of Statistics and	By promoting the concept of sea and river defence and risk management (SRDRM) and developing integrated coastal zone management (ICZM) plans and Community Action Plans (CAPs), the LDCF project will build on the Forest Sector Project by increasing the institutional capacity of county- and district-level authorities to consider climate change adaptation principles in coastal development ? including the use of nature-based solutions. These nature-based solutions include interventions similar to those used by the Forest Sector Project ? including reforestation, community-based management and forest conservation ? but will focus on coastal communities and increasing their capacity to provide coastal defence. Awareness-raising activities targeting coastal communities will focus on promoting the services coastal forests provide for protection from flooding and erosion.

Livelihoods and Employment Creation in Liberia	2021?2025	USD7.8 million	UNDP/GoL (Ministry of Commerce and Industry)	The objective of the ?Livelihoods and Employment Creation in Liberia? project is to contribute to reducing poverty and inequality in seven counties, namely Grand Bassa, Grand Cape Mount, Grand Gedeh, Lofa, Montserrado, Nimba and Sinoe. The project aims to support the creation of income-generating opportunities for poor and vulnerable populations, including refugees and their host communities. The interventions of this project will be implemented under two components, specifically: i) supporting the creation of sustainable, viable and diversified livelihood opportunities for the youth, women and persons living with disabilities by investing in and developing community infrastructure, environmental services, vocational skills, including digital skills, as well as inputs and technical advice to	The interventions under this project will be synergistic with the those under Outcome 4 of the proposed LDCF project in particular, which aims to build the resilience of climate-vulnerable coastal communities by introducing gender-responsive options for climate-resilient income and livelihood diversification. Specifically, Output 4.2 of the proposed LDCF project will build on the efforts under Component 1 by developing diversified and climate-resilient livelihood options and income-generating activities. Outputs 4.1 and 4.2 will build on both Components 1 and 2 by facilitating and improving access to adaptation-orientated finance and enabling technologies among vulnerable communities, as well as building the capacity of and providing business advisory services to coastal adaptation enterprises.

GROW Liberia: Support to the Development of Markets and Value Chains in Agriculture in Liberia	2013?2018	USD 17 million total	Adam Smith International	This project is being implemented in Montserrado, Lofa, Bong and Nimba Counties, targeting five agricultural sub-sectors, namely: i) rubber; ii) oil palm; iii) agro-processing; iv) cocoa; and v) vegetables. Activities have concluded within the rubber, oil palm and agro-processing sub-sectors[71][71].	This LDCF project will build on GROW Liberia by introducing sustainable and additional livelihoods with a focus on value-chain development across all Liberia?s coastal counties (Output 4.2). The introduction of inclusive finance under Output 4.3 will upscale the access to finance facilitated under GROW Liberia, which was limited to the rubber, cocoa and vegetables value chains in a select number of counties[72][72].

Proposed solution

The proposed solution is to implement a sea and river defence and risk management (SRDRM) approach to protect coastal assets and promote climate-resilient livelihood diversification. This solution will focus on addressing current and future climate change impacts through a gender-responsive approach, building on ongoing baseline initiatives. Long-term objectives to achieve this include: i) introducing innovation and technologies into adaptation solutions and livelihoods that increase the resilience of coastal communities to climate change risks; and ii) using a systemic approach to mainstream climate change adaptation (CCA) and resilience options. Four project outcomes will support these objectives, namely:

? Outcome 1 ? Strengthened capacity of all Liberian coastal counties' planning institutions to assess climate change risks and integrate into county development frameworks;

? Outcome 2 ? Innovative technologies ? including response planning and communication mechanisms ? introduced to support coastal adaptation;

? Outcome 3 ? Reduced vulnerability of Sinoe County coastal communities to climate-induced sea level rise impacts through hybrid solutions (nature-based and engineering); and

? Outcome 4 ? Gender-responsive options for climate-resilient income and livelihood diversification introduced to climate-vulnerable communities in coastal counties.

These outcomes form part of the proposed project?s Theory of Change (Figure 2) and will address climate change impacts by disrupting numerous impact pathways (IPs), as presented in Figure 3. The impact pathways and barriers that each outcome will address are discussed below, while Section IV.1 of the Project Document presents detailed descriptions of the project outcomes, outputs and activities.

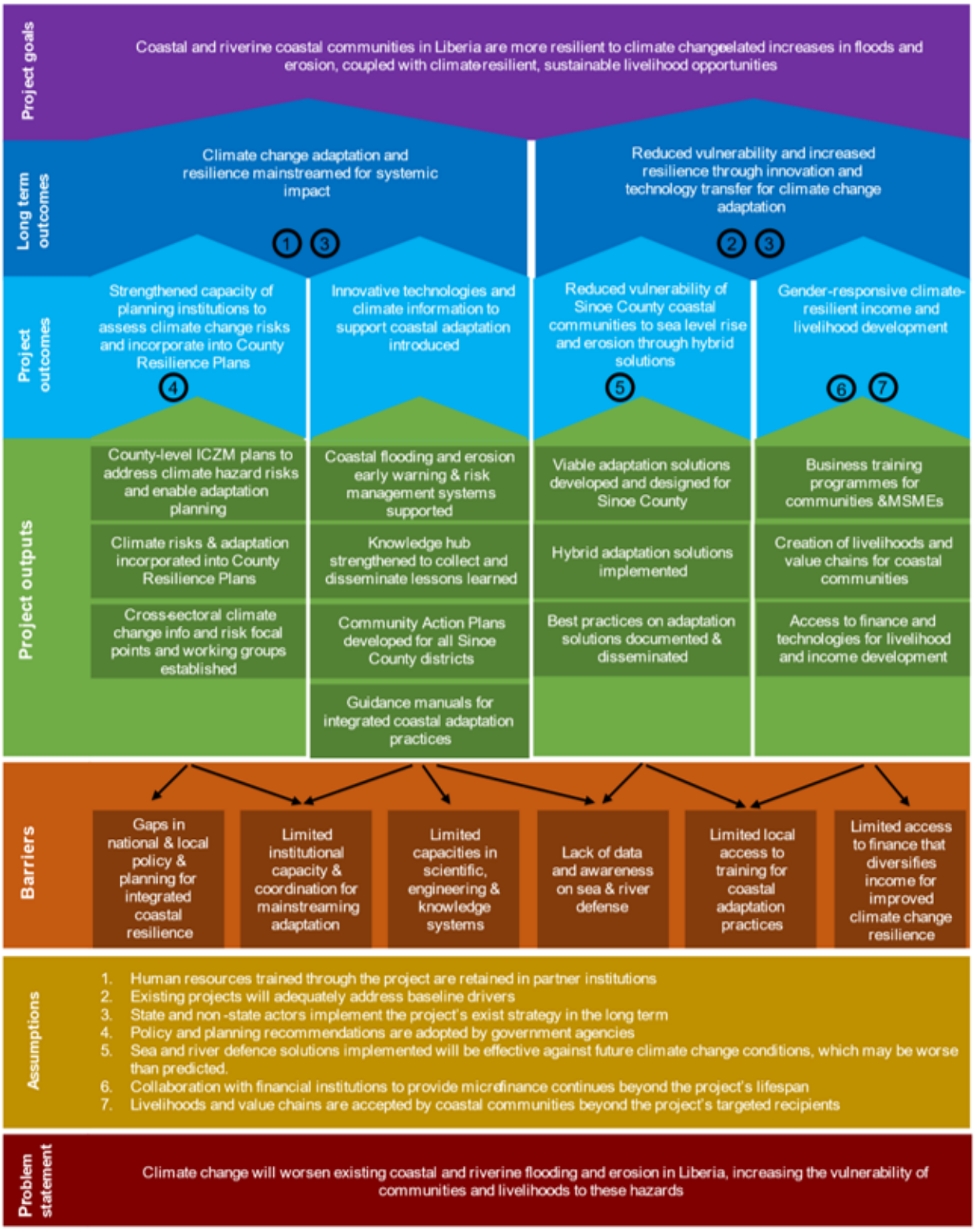

Figure 2. The proposed project?s theory of change for Liberia. Black arrows indicate which barriers the project outcomes will address and the black circled numbers relate to the numbered project assumptions.

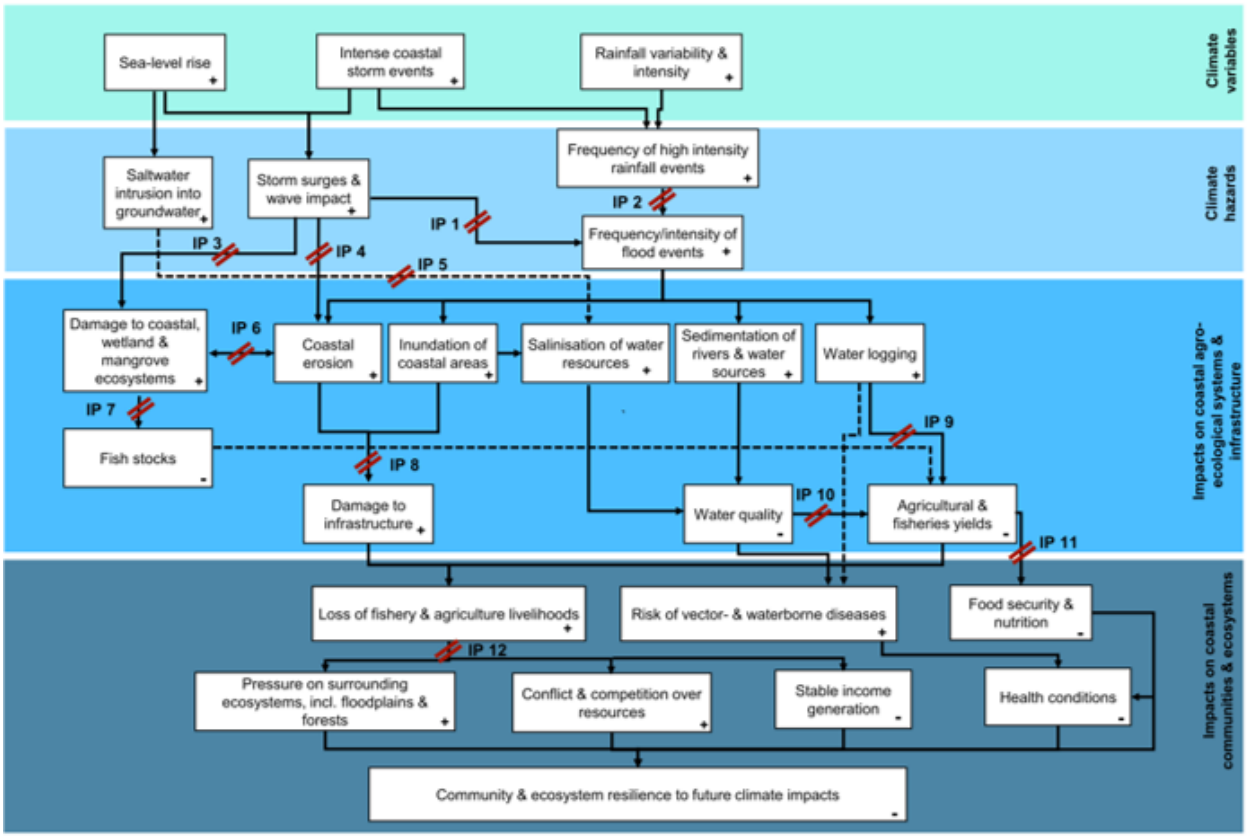

Figure 3. Solution tree for the proposed project, indicating the targeted impact pathways (labelled ip1?ip12) that the project interventions will disrupt, indicated with (//).

Strengthened institutional capacity to assess climate change risk and climate adaptation

The proposed solution ? presented as Outcome 1 ? to addressing the abovementioned constraints is to create an enabling environment for local-level coastal adaptation planning and management in all coastal counties. Specifically, this will involve increasing the capacity of county- and district-level planners to implement measures that reduce the frequency and intensity of climate change-induced flooding (**IP1** and **IP2** in Figure 3) and erosion (**IP4**) that result from future SLR and increasingly intense rainfall events predicted under the SSP1-1.9, SSP2-4.5 and SSP5-8.5 scenarios. To accomplish this, Outcome 1 will incorporate climate change risk information and CCA solutions into county-level ICZM plans and County Resilience Plans (CRPs). These plans, along with the increased capacity of coastal county planning institutions, will enable the improved management of coastal ecosystems that assist in reducing the impacts of increasingly intense flooding events and the implementation of adaptive infrastructure across Liberia?s coastal counties. Mainstreamed local-level ICZM and improved protection of coastal ecosystems will additionally assist in disrupting the positive feedback loop between ecosystem degradation and increased erosion caused by both flooding from increasingly intense rainfall events and baseline drivers of erosion (**IP6**). Through ICZM, protected ecosystems and improved management practices will also reduce pressure on natural resources such as fish, timber and non-timber forest products (NTFPs) (**IP7 and IP12**), enabling marine, riverine and coastal ecosystems to recover. Moreover, the training and establishment of climate change information and risk focal points and working groups across all coastal counties will indirectly contribute to reducing damage to infrastructure from coastal erosion and flooding (**IP8**). The increased awareness raising and training through the focal points and working groups will promote the buy-in of local communities, the private

sector and district officials of sea and river defence and risk management measures that reduce the vulnerability of coastal infrastructure to coastal erosion and SLR. Moreover, awareness raising and training will increase the capacity of these stakeholders to upscale sea and river defence interventions beyond the project?s scope and lifespan.

Outcome 1 will additionally address two main barriers presented above. First, Barrier 2 ? gaps in national and local policy and planning to enable integrated coastal resilience ? will be overcome by mainstreaming the ICZM approach and climate change adaptation into County Resilience Plans (CRPs) and county-specific ICZM plans. Second, Barrier 4 ? limited institutional capacity and coordination for mainstreaming climate change adaptation and planning in government ministries at the local level ? will be addressed by enhancing the capacities of county and district institutions to assess climate change risks.

Innovative sea and river defence response planning and communication mechanisms

Outcome 2 of the project will assist in reducing damage to infrastructure from coastal erosion and flooding (**IP8**) resulting from future SLR and increased intense rainfall events by adopting an innovative sea and river defence and risk management (SRDRM) approach. This approach will support the project?s adoption of ICZM principles by setting a framework for infrastructure management along Liberia?s coastal zone that demonstrates river and wetland management. An important element of SRDRM involves improving response planning and communication mechanisms. This approach will prepare communities for future climate hazard events, building on the ?Enhancing Climate Information Systems for Resilient Development in Liberia Project? (Liberia CIS). Interventions under Outcome 2 will include improving early warning and risk management systems, action plans, Guidance Manuals and a strengthened knowledge hub to directly support vulnerable end users and provide information for new adaptation opportunities to county and district officials as well as private sector actors.

Project interventions under Outcome 2 will address several barriers, including Barrier 1 ? limited data and awareness on SRDRM within Sinoe and other coastal counties; Barrier 3 ? limited capacities in scientific, engineering and knowledge systems to support the design and implementation of SRDRM for effective climate change adaptation in coastal counties; and Barrier 4 ? limited institutional capacity and coordination for mainstreaming climate change adaptation and planning in government ministries and at the local level. Outcome 2 will overcome Barrier 1 by strengthening coastal adaptation planning, response and communication mechanisms within Sinoe County through the improved understanding of the value of coastal ecosystem services by communities and stakeholders. Specifically, this outcome will address both Barrier 1 and 3 by strengthening the EPA?s existing Environmental Knowledge Management System (EKMS) knowledge hub to collect and disseminate lessons learned on SRDRM information available for all coastal counties. Project interventions will also improve SRDRM information access and awareness management capacity by supporting and establishing early warning and alert systems designed to effectively reach vulnerable communities and assist decision-makers in addressing climate change impacts. Finally, Outcome 2 will address Barrier 4 by developing coastal Community Action Plans (CAPs) and Guidance Manuals. These options will be applied at the county level by customising solutions to each county's specific context, The coastal CAPs provide guidelines for coastal communities to participate in the monitoring of coastal ecosystems and their services and for the adoption of new livelihood and adaptation opportunities. At the same time, the Guidance Manuals will support district staff in coastal counties to develop and disseminate integrated coastal management practices.

Hybrid climate change adaptation solutions

Under Outcome 3, climate-resilient sea and river hybrid defence solutions will be designed and implemented in Sinoe County. These solutions, including nature-based and engineered options, will

reduce the impact of flooding and erosion from increasingly frequent and intense storms caused by climate change (**IP1** and **IP2**) on vulnerable coastal areas. Engineered options, including revetments and groynes, will directly protect coastal areas from SLR and extreme rainfall event-induced flooding and storm surges. Similarly, nature-based solutions ? including the restoration and conservation of valuable ecosystems such as mangroves and forests ? slow down the speed of flooding waters, thereby reducing the impact of erosion (**IP4**). Combining these adaptation solutions will minimise damage to infrastructure and ecosystems from coastal erosion and flooding (**IP3** and **IP8**). In addition, engineered and biological barriers will reduce saltwater inundation of agricultural areas and surface freshwater sources by restricting the inland movement of seawater from storm surges that have more damaging impacts as a result of future SLR. This restriction in saltwater movement will decrease waterlogging of inland areas and assist in preventing the reduction of water quality from both sedimentation and saltwater inundation (**IP9** and **IP10**), subsequently increasing agricultural yields. Moreover, restored ecosystems such as forests will further improve water quality by promoting the infiltration of freshwater from storm events into underground aquifers, helping to protect groundwater reserves from saltwater intrusion caused by storm surges and SLR (**IP5**).

The above impact pathways will be further addressed by removing Barrier 1 ? limited data and awareness on SRDRM within Sinoe and other counties and Barrier 6 ? limited access by local communities and local institutions to training opportunities on effective coastal adaptation practices in Sinoe County. The participatory design and implementation of hybrid adaptation solutions in Sinoe County will raise awareness of these opportunities within the county?s coastal communities. At the same time, the documentation and dissemination of best practices from these interventions will assist in training communities and institutions in other coastal counties on these sea and river defence measures.

Gender-responsive and climate-resilient livelihood options

Under Outcome 4 of the proposed project, sustainable, climate-resilient livelihood opportunities, including climate-resilient fishing practices, integrated farming systems (IFS) and compressed stabilised earth block (CSEB) construction, will be introduced that increase the adaptive capacity of coastal communities to climate change impacts and reduce pressure on and degradation of surrounding ecosystems. In conjunction with coastal protection provided by adaptive solutions implemented under Outcome 3, livelihood options will be designed and implemented to increase their resilience to waterlogging and saltwater inundation of inland areas resulting from SLR and intense rainfall events (**IP9** and **IP10**). These livelihood alternatives ? combined with technologies and practices that increase the efficiency of livelihood options and energy usage ? will result in the growth of fishery and agricultural yields and improve food security and nutrition for coastal communities (**IP11**). Additionally, more diversified livelihoods will decrease conflict and competition over resources, resulting in more stable income generation and reducing pressure on surrounding ecosystems and fish stocks for resources (**IP12**). Reduced pressure on ecosystems and fish stocks ? along with reduced erosion from replacing damaging practices such as sand mining with more sustainable alternatives ? will reduce the degradation of critical coastal ecosystems. This reduced pressure will increase the resilience of these ecosystems and improve the generation of ecosystem services such as the provision of natural resources and protection from future flooding and erosion (**IP6** and **IP7**).

The interventions that will be implemented under Outcome 4 will also address two barriers, namely Barrier 6 ? limited access by local communities and institutions to training opportunities on effective coastal adaptation practices in Sinoe County, and Barrier 7 ? limited access to options and local financial credit for low-income coastal communities to diversify income and build resilience to climate change. The proposed project will overcome Barrier 6 by establishing training centres on newly introduced technologies involved in, *inter alia*, CSEB construction and IFS. These training centres will target local coastal communities and Micro, Small and Medium Enterprises (MSMES), focusing on youth and women groups. In addition, the proposed project will develop industry standards and codes of conduct that reflect best practices in CSEB production and IFS through coordination with relevant

GoL institutions. Outcome 4 will also address Barrier 7 by providing access to climate-responsive financial products and technologies to coastal communities for developing livelihood and income diversification by collaborating with micro-finance institutions to provide micro-finance and insurance opportunities.

Incremental/additional cost reasoning and expected contributions from the baseline

Table 4. GEF incremental value of the proposed project per outcome and output.

Outcome	Output	Business-as-usual (without LDCF funding)	GEF incremental value (with LDCF funding)

Outcome 1. Strengthened capacity of all Liberian coastal counties' planning institutions to assess climate change risks and integrate into county development frameworks. LDCF budget: USD700,000	Output 1.1. County-level ICZM plans prepared for all coastal counties to address climate hazard risks on infrastructure, livelihoods and health, as well as to enable adaptation planning, monitoring, protection and the maintenance of sea and river defence.	Currently, responsibility for the management of Liberia?s coastal zones is fragmented across 10 government institutions. In many cases, these institutions operate independently and with limited coordination, which detracts from the effective and sustainable management of coastal areas. While an Integrated Coastal Zone Management Unit (ICZMU) has been established under the Ministry of Mines and Energy (MME), the unit operates predominantly on an *ad hoc* basis in response to coastal climate hazards. As a result, Liberia is currently without an ICZM plan to effectively guide the efforts of the ICZMU. Additionally, limited financial, human and technical resources at the national and county-levels further inhibit the facilitation of coordinated efforts for effective coastal zone	LDCF resources will be used under this project to develop county-level ICZM plans, building on a national ICZM plan that will be developed under the GCF-funded ?Monrovia Metropolitan Climate Resilience Project?. ICZM enables an integrated approach for addressing several current and future coastal management challenges, including habitat loss, water quality degradation, depletion of coastal resources, changes in hydrological cycles and adaptation to climate change impacts, such as SLR. LDCF funding will be allocated towards *inter alia:* i) developing linkages between government institutions, local research bodies, the private sector and civil society groups through a ICZM Committee and Cross-Sectoral Working Group; and ii) facilitating the incorporation of climate change considerations into coastal zone management. Another important addition to the ICZM plans is sea and river defence risk management (SRDRM), which will outline the necessary visions, goals, policies and objectives to manage flooding and erosion defence mechanisms and infrastructure in Liberia.

	Output 1.2. Identified climate change risks and adaptation priorities incorporated into coastal County Resilience Plans as well as county and national planning and budgeting processes.	Although institutional capacity building to address coastal area development has progressed through initiatives such as the USD60 million UNDP Programme Support, there is limited knowledge and understanding of Liberia?s climate change risks and the associated impacts on the population among county-, district- and local-level governance. Consequently, the incorporation of climate change considerations into national development plans, policies and implementing processes is constrained. This is exacerbated by limited capacity among national- and county-level ministries for mainstreaming CCA into development plans.	LDCF resources will be used to support and implement Liberia?s climate change-related priorities as identified in the GCF-funded NAP project. These priorities include developing: i) sector-based climate change strategies and action plans for coastal management; and ii) technical guidelines for relevant ministries to include climate change into their budgeting and planning processes. Using the ICZM plans developed under Output 1.1, combined with the findings from this development process, coastal adaptation principles as well as monitoring, protecting and maintenance of SRDRM mechanisms will be incorporated into development plans at national and sub-national levels. Additional LDCF funding will be used to support human resource capacity to improve a local-level understanding of enhancing technical guidelines relating to SRDRM standards, protocols and indicator sets.

	Output 1.3. Cross-sectoral climate change information and risk management focal points and working groups established and trained in all coastal counties.	Currently, accessible information and awareness of Liberia?s climate change risks, as well as SRDRM at local levels, is limited. Consequently, the already high climate vulnerability of Liberia?s population ? particularly communities living in coastal counties ? is exacerbated by limited knowledge on how to appropriately reduce their vulnerability.	LDCF resources will be used to establish county-level, cross-sectoral focal points and working groups in all coastal counties and train them on climate change information and risk to enhance local awareness of climate risks and SRDRM. This output will build on the NAP?s goal of building capacity in the private sector, financial intermediaries and other stakeholders on the application of adaptation activities. While the NAP project output focusses primarily on sectoral officials and stakeholders at the national level and in selected counties, Output 1.3 of the proposed LDCF project will focus on local capacity at the county level for all coastal counties not yet targeted.

Outcome 2. Innovative technologies ? including response planning and communication mechanisms ? introduced to support coastal adaptation. LDCF budget: US$1,100,000	Output 2.1. Coastal flood and erosion early warning and risk management systems supported to provide climate information, products and services that meet the needs of end users.	The Liberia National Disaster Management Policy highlighted risk identification and communication mechanisms as a priority because a robust disaster risk management (DRM) system that promotes a proactive approach can considerably reduce disaster losses. However, while disaster preparedness, mitigation and response institutions exist in Liberia, there is limited coordination among these institutions and no national mechanism for shared generation and use of weather- and climate-related information. There is also limited institutional capacity to collect, analyse, disseminate weather and climate data for planning, development and disaster risk reduction (DRR). Additionally, Liberia?s civil wars led to the damage and loss of many of the country?s hydrometric infrastructure. The USD2.5	Under this output, LDCF resources will be used to strengthen existing coastal flood- and erosion-risk management and EWS within Sinoe County to address the impacts of climate hazards on communities. This will be done by supporting the interventions being implemented by the GCF-funded Liberia CIS project. Specifically, the LDCF project will: i) contribute to the procurement of weather stations and equipment to improve the collection of weather data; ii) increase the capacity of LMS staff to consider climate change in risk management and EWS; and iii) support early warning and preparedness information delivery systems targeting vulnerable coastal communities.

	Output 2.2. Existing EPA Environmental Knowledge Management System enhanced to support the collection and dissemination of lessons learned on sea and river defence based on Sinoe County adaptation solutions.	Information services and products related to CCA and risk management that are targeted specifically at local communities have not been developed in many coastal counties. Consequently, vulnerable communities have limited knowledge and access to knowledge on climate risks. Although the Environmental Knowledge Management System (EKMS) developed under the USD3 million project ?Strengthening national capacities to meet global environmental obligations with the framework of sustainable development priorities? provides information dissemination and institutional coordination for sustainable development, its focus on climate change ? particularly with regards to coastal adaptation ? is limited and does not consider the concept of ICZM and SRDRM.	LDCF resources will be used to enhance the existing EPA national online knowledge hub ? Environmental Knowledge Management System (EKMS) ? with the objective of: i) collecting and disseminating data on effective SRDRM; and ii) contributing to the production and application of climate risk and adaptation information that meets the needs of vulnerable populations. Additionally, a decision-making support tool will be developed on adaptation options and risk management, targeting county- and district-level planners and private sector stakeholders.

	Output 2.3. Community Action Plans developed for all coastal districts of Sinoe County.	Given the limited knowledge and awareness of communities on Liberia?s climate risks and the associated impacts on the population ? including drivers such as sand mining which exacerbate these impacts ? communities are not equipped with adequate knowledge to reduce their vulnerability to these impacts. However, Conservation International (CI) and GoL are currently implementing a project entitled ?Conservation and Sustainable Use of Liberia?s Coastal Natural Capital? which focusses on, *inter alia*, developing community incentives for shifting away from unsustainable resource-use practices in favour of preservation, restoration and sustainable management to improve sustainable use and conservation of Liberia?s coastal natural capital.	Using LDCF resources, the proposed project will encourage coastal communities to adopt new adaptation and livelihood opportunities to increase their resilience to SLR and flooding and erosion induced by intense storm events through the development of Community Action Plans. The plans will also include a framework for participatory community monitoring of coastal ecosystems and their services, encouraging communities to play an active role in reducing activities driving degradation.

	Output 2.4. Guidance Manuals for integrated coastal adaptation practices developed and disseminated to all coastal counties.	There is no evidence of knowledge products being developed to inform and guide the implementation of integrated coastal adaptation in Liberia?s coastal and riverine counties.	Building on baseline information and analyses generated by the NAP project, as well as the proposed project?s county-level ICZM plans (Output 1.1), the knowledge hub (Output 2.2) and best practices on adaptation solutions (Output 3.3), LDCF resources will be used to produce and disseminate a series of Guidance Manuals to coastal district staff within Sinoe County and other coastal counties to support participative ICZM practices. The manuals will include, for example, guidance for re-defining building codes for climate-proofing infrastructure in riparian forests or coastal wetland ecosystems and supporting climate-resilient agricultural development in response to climate change impacts.

Outcome 3. Reduced vulnerability of Sinoe County coastal communities to climate-induced sea level rise impacts through hybrid solutions (nature based and engineering). LDCF budget: US$3,608,000	Output 3.1. Viable solutions to address climate vulnerabilities in Sinoe County developed and designed using multi-criteria and participatory processes for identifying, prioritising and planning adaptation and resilience solutions.	There is limited expert knowledge and technical capacity within Liberia?s relevant government institutions to address the country?s vulnerability to climate change impacts, specifically through the identification, design and implementation of appropriate CCA interventions which integrate both nature-based and engineered solutions. Under a business-as-usual scenario, interventions to address the impacts of climate hazards will likely continue to be focussed on grey infrastructure. Compared with hybrid solutions, this approach will be less effective against the intensification of these impacts under future climate change.	Using LDCF resources, Output 3.1 will focus on assessing viable adaptation intervention options for implementation in Sinoe County. These options ? both engineered and nature-based solutions ? will be considered and selected based on a rigorous multi-criteria analysis, which will include the effectiveness, impact potential, cost, political viability, sustainability and maintenance of each intervention, based on a combination of expert analyses and a stakeholder engagement process. This approach will ensure the viability of selected adaptation solutions to adequately address current and future impacts of climate change in Liberia, and particularly in Sinoe County.

	Output 3.2. Coastal- and catchment-level adaptation solutions implemented to improve the resilience of communities to the impacts of climate change in Sinoe County.	Considering Liberia?s relatively low GDP and considerable development needs, the GoL has limited financial capacity to invest in medium- to long-term interventions to enhance the country?s resilience to climate change. In addition, investments available for coastal ecosystems predominantly comprise short-term grants from private foundations and government aid agencies. However, these are insufficient for developing and implementing sustainable sea and river defence management interventions. As a result, communities that are currently exposed to climate hazards such as erosion and flooding will become more vulnerable to these impacts under future climate change. There are currently no hard infrastructure initiatives to address coastal protection in Sinoe County, because they have mainly	Under this output, LDCF resources will be used to implement nature-based and engineered adaptation solutions ? identified under Output 3.1 ? to enhance the resilience of coastal communities to SLR and other climate change impacts in Sinoe County. This will include constructing revetments and groynes in the communities of Downtown-Mississippi and Sebeh designed to withstand the impacts of future climate change, as well as restoring protective ecosystems in targeted coastal sites across Sinoe County. To ensure the long-term sustainability of the nature-based interventions, LDCF resources will be used to establish a community-driven ecosystem-based monitoring programme for the coastal zone, using lessons learned from the baseline projects. Ecosystem-based monitoring will specifically focus on raising awareness of climate change impacts and ecosystem services that contribute to coastal protection.

	Output 3.3. Best practices on adaptation solutions documented and disseminated to other coastal counties for adoption and upscaling, including engagement with the private sector.	Given the limited available financing to invest in sustainable and effective coastal adaptation that incorporates both engineered and nature-based solutions, there are currently minimal coastal adaptation models specific to Liberia?s coastal counties and adaptation needs that are suitable for replication and upscaling.	The adaptation options implemented under Output 3.2 will serve as a pilot project for effective coastal adaptation in Liberia. LDCF resources will be used to develop technical methodologies for documenting best practices of these adaptation solutions and lessons learned during implementation. These best practices and lessons learned will be specific to the context of coastal counties in Liberia and will enable appropriate adoption and upscaling of similar interventions in other vulnerable coastal counties. This output will also involve engagement with stakeholders ? including the private sector ? to ensure comprehensive and integrated best practices on adaptation solutions are collated and documented.

Outcome 4. Gender-responsive options for climate-resilient income and livelihood diversification introduced to climate-vulnerable communities in coastal counties. LDCF budget: US$3,099,100	Output 4.1. Business identification, development and management training programmes designed and delivered to communities and Micro, Small and Medium Enterprises in coastal counties, targeting women and the youth.	There is currently limited local-level knowledge and training on climate-resilient livelihoods and income-generating activities with a specific focus on the youth and women. Consequently, the livelihoods of coastal communities, and these groups in particular, are continually vulnerable to climate hazards, which is worsened by limited knowledge on the appropriate adaptive measures to minimise climate risks to businesses. In response, UNDP and the GoL, particularly the Ministry of Commerce and Industry have recently initiated a project entitled ?Livelihoods and Employment Creation in Liberia? targeted towards the reduction of poverty and inequality in seven counties, namely Grand Basse, Grand Cape Mount, Grand Gedeh, Lofa, Montserrado, Nimba and Since The	Under this output, LDCF resources will be used to improve the ability of individuals to identify, initiate and sustain climate-resilient and sustainable enterprises, allowing them to better access livelihood and value-chain opportunities developed and implemented under Output 4.2. Specifically, funding will be used to design and deliver training programmes focussing on business identification, development and management to coastal communities.

	Output 4.2. Opportunities for integrated farming systems, fisheries, compressed stabilised earth blocks and their value chains created for coastal communities.	Numerous initiatives in Liberia are focussing on promoting sustainable and diversified livelihoods that reduce ecosystem degradation and benefit communities. These projects include: i) ?Conservation and sustainable use of Liberia?s coastal natural capital ? (USD15 million); ii) ?Reducing deforestation from palm oil and cocoa value chains? (USD74 million); iii) ?Improve sustainability of mangrove forests and coastal mangrove areas in Liberia through protection, planning and livelihood creation as a building block towards Liberia?s marine and coastal protected areas? (USD4 million); iv) ?Livelihoods and employment creation in Liberia? (USD7.8 million); and v) ?GROW Liberia: Support to the development of markets and value chains in agriculture in	LDCF resources will be used to ensure the improved, sustainable use of natural resources initiated through the baseline projects by identifying and implementing sustainable, climate-resilient livelihood options for coastal communities. The livelihoods ? developed in consultation with beneficiary communities and relevant county and district institutions ? will be linked specifically to opportunities involving fisheries, compressed stabilised earth block (CSEB) and integrated farming system industries and their value chains. Moreover, these industries will be adapted to be appropriate for the specific climate change adaptation needs within Liberia?s coastal communities.

	Output 4.3. Access to finance and technologies to develop livelihood and income diversification enterprises of coastal livelihoods and resources facilitated in collaboration with national and county financial institutions.	While several efforts have been made to modernise financing mechanisms in Liberia and promote inclusive finance, numerous challenges are still experienced by the country?s population ? particularly low-income coastal communities that are vulnerable to climate change. There is also limited available financing for agricultural producers. These challenges are further exacerbated by the high risk associated with financing the small-scale, semi-formal businesses, which predominantly constitutes businesses in Sinoe County. Resultantly, this limits the communities? capabilities to diversify their income base, and subsequently enhance their adaptive capacity. However, the ?Livelihoods and Employment Creation in Liberia? project aims to promote access to	Output 4.3 will be used to facilitate ? in collaboration with micro-finance institutions and Village Savings and Loans Associations (VSLAs) ? access to finance to support climate-adaptive enterprises in vulnerable communities. This will include training national and county financial institutions to integrate climate risk management into financial products and business cases as well as implement sector-wide guidelines to integrate climate change risks, vulnerability and adaptation opportunities into financial decision-making. Additionally, market studies will be undertaken on target communities to develop context-specific climate-responsive financial products, which will be piloted through existing VSLAs in Grand Cape Mount County.

Contributions to the GEF7 climate change adaptation focal area strategy

The proposed project interventions discussed above will contribute to three GEF7 climate change adaptation focal area objectives: CCA-1 ? reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation; CCA-2 ? mainstream climate change adaptation and resilience for systemic impact; and CCA-3: Foster enabling conditions for effective and integrated climate change adaptation. Specific project contributions to these focal area elements are described below, with further details provided in Annex 15: LDCF Core Indicators.

CCA-1: Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation.
The proposed project will contribute to CCA-1?s Outcome 1.1 ? Technologies and innovative solutions piloted or deployed to reduce climate-related risks and enhance resilience through the interventions under Outcomes 2, 3 and 4. Specifically, Outcome 2 will strengthen existing or developing new early warning and alert communication systems and their associated technologies, allowing communities to prepare for climate hazards early and thereby increasing their resilience (Output 2.1). By developing and implementing innovative engineered and nature-based adaptation solutions, Outcome 3 will increase the resilience of coastal community assets to flooding and erosion. Additionally, by restoring coastal ecosystems such as mangroves, this outcome will strengthen the capacity of these ecosystems to provide services to surrounding communities (Outputs 3.1 and 3.2). Finally, Outcome 4 supports this focal area objective by introducing and delivering training on new livelihood opportunities and their technologies, thereby strengthening and diversifying the income streams of communities vulnerable to climate change in a gender-responsive manner (Outputs 4.1 and 4.2).

The proposed project will also support CCA-1?s Outcome 1.2 ? Innovative financial instruments and investment models enabled or introduced to enhance climate resilience through interventions in Outcome 4. This will be achieved by introducing innovative technologies to entrepreneurs in coastal communities, including CSEBs, IFS and equipment that aid the fishery sector, such as boat motors and fish preservation units (Output 4.2). In addition, financial instruments, specifically platforms that increase entrepreneurs involved in climate adaptation-orientated livelihoods? access to micro-finance will be introduced through Output 4.3.

CCA-2: Mainstream climate change adaptation and resilience for systemic impact.
The proposed project will contribute to this focal area objective by supporting Outcome 2.1 ? Strengthened cross-sectoral mechanisms to mainstream climate adaptation and resilience, as well as Outcome 2.2 ? Increased ability of the country to access climate finance or mainstream adaptation in large-scale, programmatic investment. Outcomes 1 and 2 will accomplish this by building on existing and developing new, county-specific plans and manuals, focussing on integrating a cross-sectoral approach to climate change adaptation. Outcome 1 will include preparing county-level ICZM plans and establishing cross-sectoral climate change information and risk focal points and working groups (Outputs 1.2 and 1.3). The inclusion of the private sector within focal point and working group capacity building and awareness-raising activities will promote the addition of climate change risks and adaptation measures in their business strategies and investment plans. Under Outcome 2, CAPs and Guidance Manuals will promote the participatory monitoring and management of coastal ecosystems, supporting other GEF themes, including sustainable land-use management and increased biodiversity.

CCA-3: Foster enabling conditions for effective and integrated climate change adaptation.
The proposed project will support the CCA-3 focal area objective through the LDCF Outcome 3.2 ? Institutional and human capacities strengthened to identify and implement adaptation measures. This will be achieved by training line ministry officials, community members, small business holders, extension officers and hydrometeorological staff. National and county-level planners and decision-makers will be trained on incorporating SRDM and coastal adaptation into plans and budgeting processes through the project Output 1.2. Community members will be trained on implementing CAPs (Output 2.3) and community-based monitoring (Output 3.2). Additionally, small business holders and entrepreneurs within vulnerable communities will receive training on business planning and development (Output 4.1) and the implementation of selected livelihood options, including IFS,

climate-resilient fishing practices and CSEB construction (Output 4.2). Under Output 1.3, focal points and working groups will be trained to provide awareness raising for the private sector and vulnerable communities on climate risks and SRDRM. The capacity of extension officers to deliver business training will be developed under Output 4.1, while individuals will be trained under Output 4.3 to perform the role of VSLA champions. Finally, through Outcome 2, hydrometeorological observers, forecasters and climatological technicians will be trained on using the updated EWS system (Output 2.1).

Innovativeness, sustainability and potential for scaling up

Innovativeness

Coastal adaptation projects in Liberia have generally employed hard adaptation approaches in isolation with limited consideration of nature-based solutions. The proposed project will bridge this gap by implementing innovative hybrid interventions that balance site-specific soft (nature-based) and hard (engineered) approaches ? supported by integrated planning and management processes ? to develop hybrid mechanisms to address, *inter alia*, coastal flooding and coastal erosion (Output 3.1). This hybrid approach will allow for the use of hard interventions to address the most urgent coastal erosion needs, while using more cost-effective nature-based solutions where appropriate to achieve long-term resilience. The integration of nature-based solutions into the adaptation approach will also yield numerous co-benefits to local communities that will improve buy-in and promote sustainability. These hybrid interventions have not been substantively introduced in Liberia before ? with previous efforts mostly focussing on communities around the capital of Monrovia ? and have never been introduced within Sinoe County. The development of ICZM will complement these hybrid approaches by ensuring a holistic and integrated approach to managing coastal zones is adopted throughout the nine Liberian coastal counties (Output 1.1). The spatial extent of the ICZM plans will cover both coastal ecosystems as well as riverine ecosystems with river mouths located within coastal zones to ensure that the full coastal hydrology is adequately managed. This geographical focus will be supported by the Sea and River Defence Investment Management Plan to be piloted in Sinoe County (Activity 1.1.2). In addition, the development of ICZM plans will allow for a more sustainable management of coastal areas, with the long-term goal of, *inter alia*, reducing coastal flooding. Reduced flooding will generate social co-benefits for community members in the form of improved public health as the spread of waterborne diseases is restricted.

The abovementioned hybrid interventions will be complemented by another innovative element of the project ? the development of additional and diversified livelihood strategies (Output 4.2) with training, financial and technological support (Output 4.1 and 4.3, respectively). These interventions have not been piloted in Sinoe and several other coastal counties and have not explicitly focussed on coastal communities. The diversification of livelihoods will focus on improving the climate resilience of agricultural and fishery-based occupations, expanding associated value chains and reducing the dependence of beneficiaries on unsustainable practices, such as sand mining, that contribute to environmental degradation.

Agricultural livelihoods will be supported by introducing integrated farming systems (IFS) that merge agricultural and aquacultural activities to enable the simultaneous cultivation of vegetables and staple crops alongside small livestock and fish. The introduction of innovative IFS approaches will shift agricultural livelihoods away from climate-sensitive practices, enabling farmers to produce a diverse range of agricultural products that can be sold year-round. Moreover, IFS also reduces farmers? reliance on expensive and ecologically damaging agricultural inputs such as pesticides, fuel and fertilisers. The fisheries value chain will be supported by introducing: i) safer and more efficient equipment; ii) upgrades to the fish drying and processing process to promote greater efficiency; and iii) refrigeration units to enable storage of fish and production of ice. Furthermore, environmentally degradative practices such as sand mining ? used to produce bricks for construction ? will be addressed by introducing compressed stabilised earth blocks (CSEBs). The bricks produced using this technique reduce the pressure on sand resources and associated coastal erosion. Importantly, the integration of socially and environmentally focussed interventions demonstrates the interdependence of these factors and the necessity for merging these interventions to achieve long-term sustainability.

Finally, the proposed project will promote innovations in the financial services sector by improving access to CCA finance for Liberian businesses. The project will facilitate improved access to finance in the agricultural sector[73][73] by engaging with financial institutions and insurance providers at the national, county and micro scale (Output 4.3). This collaboration with the private sector will address the considerable financial gap and encourage technology transfer[74][74] and livelihood diversification at the local level. Ultimately, these activities will improve the climate resilience of coastal community livelihoods and ensure the long-term sustainability of the proposed project.

Sustainability

Beyond its primary objective of maintaining environmental sustainability in the context of climate change in Sinoe County, the proposed project design will also ensure the institutional, social and economic sustainability of interventions and their impacts beyond the project lifespan. These project design elements ? detailed below ? will ensure the proposed interventions are maintained and continue to benefit target communities beyond the project?s life cycle.

Institutional Sustainability

The proposed project comprises several interlinked activities to ensure the institutional sustainability of its interventions. Specifically, climate change risks and appropriate adaptation interventions will be incorporated into Liberia?s existing institutional framework. The integration of climate change risk considerations into new development plans will enable mainstreaming CCA into these planning tools, ensuring the sustainability of project interventions (Output 1.2). CCA will be incorporated into the institutional framework by developing Integrated Coastal Zone Management (ICZM) plans for all coastal counties (Output 1.1). These planning tools will assist counties in addressing climate change threats to local livelihoods and infrastructure and contribute to incorporating CCA into future planning systems. In addition, CAPs will be developed across all coastal districts in Sinoe County, further assisting in mainstreaming CCA into Liberia?s institutional framework (Output 2.3). Complementary awareness-raising initiatives will be implemented to strengthen the understanding of targeted private sector and community groups on SRDM standards, protocols and indicators (Output 3.3). In addition, climate change risk and information focal points will be developed and disseminated to the necessary stakeholders across all relevant coastal counties (Output 1.3). The establishment of working groups will be supported by developing Guidance Manuals designed to support the implementation of ICZM for distribution to relevant district staff in all coastal counties (Output 2.4).

The long-term maintenance and sustainability of on-the-ground infrastructure implemented by the project will be secured by commitments from partner institutions and the GoL. Specifically, memoranda of understanding (MoUs) will be signed between the Liberia Meteorological Service (LMS) and institutions housing and maintaining weather stations and other equipment used for the early warning systems under Output 2.1. Hard infrastructure under Output 3.2, including revetments and groynes in Greenville, will be maintained past the project?s lifespan by the MME as detailed in the Operations and Maintenance Plan (Annex 13e). Restored mangrove and forest ecosystems within targeted sites in Sinoe (Output 3.2) will be maintained through agreements with partnering organisations providing technical expertise during implementation ? which could include international organisations such as Conservation International ? and communities participating in community-based monitoring programmes.

Social Sustainability

The social sustainability of project interventions will primarily be ensured by emphasising stakeholder participation in the project design. For example, hybrid interventions designed under Output 3.1 to

address climate change hazards will be developed in consultation with community stakeholders. Moreover, Output 2.3 will involve the development and implementation of a community-based monitoring programme to strengthen beneficiary communities? understanding of climate change impacts and appropriate adaptation interventions. The findings of this programme will be disseminated throughout other coastal counties, with a particular focus on, *inter alia*: i) appropriateness for diverse contexts; ii) effectiveness in addressing climate change hazards and impacts; iii) costs; and iv) sustainability. In addition, the CAPs (under Output 2.3) will be developed in a participatory manner and empower communities with knowledge about the livelihood impacts of observed and projected climate change ? as well as other environmental and economic factors.

Component 4 of the proposed project will further contribute to the social sustainability of the project, specifically by introducing sustainable alternative livelihood strategies for beneficiary communities such as IFS and climate-resilient fisheries (Output 4.2). The long-term sustainability of these interventions will be enhanced by providing training on business identification, development and management combined with training programmes targeting Micro, Small and Medium Enterprises (MSMEs, Output 4.1). In conjunction, these initiatives will empower beneficiaries with the relevant knowledge required to develop and maintain sustainable nature-based livelihoods beyond the lifespan of the proposed project.

Economic Sustainability

The best practices on adaptation solutions that will be piloted in Sinoe County, will be documented and disseminated to other coastal counties under Output 3.3. The adoption and upscaling of these interventions within the private sector will be supported by demonstrating the business case for adopting adaptation interventions, thereby encouraging private businesses to invest in CCA and enhance the long-term sustainability of their operations. Ultimately, this will facilitate the economic sustainability of project interventions by engaging private sector actors along their value chains and facilitating the adoption and upscaling of such interventions beyond the project lifespan.

Component 4 will also contribute to the project?s economic sustainability by providing training on business development skills to MSMEs ? targeting women and the youth in particular (Output 4.1). This will improve beneficiaries? livelihoods and encourage their adoption of the climate-resilient technologies piloted in the proposed project, thereby facilitating their replication beyond the scope of the project?s lifespan. Output 4.2 will complement the business development training (Output 4.1) and the private sector engagement convened under Output 3.3 by identifying further opportunities for IFS, climate-resilient fisheries, compressed stabilised earth blocks (CSEBs) and their value chains to be developed. The economic sustainability of these interventions will be supported by increasing access to finance (Output 4.3). Financial institutions will be engaged during project implementation to increase the availability of micro-finance loans for adaptation-oriented enterprises in vulnerable coastal communities.

Scalability

The development of the EKMS knowledge hub will generate the necessary information on best practices and lessons learned from experiences with ICZM and will be distributed to other coastal and riverine counties across Liberia (Output 2.2). This knowledge dissemination will provide the recipient counties with the information required to design and implement their own contextually responsive ICZM systems in the future. Experiences with integrating relevant climate change risks and adaptation priorities into County Resilience Plans under Output 1.2 will be documented by the EKMS knowledge hub and provide an entry point for other counties to replicate these interventions and build on identified best practices.

As detailed in the ?Economic Sustainability? sub-section above, private sector representatives and financial institutions have been identified as key stakeholders to facilitate the upscaling and replication of piloted interventions in other areas of Liberia. Private sector engagement will be achieved through five methods. First, workshops will be convened with private sector representatives from priority,

climate-vulnerable value chains including agriculture, fisheries and construction, to demonstrate the business case for adopting adaptation interventions (Output 3.3). Presenting this business case will encourage the embedding of innovative adaptation technologies and climate-resilient value chains into private sector business models. Second, training on business development skills for MSMEs, focussing on climate-resilient businesses, will be presented under Output 4.1. This training will further encourage the adoption of innovative adaptation solutions by the private sector. Third, Output 4.1?s training will be supported by improving linkages between village loan saving associations (VSLAs) and microfinance institutions to facilitate improved access to finance for beneficiaries (Output 4.3). Finally, the economic sustainability of these interventions will be supported through increased access to finance and supporting technologies (Output 4.3), ultimately improving the long-term viability of livelihoods and income diversification strategies. Combined, these interventions will position the private sector and financial institutions as key stakeholders for upscaling project interventions in other parts of Liberia.

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[12] Government of Liberia (GoL). 2013. INC to the UNFCCC.

[13] USAID. 2012. Climate Change Adaptation in Liberia.

[14] Kalinski V. 2019. Climate hazard, vulnerability and risk assessment for the coastal zone of Liberia. From: Project ?To advance the National Adaptation Plans (NAP) process for medium-term investment planning in climate-sensitive sectors and coastal areas in Liberia?.

[15] USAID. 2012. Climate Change Adaptation in Liberia.

[16] Natural resources are harvested from mangroves and include non-timber forest products.

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[18] Government of Liberia (GoL). 2017. National Biodiversity Strategy and Action Plan-II 2017?2025.

[19] Agro-industrial crop plantations are a form of large-scale commercial agriculture, which in Liberia typically includes the cultivation of tree crops such as rubber, palm oil, coffee and cocoa. Coffee and cocoa are usually cultivated using intercropping methods, while rubber and palm oil are typically grown on large, monocrop plantations. The conversion of natural forests to agro-industrial crop plantations has been a major driver of historical forest loss in the country. From: USAID. 2008. *Liberia Environmental Threats and Opportunities Assessment*. USAID Liberia, Monrovia.

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[24] World Bank Group. 2014. *The Economic Impact of the 2014 Ebola Epidemic: Short- and Medium-Term Estimates for West Africa*. World Bank, Washington, D.C.

[25] Mercy Corps. 2019. Chapter 4: How does Ebola affect the economy? Available at: https://www.mercycorps.org/blog/ebola-outbreaks-africa-guide/chapter-4

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[31] World Bank Group. 2021. Climate Change Knowledge Portal: Liberia climate data ? historical. Available at: https://climateknowledgeportal.worldbank.org/country/liberia/climate-data-historical

[32] This climate projection is modelled from the global climate model compilations of the Coupled Model Inter-comparison Projects Phase 6 (CMIPS6). The historic reference period used is 1995?2014. The SSPs are five scenarios that consider how global society, demographics and economis may change over the next cenruty and the impacts on climate change. SSP1-1.9 ? Taking the Green Road ? assumes optimistic trends for human development with a gradual shift towards sustainable practices. SSP2-4.5 ? Middle of the Road ? assumes a ?business as usual? human developmental pathway in the future. Finally, SSP5-8.5 ? Taking the Highway ? assumes an optimistic, energy-intensive human development but with a heavy dependence on fossil fuels.

[33] World Bank Group. 2021. Climate Change Knowledge Portal: Liberia climate data projections. Available at: https://climateknowledgeportal.worldbank.org/country/liberia/climate-data-projections?variable=pr

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[38] USAID. 2017. Climate Change Risk Profile: Liberia.

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[40] USAID. 2017. Climate Change Risk Profile: Liberia.

[41] Stanturf *et al*. 2013. Liberia: Climate Change Assessment

[42] USAID. 2017. Climate Change Risk Profile: Liberia.

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[45] The action of waves may be either destructive or constructive. Destructive waves erode the coastline as the backwash ? the water which flows back into the ocean after being deposited by a wave on the shore ? is stronger than the swash ? the water deposited on the shore by the wave. Constructive waves have a stronger swash than a backwash, which results in the deposition of material and sediment on the shore and ultimately build up the coastline. From: BBC. N.d. Coastal Processes. Available at: https://www.bbc.co.uk/bitesize/guides/zct8bk7/revision/1

[46] UNDP. 2006. *First State of the Environment Report for Liberia*. Available: https://www.thegef.org/sites/default/files/ncsa-documents/State_of_the_environment_report_final.pdf

[47] USAID. 2017. Climate Change Risk Profile: Liberia.

[48] USAID. 2017. Climate Change Risk Profile: Liberia.

[49] Ibid.

[50] UNDP & EPA. 2006. First State of the Environment Report for Liberia. Available at: https://www.thegef.org/sites/default/files/ncsa-documents/State_of_the_environment_report_final.pdf

[51] Kalinski V. 2019. *Climate Hazard, Vulnerability and Risk Assessment for the Coastal Zone of Liberia.* Part of the project ?To advance the National Adaptation Plans (NAP) process for medium-term investment planning in climate-sensitive sectors and coastal areas in Liberia?.

[52] Kalinski V. 2019. *Climate Hazard, Vulnerability and Risk Assessment for the Coastal Zone of Liberia.* Part of the project ?To advance the National Adaptation Plans (NAP) process for medium-term investment planning in climate-sensitive sectors and coastal areas in Liberia?.

[53] The significant wave height is the average height of the highest one-third of all waves measured which is equivalent to the estimate that would be made by a visual observer at sea. The significant wave height profile along Liberia?s coast is shifting towards an increase in the occurrence of all large waves. The return period of extreme storm events that historically occurred once every 100 years are projected to decrease to 1 in 40 years under RCP4.5 and 1 in 25 years under RCP8.5 by the year 2100.

[54] Climate change degrades mangroves through inundation because of SLR and through changes in water temperature, salinity and sediment transport. For more information see: GEF Project Document. 2016. Improve sustainability of mangrove forests and coastal mangrove areas in Liberia through

protection, planning and livelihood creation ? building blocks towards Liberia?s marine and coastal protected areas. Available at:

https://www.conservation.org/docs/default-source/gef-documents/liberia-mangroves/5712-liberia-mangroves-prodoc-20160311.pdf?sfvrsn=20715c6e_2

[55] World Bank Data. GDP per capita: Liberia. Available at: https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=LR

[56] In 2006, the Central Bank of Liberia (CBL) strengthened the commercial banking sector through increased capitalisation and reserve requirements. CBL later developed a Strategic Plan (2014?2018) for the Regulation and Supervision Department (RSD) which: i) assisted in addressing gaps in the regulation and supervision of the financial sector; and ii) modernised payments systems through the establishment of the Automated Clearing House (ACH) AND Real Time Gross Settlement (RTGS) systems. In 2016, CBL launched a Financial Sector Development Implementation Plan (FSDIP) which reinforced the need for well-developed financial infrastructure and to leverage digital technologies to expand service provision to unserved and underserved communities into the formal financial system. CBL later launched another Strategic Plan (2016?2018) aimed at modernising the financial sector, promoting financial inclusion and improving the capacity of CBL.

[57] GEF. Strengthening National Capacities to Meet Global Environmental Obligations with the Framework of Sustainable Development Priorities. Available at: https://www.thegef.org/project/strengthening-national-capacities-meet-global-environmental-obligations-framework-0

[58] USD1,500,000 GEF Project Grant; USD1,500,000 co-financing.

[59] The three Rio conventions are: i) the Convention of Biological Diversity (CBD); ii) United Nations Convention to Combat Desertification (UNCCD); and iii) United Nations Framework Convention on Climate Change (UNFCCC).

[60] GEF. Conservation and Sustainable Use of Liberia?s Coastal Natural Capital. Available at: https://www.thegef.org/project/conservation-and-sustainable-use-liberia-s-coastal-natural-capital

[61] USD3,944,220 GEF Project Grant; USD11,194,248 co-financing.

[62] GEF. N.d. Reducing deforestation from palm oil and cocoa value chains. [online] Available: https://www.thegef.org/project/reducing-deforestation-palm-oil-and-cocoa-value-chains

[63] GEF. 2020. FSP CEO endorsement document. [online] Available: https://publicpartnershipdata.azureedge.net/gef/GEFProjectVersions/f0aacd75-c08e-e911-a83d-000d3a375888_CEOEndorsement.pdf

[64] GEF. 2020. FSP CEO endorsement document. [online] Available: https://publicpartnershipdata.azureedge.net/gef/GEFProjectVersions/f0aacd75-c08e-e911-a83d-000d3a375888_CEOEndorsement.pdf

[65] GEF. 2014. Project Identification Form. [online] Available: https://www.thegef.org/project/improve-sustainability-mangrove-forests-and-coastal-mangrove-areas-liberia-through

[66] The project duration was initially programmed at 36 months, or three years; however, it is listed on the GEF website as still currently under implementation.

[67] GEF. 2014. Project Identification Form. [online] Available: https://www.thegef.org/project/improve-sustainability-mangrove-forests-and-coastal-mangrove-areas-liberia-through

[68] These come from diverse sources, including UNDP?s own funds, from UNCDF, from a range of bilateral donors (e.g. SIDA, DANIDA) and others (e.g. EU).

[69] MME. NVE technical assistance programme 2016?2020. Available at: https://www.nve.no/media/7825/2019-03-01-liberia.pdf.

[70] World Bank. 2021. Liberia Forest Sector Project. Available at: https://projects.worldbank.org/en/projects-operations/project-detail/P154114.

[71] GROW Liberia. N.d. About Grow. [online] Available: https://www.growliberia.com/about-grow

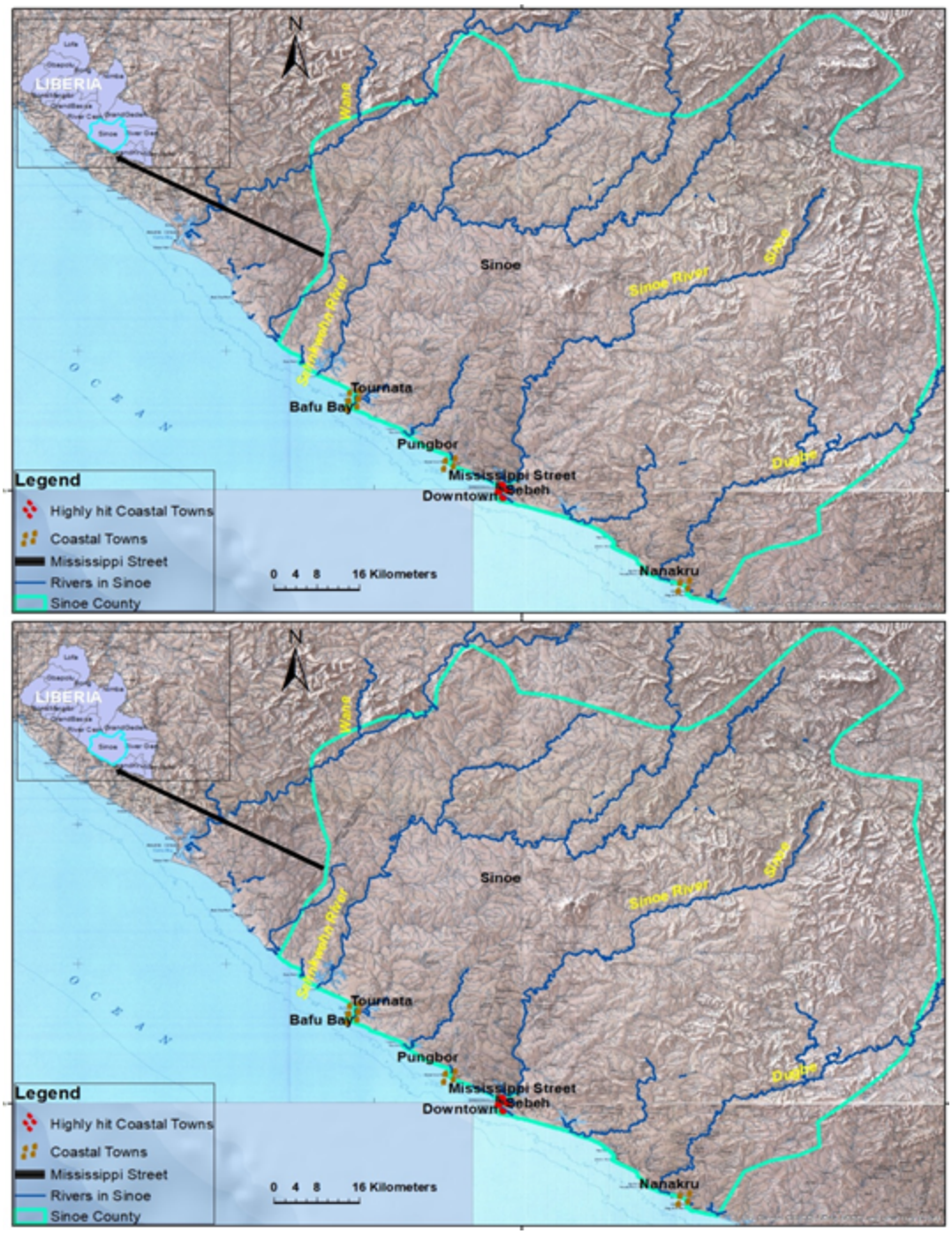
[72] Adam Smith International. N.d. GROW: Support to the Development of Markets and Value Chains in Agriculture Presentation. [online] Available: https://www.developingmarkets.com/sites/default/files/Grow%20Presentation.pdf

[73] Specific agricultural enterprises will include Integrated Farming Systems, climate-resilient fisheries and their value chains.

[74] This will include, *inter alia,* agricultural technology that many smallholder farmers are unable to purchase as a result of limited access to credit.

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.



County	Community name	Longitude	Latitude
Sinoe	Tournata	-9.283802?	5.177191?
	Bafu Bay	-9.289861?	5.152091?
	Pungbor	-9.122458?	5.048611?
	Downtown-Mississippi (Greenville)	-9.036171?	4.999627?
	Sebeh (Greenville)	-9.032484?	4.998422?
	Nanakru	-8.727388?	4.829784?

1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations Yes

Indigenous Peoples and Local Communities Yes

Private Sector Entities Yes

If none of the above, please explain why:

Please provide the Stakeholder Engagement Plan or equivalent assessment.

Please see the full document uploaded as Annex 9 to the Project Document. It can also be accessed directly via this link: https://gefportal.worldbank.org/api/spapi/LoadDocument?fileName=https%3A%2F%2Fworldbankgroup.sharepoint.com%2Fsites%2Fgefportal%2FGEFDocuments%2F4ef75270-e0eb-e911-a83d-000d3a37557b%2Fceoendorsement%2FOthers_Liberia%20LDCFAnnex%209.%20Stakeholder%20Engagement%20Plan.docx

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

Please find the Stakeholder Engagement Plan attached as Annex 9 of the Project Document.

During the project design phase, numerous stakeholders were engaged through workshops, virtual meetings, in-person consultations and group focus discussions. A summary of stakeholders engaged and the methods of engagement for each consultation is presented in Table 5.

Table 5. List of stakeholders engaged during the project design phase and methods of engagement.

Stakeholder group	Description of stakeholder	Method of engagement

National government, ministries, and agencies	National Climate Change Focal Person, Ministry of Internal Affairs (MIA), Ministry of Finance and Development Planning (MFDP), Ministry of Agriculture (MoA), Ministry of Commerce and Industry (MoCI), Ministry of Gender, Children and Social Protection (MoGCSP), National Disaster Management Agency (NDMA), Liberia Institute of Statistics and Geo-Information Services (LISGIS), Liberia Maritime Authority (LMA), the National Fisheries and Aquaculture Authority (NAFAA)	In-person consultations, Inception and Validation Workshops
	Environmental Protection Agency (EPA), Ministry of Mines and Energy (MME)	In-person consultations, virtual engagements, Inception and Validation Workshops
County Governments	Superintendents from the counties of Sinoe, Grand Bassa, Grand Cape Mount and Maryland and the regional coordinator for the Farmers Union Network of Liberia	In-person consultations, Inception and Validation Workshops
Civil society organisations (CSOs) and non-government organisations (NGOs)	The range of Community-based Organisations (CBOs) engaged include the following. ? Agricultural organisations (Farmers Union of Sinoe, Southeast Region Farmers Union Network of Liberia). ? Community-based organisations (CBOs), including women?s groups (Sinoe Women Forum), youth groups (Sinoe County Youth Association, Grand Bassa Youth Forum and Cape Mount Youth) and the Disabled Association. ? Liberia Business Association. ? Collaborative Management Association. National-level NGOs consulted include the following entities. ? The Society for Conservation of Nature (SCNL) ? Fund a Child?s Education (FACE) ? Liberia Agency for Community Empowerment (LACE) ? Association of Environmental Lawyers	In-person focus group discussions
Local communities	Community members from Downtown-Mississippi, Nanakru, Pungbor, Kommanah Town, Bafu Bay, Tournata, Sebeh and Ponkpoh	In-person focus group discussions
Academia	University of Liberia	Inception and Validation Workshops

Private sector	Golden Veroleum Liberia (GVL), Ruby Light Forestry Investment Inc., Mandra Forestry Liberia, Equatorial Palm Oil PLC Maryland Oil Palm Plantation, Bea Mountain Mining Corporation, Sime Darby Plantation, Cavalla Rubber Corporation and micro, small and medium enterprises (MSMEs)	In-person consultations, Inception and Validation Workshops
	Liberia?s Private Sector Alliance on Climate Change (LIFSCAA)	Virtual engagements
International organisations	UNDP, Conservation International (CI)	Virtual engagements, Inception and Validation Workshops
Financial services sector	Access Bank, Building Resources Across Communities (BRAC)	Virtual engagements

Continuous engagement with stakeholders ? particularly community beneficiaries and the public and private sectors ? will be maintained during the project implementation phase, primarily in the form of capacity building, awareness-raising, information sharing and institutional strengthening. This SEP will ensure consistent and ongoing engagement with key stakeholders to: i) facilitate information sharing and awareness-raising regarding CCA interventions; ii) establish community ownership of project interventions; iii) promote gender equality and the empowerment of marginalised groups including the youth and persons with disabilities; and iv) enhance complementarity with other ongoing initiatives.

Local communities will be engaged through several project outputs to ensure the needs of the beneficiaries inform all relevant interventions. First, communities will be targeted through awareness-raising and capacity-building activities (Output 1.3) to improve their understanding of ? and secure their buy-in for ? the CCA interventions and livelihood opportunities introduced under Outputs 3.2 and 4.2, respectively. This CCA understanding will be reinforced by developing an early warning and preparedness delivery system that provides necessary and accessible climate change and climate hazard information to vulnerable communities (Output 2.1). Access to climate information will be extended by strengthening the Environmental Knowledge Management System (EKMS) knowledge hub (Output 2.2), which will utilise awareness raising to inform target communities on the existence and use of the knowledge hub. Community beneficiaries will secondly be engaged by developing Community Action Plans (CAPs) under Output 2.3, which will include a participatory resource mapping exercise and a framework for monitoring coastal and river ecosystems. Third, local ecological knowledge will be garnered to inform the development of Guidance Manuals for integrated coastal adaptation practices (Output 2.4). Fourth, communities will be engaged in implementing community-based coastal ecosystem monitoring programmes (Output 3.2) to enhance the long-term sustainability of nature-based solutions implemented under the output. Finally, consultations with local communities will identify site-specific needs and livelihood opportunities (Output 4.2). Communities will also validate the additional livelihood opportunities developed under this output to ensure they are appropriate for the local context.

Public sector stakeholders at the national, county and district levels will also be engaged through several project outputs. Specifically, the project will provide technical and human capacity building to officials, planners, decision-makers and climate information system units at all levels of governance to, *inter alia*: i) adequately assess climate change risks and prepare county-level integrated coastal zone management (ICZM) plans (Output 1.1); ii) incorporate sea and river defence and risk management (SRDRM) and coastal adaptation principles into relevant development plans (Output 1.2); iii) implement and manage the EWS (Output 2.1); iv) effectively implement CAPs (Output 2.3); and v) understand and use the climate-resilient coastal management Guidance Manuals (Output 2.4). These capacity-building initiatives will better equip recipients to incorporate CCA into their operations and enable their meaningful engagement in project activities. The feasibility mapping exercise (Output 3.1) will be informed by engagement with, *inter alia,* public sector stakeholders to ensure priority assets,

livelihoods and ecosystems are reflected in the final exercise. Similarly, county- and district-level officials will be engaged under Output 4.2, which involves the collaborative development of industry standards and codes of conduct for fisheries, integrated farming systems, compressed stabilised earth block construction and their value chains.

Under Output 3.3, workshops on CCA will be convened with private sector representatives to encourage adopting CCA options in climate-vulnerable sectors such as agriculture, fisheries and construction. Financial institutions will be engaged under Output 4.3 to: i) enhance their capacity for integrating climate change information and risks into sector-wide guidelines; and ii) improve the linkages between micro-finance provision and CCA-oriented businesses. These engagements will result in greater access to micro-finance among vulnerable coastal communities ? specifically women, the youth and people with disabilities ? which will in turn support the livelihoods implemented under Output 4.2. Moreover Output 4.3 will include improved capacity among financial institutions to incorporate CCA considerations into their financial products and business cases.

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor;

Co-financier; Yes

Member of project steering committee or equivalent decision-making body;

Executor or co-executor; Yes

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

Please see the document uploaded as Annex 11 to the Project Document.

Project outputs with a specific focus on gender-responsiveness include Outputs 1.3, 4.1, 4.2 and 4.3. Output 1.3 will include focal point and working group-led awareness-raising campaigns that focus on providing information on climate risks and SRDRM to women and the youth. A gender-mainstreaming approach will be ensured by having at least one working group that focusses on challenges and awareness-raising activities pertaining to gender, the youth and people with disabilities. All three outputs under Outcome 4 complement each other to increase sustainable and climate adaptive livelihood opportunities, with a focus on women empowerment. Accordingly, Output 4.1 will involve business training specifically targeted towards empowering and developing the capacity of women entrepreneurs. This output will specifically be measured as part of Indicator 1: the number of direct project beneficiaries disaggregated by gender. This indicator will in particular include beneficiaries

receiving training on business identification, development and management training, of which 75% will be women. Output 4.2 will include livelihoods and value chains that are targeted towards strengthening existing women?s livelihoods or providing new income opportunities for women. This will be measured through Indicator 8: the number of households receiving access to equipment and training that provide diversified climate-resilient livelihood options that are gender sensitive.

All other outputs will be implemented to be participatory and inclusive, and will aim to promote gender mainstreaming, women empowerment, gender responsiveness, gender equality and gender awareness. Under this aim, Indicator 1 ensures gender equality across all beneficiaries based on recent men and women population numbers ? benefiting 282,018 women which represent ~51% of the population. Gender mainstreaming and responsiveness will be accomplished through several approaches to be taken during project implementation, which are summarised in Table 6 below. Additionally, to further ensure gender mainstreaming, each output will include gender-responsive sub-activities and indicators, which are presented in Table 7 below as part of the Gender Action Plan.

Table 6. Gender-responsive measures to be implemented by the proposed project.

Approach	**Measures to be implemented by the project**
Capacity building, awareness raising and training	The project will increase awareness, knowledge and human capacity for building climate resilience and adaptation. The GAP supports equitable gender benefits to the project?s capacity-building, awareness-raising and training opportunities. In addition, the information materials used for creating awareness in communities should reflect gender responsiveness. Specific actions will include, *inter alia*: i) promoting equal access to opportunities by providing technical training and planning processes; ii) improving institutional capacity to address gender in climate change planning, programming and implementation; iii) producing gender-responsive awareness-raising products; and iv) capacitating communities to participate in climate change adaptation and resilience-building processes.
Livelihood/economic opportunities	The project seeks to reduce inequality by ensuring men and women equally benefit from the project?s livelihood and income-generating initiatives. This component will increase livelihood options and create market linkages and value-chain opportunities for men, women and vulnerable groups in coastal counties. Specific actions will include: i) supporting livelihood options that improve the gender-differential needs of the population in coastal communities; ii) selecting target beneficiaries for livelihood programmes by prioritising women-headed households, families that rely on the sea and ecosystems for their livelihood and other marginalised groups; iii) promoting equal access to economic opportunities by ensuring fair and equal treatment of unskilled and skilled workers, ensuring equal pay for equal work and promoting workers? safety through prevention of sexual abuse and harassment; and iv) reducing barriers that limit women?s access to livelihood training and opportunities.

Decision-making	The project will contribute to national efforts to increase women?s roles in leadership and decision-making processes. Specific actions will include: i) ensuring women can lead and participate in all climate change decision-making processes under the project, including county development planning processes, monitoring and evaluation and community involvement in climate change processes; and ii) promoting gender-responsive decision-making by producing knowledge products on gender-sensitive climate action.
Participation	The project will support processes that ensure the participation of key stakeholders and communities in several processes such as assessments, screenings and validation processes. Specific actions will include: i) ensuring that project assessments, environmental and social impact assessments, as well as consultations and validation processes are gender-responsive and inclusive in design and implementation; and ii) ensuring assessment reports and findings reflect gender-responsive participation.
Monitoring and Evaluation	This aligns with the programme?s accountability ? the project supports women and men to participate and lead the fostering of enhanced coastal adaptation measures. Specific actions will include: i) increasing women?s participation in monitoring and evaluation systems; ii) establishing gender-sensitive monitoring and evaluation systems; and iii) promoting the collection, analysis and use of sex- and age-disaggregated data.

Table 7. Gender Action Plan for the proposed project, including gender-specific sub-activities and indicators.

Output	Sub Activities	Gender barriers addressed	Intended Gender Outcome	Gender Activities	Indicator	Implementing Partners	Proposed Budget
Outcome 1. Strengthened capacity of all Liberian coastal counties' planning institutions to assess climate change risks and integrate into county development frameworks.							
Output 1.1. County-level ICZM plans prepared for all coastal counties to address climate hazard risks on infrastructure, livelihoods and health, as well as to enable adaptation planning, monitoring, protection and the maintenance of sea and river defence.	Activity 1.1.1. Develop nine climate-responsive ICZM plans for all coastal counties in collaboration with stakeholders.	Gaps in national and local policy and planning to enable integrated coastal resilience.	Gender mainstreaming	1.1.1a. Host at least 2 dedicated working sessions to ensure the integration of gender in ICZM plans, SRDIMP and updating of national and county-level policies, plans and budgeting processes.	Baseline: 0 Target: 2 Indicator: Evidence documented in working session reports that 9 ICZM plans are gender responsive.	UNDP, Project Gender Officer, EPA, and other relevant Ministries Agencies Commissions (MACs) including Ministry of Gender Children Social Protection (MoGCSP) , County Governments.	USD7,000
	Activity 1.1.2. Develop a pilot district-level SRDIMP within Sinoe County.	Gaps in national and local policy and planning to enable integrated coastal resilience.	Gender mainstreaming	1.1.2a. See Activity 1.1.1a	Baseline: 0 Target: 2 Indicator: Evidence documented in working session reports that SRDIMP are gender responsive.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments.	Same as Activity 1.1.1a.

	Activity 1.1.3. Prepare and host two validation workshops for representatives from county- and district-level government officials responsible for coastal management to secure ownership of and operationalize the ICZM plans and SRDIMP.	Limited participation of women in leadership and planning roles.	Women empowerment	1.1.3a. Ensure validation workshops include sections on the gender considerations mainstreamed in ICZMP and SRDIMP.	Baseline: 0 Target: 2 Indicator: 2 validation meetings report include chapter on gender issues discussed at validation workshops Baseline: 0 Target: 40% Indicator: At least 40% of participants are women disaggregated by age and disability.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments	Cost included in project budget.

Output 1.2. Identified climate change risks and adaptation priorities incorporated into coastal County Resilience Plans as well as county and national planning and budgeting processes.	Activity 1.2.1. Design and host technical training programmes for relevant planners and decision-makers on incorporating climate change risks, coastal adaptation, ICZM principles and SRDRM guidelines and standards into planning and budgeting processes.	Limited technical capacity in gender and climate change.	Gender mainstreaming	1.2.1a. Provide training for relevant national and county-level planners on gender mainstreaming processes. 1.2.1b. Provide specialised training in gender and climate for Project Gender Officer and PMU	Baseline: Yes,[1] Target: Yes Indicator: Percentage of relevant national and county-level planners and decision-makers with capacity to mainstream gender in climate change work. Baseline: 0 Target: 40% Indicator: At least 40% of training program beneficiaries are women disaggregated by age and disability. Baseline: 0 Target: PMU Team Indicator: Project Gender Officer and PMU have appropriate skills, knowledge, and tools to implement GAP.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments.	USD9,300 Specialized training cost for PMU to be suggested by UNDP.

	Activity 1.2.2. Update national and county-level planning and budgeting processes to incorporate SRDRM and coastal adaptation principles using the training and capacity building under Activity 1.2.1.	Limited progress in operationalising gender mainstreaming in climate change processes.	Gender mainstreaming	1.2.4a. See Activity 1.1.1a	Baseline: Yes,[2] Target: 100% Indicator: Working session reports provide evidence that 100% of all plans and budgeting processes updated have evidence of gender consideration.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments.	Same as Activity 1.1.1a.
	Activity 1.2.3. Develop County Resilience Plans for Sinoe, Grand Bassa and Maryland that incorporate climate change risks, ICZM principles and SRDRM.	Limited progress in operationalising gender mainstreaming in climate change processes.	Gender mainstreaming	1.2.3a. Develop gender and climate action plans for CRPs.	Baseline: 0 Target: 3 Indicator: 3 updated CRPs include gender action plans.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments.	USD6,000
Output 1.3. Institutional development planning capacity supported through the establishment and training of cross-sectoral	Activity 1.3.1. Establish climate change working groups for each coastal county.	Limited participation of women, youth, and Persons with Disabilities (PWDS) Limited knowledge-sharing	Participation and inclusivity Gender awareness	1.3.1a. Set up the working group to include gender, youth, PWDS focal persons.	Baseline: Yes[3] Target: Yes Indicator: Number focal points identified and actively participate in working group activities.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments.	Cost included in project budget.

climate change information and risk management focal points and working groups in all coastal counties.	Activity 1.3.2. Develop awareness-raising knowledge products that can be utilised by the focal points and working groups to increase the understanding climate risks as well as SRDRM.	Limited knowledge-sharing	Gender awareness	1.3.2a. Contract a service provider to design and develop radio programs, IEC materials and fact sheets on gender responsive climate actions, disability inclusive climate actions, and promotion of gender equality.	Baseline: No Target: Yes Indicator: The radio programs, fact sheets and IEC materials are gender sensitive and inclusive.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider.	Cost included in project budget.
	Activity 1.3.3. Prepare and host at least two training of trainer workshops in each coastal county to enable focal points and climate change working groups.	Limited knowledge-sharing	Gender awareness	1.3.3a. Project gender officer ensures the ToTs include content on gender responsive climate actions and disability inclusive climate actions.	Baseline: 0 Target: 2 Indicator: 2 training reports with a chapter on gender including analysis on gender and disability content delivered during trainings.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider.	Cost included in project budget.

	Activity 1.3.4. Support focal points and working groups to host capacity-building and awareness-raising workshops on climate risks as well as SRDRM, targeted at local communities and the private sector, with a focus on female and youth involvement.	Limited participation of women, youth, and Persons with Disabilities (PWDS). Limited knowledge-sharing	Participation and inclusivity Gender awareness	1.3.4a. Conduct workshop on gender responsive climate actions and disability inclusive climate actions targeting private sector actors. 1.3.4b. Using awareness products developed in Activity 1.3.2 host community meetings annually in project intervention communities to raise awareness on gender responsive climate actions, disability inclusive climate actions, and promotion of gender equality. 1.3.4c. Using awareness products developed in Activity 1.3.2 host radio programs.	Baseline: 0 Target: 2 Indicator: At least 2 staff (gender balance) from private sector institutions engaged under the project have capacity to mainstream gender in climate change work. Baseline: 30%[4] Target: 75% Indicator: At least 75% of the population in project intervention communities disaggregated by sex and age have awareness on gender responsive climate actions, disability inclusive climate actions, and promotion of gender equality.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments	Cost included in project budget.

Output	Sub Activities	Gender barriers addressed	Intended Gender Outcome	Gender Activities	Indicator	Implementing Partners	Proposed Budget
Outcome 2. Innovative technologies ? including response planning and communication mechanisms ? introduced to support coastal adaptation.							
Output 2.1. Coastal flood and erosion early warning and risk management systems supported to provide climate information, products and services that meet the needs of end users.	Activity 2.1.1. Undertake a capacity and equipment needs assessment of existing risk management and EWS for all coastal counties. considering county-level needs gaps under the Liberia CIS project.	Climate-smart technologies are often designed without considering gender differential needs.	Gender equality	2.1.1a. Consultation with diverse groups of people on existing risk management and early warning systems.	Baseline: Yes,[5] Target: 50% Indicator: At least 50% of people consulted are women disaggregated by age and disability.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service Provider	Cost included in project budget.
	Activity 2.1.2. Procure and install synoptic stations and automatic rainfall stations in coastal counties to support the Liberia CIS project, based on the needs assessment in Activity 2.1.1.	Climate-smart technologies are often designed without considering and addressing the differential needs of women and men.	Gender responsiveness	2.1.2a. Considering capacity and equipment needs assessment in Activity 2.1.1, procure user-friendly equipment.	Baseline: No Target: Yes Indicator: A perception survey is conducted to test gender responsiveness and whether equipment is user-friendly.	UNDP, Project Gender Officer, EPA, and other relevant MACs	Cost included in project budget.

	Activity 2.1.3. Provide capacity training for hydrometeorological observers, forecasters and climatological technicians in the LMS on incorporating climate change into risk management and EWS.	Limited participation of women in leadership and planning roles.	Women empowerment	2.1.3a. Provide climate change risk management systems and EWS trainings for women and men.	Baseline: Yes,[6] Target: 40% Indicator: At least 40% of training program beneficiaries are women disaggregated by age and disability.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP.	Cost included in project budget.
	Activity 2.1.4. Support early warning and preparedness information delivery system for vulnerable communities within all coastal counties.	Limited participation of women in leadership and planning roles.	Women empowerment	2.1.5a. Ensure equitable participation of men women, youth and PWDS in EWS. 2.1.5b. EWS target women as primary users of climate change information through awareness activities.	Baseline: Yes,[7] Target: Yes Indicator: Percentage of women, men, youth and PWDS trained and play key roles in EWS. Baseline: 0 Target: Yes Indicator: Percentage of women disaggregated by age and sex that report receiving climate information through early warning systems and sue it for adaption and decision-making purposes.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP.	Cost included in project budget.

Output 2.2. Existing EPA Environmental Knowledge Management System enhanced to support the collection and dissemination of lessons learned on sea and river defence based on Sinoe County adaptation solutions.	Activity 2.2.1. Collect data on lessons learned on SRDRM within Liberia and beyond, including information from Output 3.3, desktop studies and consultations with local stakeholders and similar project developers.	Limited data and awareness on gender differentiated impacts of climate change	Gender mainstreaming	2.2.1a. Project Gender Officer to support the data collection process.	Baseline: Yes,[8] Target: Yes Indicator: Final reports reflect data on gender differentiated impacts on climate change.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service Provider	
	Activity 2.2.2. Update the EKMS, based on information collected under Activity 2.2.1.	Limited data and awareness on gender differentiated impacts of climate change	Gender mainstreaming	2.2.2a. Include gender specific data in updated EKMS.	Baseline: 0 Target: Yes Indicator: Updated EKMS reflects gender differentiated impacts on climate change.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service Provider	Cost included in project budget.
	Activity 2.2.3. Develop decision-making support tools on adaptation options and risk management that target county- and district-level planners and private sector actors.	Limited data and awareness on gender differentiated impacts of climate change.	Gender mainstreaming.	2.2.3a. Project Gender Officer ensures a gender lens is included in decision support tools.	Baseline: No Target: Yes Indicator: Evidence brough by service provider that support tools are gender responsive.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service Provider	Cost already provided for in Activity 2.2.1.

Output 2.3. Community Action Plans developed for all coastal districts of Sinoe County.	Activity 2.3.1. Perform a baseline study to inform the content of the CAPs, including consultations with coastal communities to determine the specific adaptation needs for communities in each district.	Limited participation of women, youth, and Persons with Disabilities (PWDS)	Participation and inclusivity	2.3.1a. Include in the ToR of service provider the responsibility to consultation with diverse groups of people on specific adaptation needs in each district.	Baseline: 0 Target: 50% Indicator: At least 50% of people consulted are women disaggregated by age and disability.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service Provider	Cost included in project budget.
	Activity 2.3.2. Develop CAPs for all coastal districts in Sinoe County, with participation from coastal communities and local authorities.	Limited progress in operationalising gender mainstreaming in climate change processes.	Gender mainstreaming	2.3.2a. Host working sessions to ensure the integration of gender in the CAPS.	Baseline: 0 Target: TBD Indicator: 100% of all CAPs developed have evidence of gender consideration.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service Provider	USD1,500
	Activity 2.3.3. Design and implement a framework within the CAPs for participatory community monitoring of ecosystems and their services.	Limited progress in operationalising gender mainstreaming in climate change processes.	Gender mainstreaming	2.3.3a. Ensure frameworks for the CAPs are gender sensitive.	Baseline: No Target: Yes Indicator: Evidence that CAPs participatory community monitoring frameworks are gender responsive.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments	Cost included in project budget.

	Activity 2.3.4. Hold a validation workshop for the CAPs with community representatives and local authorities from each district community.	Low capacity for mainstreaming gender in climate change processes. Limited participation of women in leadership and planning roles.	Gender mainstreaming Women?s participation in leadership	2.3.4a. Ensure validation workshops include sections on the gender considerations mainstreamed in CAPs.	Baseline: No Target: Yes Indicator: Validation meetings report include chapter on gender issues discussed at validation workshops. Baseline:0 Target: 50% Indicator: At least 50% of participants are women disaggregated by age and disability.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments	Cost included in project budget.
	Activity 2.3.5. Hold training workshops for community representatives and local authorities on CAP implementation.	Low capacity for mainstreaming gender in climate change processes.	Gender mainstreaming	2.3.5a. Ensure training workshops include content on the gender considerations mainstreamed in CAPs.	Baseline: No Target: Yes Indicator: Training reports include chapter on gender issues aspects of CAP implementation. Baseline: 0 Target: 50% Indicator: At least 50% of participants are women disaggregated by age and disability.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider	Cost included in project budget.

Output 2.4. Guidance Manuals for integrated coastal adaptation practices developed and disseminated to all coastal counties.	Activity 2.4.1. Collect information to inform the Guidance Manuals, including through consultations with communities.	Limited data and awareness on gender differentiated impacts of climate change.	Gender mainstreaming	2.4.1a. Project gender officer support consultation, data collection and inclusion of gender considerations in guidance manuals.	Baseline: No Target: Yes Indicator: Guidance manual includes a checklist to guide the incorporation of gender considerations in integrated coastal adaptation practices.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider	
	Activity 2.4.2. Draft district-specific coastal adaptation option Guidance Manuals and host a validation workshop with all district-level officials.	Gaps in national and local policy and planning to enable integrated coastal resilience	Gender mainstreaming	2.4.2a. Ensure training validation workshops present content on the gender considerations mainstreamed in guidance manuals.	Baseline: 0 Target: 2 Indicator: 2 validation meetings report include chapter on gender issues discussed at validation workshops Baseline:0 Target: 40% Indicator: At least 40% of participants are women disaggregated by age and disability.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider	Cost included in project budget.

	Activity 2.4.3. Disseminate coastal district Guidance Manuals to relevant district staff through print and online systems.	Gaps in national and local policy and planning to enable integrated coastal resilience	Gender mainstreaming	Activity 2.4.3a. Ensure equitable access and use of the guidance manual.	Baseline: No Target: Yes Indicator: Percentage of staff disaggregated by sex and age that have access to guidance manual and can use it in their work.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider	Cost included in project budget.
Outcome 3. Reduced vulnerability of Sinoe County coastal communities to climate-induced sea level rise impacts through hybrid solutions (nature based and engineering).							
Output 3.1. Viable solutions to address climate vulnerabilities in Sinoe County developed and designed using multi-criteria and participatory processes for identifying, prioritising and planning adaptation and resilience solutions.	Activity 3.1.1. Perform a mapping exercise of site-specific assets, livelihoods and ecosystems vulnerable to climate change impacts within Sinoe County.	Limited data and awareness on gender differentiated impacts of climate change	Gender mainstreaming	Activity3.1.1a. Include in the ToR of service provider the responsibility to consult diverse groups of people on specific adaptation needs in each district.	Baseline: Yes,[9] Target: 50% Indicator: At least 50% of people consulted are women disaggregated by age and disability.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider	Cost included in project budget.
	Activity 3.1.2. Conduct a multi-criteria analysis to select site-specific, viable nature-based and engineered adaptation solutions, including details on costing, implementation and maintenance.	Limited data and awareness on gender differentiated impacts of climate change	Gender mainstreaming	23.1.2a. The gender differential needs and constraints relating to coastal defence are considered in the multi-criteria analysis.	Baseline: Yes,[10] Target: Yes Indicator: Multi criteria analysis is gender responsive.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider	Cost included in project budget.

	Activity 3.1.3. Hold a validation workshop to finalise the feasibility assessment and selection of adaptation solutions with relevant stakeholders.	Limited participation of women, youth, and Persons with Disabilities (PWDS)	Participation and inclusivity	Activity 3.1.3a. Present final designs to diverse groups of stakeholders.	Baseline: 0 Target: 50% Indicator: At least 50% of participants are women disaggregated by age and disability.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider	Cost included in project budget.

Output 3.2. Coastal- and catchment-level adaptation solutions implemented to improve the resilience of communities to the impacts of climate change in Sinoe County.	Activity 3.2.1. Implement nature-based solutions, including conservation and active restoration of mangrove and forest ecosystems in Greenville and other sites in Sinoe County, informed by the multi-criteria assessment undertaken in Output 3.1.	Limited job opportunities for skilled and unskilled labourers in Sinoe County. Risk of sexual harassment and exploitation.	Gender equality	3.2.1a. Ensure equitable opportunities for men, women, youth, and PWDs to participate in, and benefit from, income-earning opportunities. 3.2.1b. Ensure project grievance redress mechanism (GRM),[11] include reporting procedures on sexual harassment and abuse in the workplace. 3.2.1c. Ensure sexual and gender-based violence prevention guidelines and reporting mechanism are included in contractors code of conduct.	Baseline: 0 Target: 50% Indicator: Women, youth, and PWDs constitute at least 50% of waged labourers. Target: 0 Baseline: All workers receive awareness on GRM mechanisms, SGBV guidelines and signed codes of conduct.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider	USD2,300 for awareness programs on GRM and Sexual Exploitation and Abuse (SEA)

	Activity 3.2.2. Implement engineered solutions, including revetment and groyne construction in Greenville, informed by the multi-criteria assessment undertaken in Output 3.1.	Same as above	Same as above	Same as gender activities in Activity 3.2.1.	Same as above	Same as above	Same as above
	Activity 3.2.3. Establish a community-based coastal ecosystem monitoring programme to ensure the long-term sustainability of nature-based adaptation solutions.	Limited participation of women, youth, and Persons with Disabilities (PWDS)	Participation and inclusivity	Activity 3.2.3a. Ensure equitable participation of men, women, youth and PWDS in monitoring programme.	Baseline: No Target: Yes Indicator: Percentage of women, men, youth and PWDS trained and play key roles in monitoring programme.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider	Cost included in project budget.
	Activity 3.2.4. Undertake monitoring and evaluation of project interventions.	Limited data and awareness on gender differentiated impacts of climate change	Gender mainstreaming	Activity 3.2.4a. Develop gender-based indicators for monitoring plan	Baseline: No Target: Yes Indicator: Evidence brough by project gender officer that monitoring plans include gender-based indicators.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments	Cost included in project budget.

Output 3.3. Best practices on adaptation solutions documented and disseminated to other coastal counties for adoption and upscaling, including engagement with the private sector.	Activity 3.3.1. Develop technical methodologies for capturing information relevant to best practices.	Limited data and awareness on gender differentiated impacts of climate change	Gender mainstreaming	Activity 3.3.1. Ensure methodologies have gender lens.	Baseline: No Target: Yes Indicator: Evidence brough by project gender officer that methodologies include gender lens.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments	Cost included in project budget.
	Activity 3.3.2. Through methodologies developed under Activity 3.3.1, collate best practice information into a report that can be disseminated to county and district officials in other coastal counties.	Limited data and awareness on gender differentiated impacts of climate change	Gender mainstreaming	Activity 3.3.2. Collect gender specific data	Baseline: No Target: Yes Indicator: Report reflects information on gender and social impacts of coastal defence.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments.	Cost included in project budget.
	Activity 3.3.3. Hold workshops to engage with private sector entities across all coastal counties on adaptation best practices.	Limited data and awareness on gender differentiated impacts of climate change	Gender mainstreaming	Activity 3.3.3a. Ensure validation workshops include sections on the gender best practices considerations.	Baseline: No Target: Yes Indicator: At least 2 staff (gender balance) from private sector institutions have knowledge on adaptation best practices and use it to inform their work.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments.	Cost included in project budget.
Outcome 4. Gender-responsive options for climate-resilient income and livelihood diversification introduced to climate-vulnerable communities in coastal counties.							

Output 4.1. Business identification, development and management training programmes designed and delivered to communities and Micro, Small and Medium Enterprises in coastal counties, targeting women and the youth.	Activity 4.1.1. Undertake a needs assessment to determine or validate priorities for the training programme curriculum.	Differentiated socio-economic impacts of climate change on women, men, boys, and girls. Care work can make it challenging for women and girls to engage in livelihoods training programs. Livelihoods programmes tend to reinforce traditional gender roles and stereotypes	Gender equality and equity	4.1.1a. Collect and analyse sex, age, disability disaggregated data on needs and priorities relating to livelihoods. 4.1.1b. As part of the livelihood assessment, conduct an analysis of household and other unpaid care work. (Gender expert) 4.1.1c. As part of the livelihood assessment, conduct analysis on needs and interest in non-traditional livelihood sectors. (Gender expert)	Baseline: Yes,[12] Target: Yes Indicator: Percentage of the population disaggregated by sex, age, disability, marital status consulted in needs assessment. Baseline: Yes,[13] Target: Yes Indicator: Livelihood assessment report reflects gender differentiated needs, priorities, and capabilities including analysis of household and other unpaid care work; income generating activities in non-traditional sectors.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider	USD4,500

	Activity 4.1.2. Using the needs assessment under Activity 4.1.1, design a training programme for business identification, development and management targeting coastal communities and MSMES.	Same as above	Same as above	4.1.2a. Incorporate assessment findings in training program design. (Ensure design of training program include childcare services and include options that challenges structural gender inequalities to women, girls, men, and boys) 4.1.2b. As part of awareness products designed in Activity 1.3.2 include products on shared responsibilities for unpaid care work targeting men and boys.	Baseline: Yes,[14] Target: Yes Indicator: Evidence that training program designs incorporate assessment findings including options for non-traditional income generating activities and childcare services. Baseline: 0 Target: 1 Indicator: Awareness products on shared responsibility for unpaid care work is designed as part of training program.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider	Cost included in project budget.

	Activity 4.1.3. Hold training of trainers workshops for representatives from business collectives on the identification, development and management of climate-resilient businesses in centralised localities in all coastal counties.	Limited participation of women in leadership and planning roles.	Women empowerment	4.1.3a Ensure equitable gender participation in ToTs	Baseline: No Target: 50% Indicator: At least 50% of people trained are women. Baseline: No Target: Yes Indicator: Number of women who report that childcare services increased their access to participating in ToT.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider	Cost included in project budget.

	Activity 4.1.4. Hold business training workshops on the identification, development and management of climate-resilient businesses, hosted by members trained under Activity 4.1.3 across all coastal counties, specifically targeting women and the youth.	Differentiated socio-economic impacts of climate change on women, men, boys, and girls.	Gender equality and equity	4.1.4a. Ensure equitable participation of men, women, youth, and PWDS groups in training programs. 4.1.4b. Deliver workshops at considerable times considering domestic and care roles.	Baseline: 0 Target: 70% Indicator: At least 70% of beneficiaries are women, youth and PWDS. Baseline: No Target: Yes Indicator: Number of women who report that childcare services and training times increased their access to training program. Baseline: No Target: Yes Indicator: Percentage of Women, men, boys, and girls trained in non-traditional livelihood sectors.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider.	Cost included in project budget.

Output 4.2. Opportunities for integrated farming systems, fisheries, compressed stabilised earth blocks and their value chains created for coastal communities.	Activity 4.2.1. Hold validation workshops with beneficiary communities as well as county and district level institutions to finalise site-specific needs and livelihood opportunities.	Limited participation of women, youth, and Persons with Disabilities (PWDS)	Participation and inclusivity	4.2.1a. Present final site-specific needs and livelihood opportunities to all stakeholders.	Baseline: 0 Target: 50% Indicator: At least 50% of participants are women disaggregated by age and disability.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider.	Cost included in project budget.
	Activity 4.2.2. Establish training and awareness-raising centres focusing on the use of technologies for the proposed livelihoods, particularly with regards to IFS and CSEBs and provide training on best practices for the targeted livelihoods.	Differentiated socio-economic impacts of climate change on women, men, boys, and girls.	Gender equality and equity	4.2.2a. Ensure equitable gender participation	Baseline: 0 Target: 40% Indicator: At least 40% of trainers working in training and awareness-raising centres are women.	Cost included in project budget.	Cost included in project budget.
	Activity 4.2.3. Working with relevant government institutions at the county and district level, develop industry level standards and codes of conduct that reflect best practices for fisheries, IFS and the construction of CSEBs.	Limited data and awareness on gender differentiated impacts of climate change.	Gender mainstreaming	Activity 4.2.3a. Ensure industry level standards and codes are gender responsive	Baseline: 0 Target: Indicator: Evidence brought by project gender coordinator that industry level standards and code of conduct are gender responsive and CoC include provision on SGBV	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider.	Cost included in project budget.

	Activity 4.2.4. Procure equipment for and implement climate-resilient fisheries, IFS and CSEBs and their value chains across 480 households.	Climate-smart technologies are often designed without considering and addressing the differential needs of women and men.	Gender responsiveness	Activity 4.2.3a. Procure equipment that will meet women needs in agriculture and fishery (i.e. solar dryers for fish and agriculture produce, solar freezers, energy efficient smoke ovens)	Baseline: 0% Target: 100% Indicator: A perception survey presents evidence that equipment meet women needs.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Service provider.	A percentage of the cost allocated for equipment should be determined to ensure equipment that meet women needs are purchased
Output 4.3. Access to finance and technologies to develop livelihood and income diversification enterprises of coastal livelihoods and resources facilitated in collaboration with national and county financial institutions.	Activity 4.3.1. Hold training workshops with national and county financial institutions on integrating climate risk management into products and business cases to promote investments into climate adaptation livelihoods.	Differentiated socio-economic impacts of climate change on women, men, boys, and girls.	Gender equality and equity	4.3.1a Ensure the training workshops have content on products tailored to women/girls led MSMEs.	Baseline: No Target: Yes Indicator: Percentage of staff from national and county financial institutions with capacity to mainstream gender in product development.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Access Bank and other microfinance institutions	Cost included in project budget.

	Activity 4.3.2. Design and implement sector-wide guidelines for financial institutions to integrate climate change risks, vulnerability and adaptation opportunity assessments in decision making.	Gaps in national and local policy and planning to enable integrated coastal resilience.	Gender mainstreaming	4.3.2a Ensure gender considerations are mainstreamed in guidelines.	Baseline: No Target: Yes Indicator: Evidence brought by project gender officer that guidelines are gender responsive.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Access Bank and other microfinance	Cost included in project budget.
	Activity 4.3.3. Undertake market studies in the target communities, outlining existing financing, required climate-responsive financial products, and potential market demand including community-specific business cases, cash-flow analyses and rate of returns.	Differentiated socioeconomic impacts of climate change on women, men, boys, and girls.	Gender equality and equity	4.3.3a. Collect and analyse sex, age, disability disaggregated data on needs and priorities relating to access to finance.	Baseline: Yes Target: Yes Indicator: Percentage of the population disaggregated by sex, age, disability, marital status consulted in market study. Baseline: Yes Target: Yes Indicator: Market study report reflects gender differentiated needs, priorities, and capabilities	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Access Bank and other microfinance	Cost included in project budget

	Activity 4.3.4. Develop context-specific climate-responsive financial products, informed by engagement with an MFI partner and the market studies under Activity 4.3.3.	Differentiated socio-economic impacts of climate change on women, men, boys, and girls.	Gender equality and equity	4.3.4a. Ensure financial products are gender-responsive.	Baseline: No Target: Yes Indicator: Evidence brought by project gender officer that financial products are gender responsive.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Access Bank and other microfinance	Cost included in project budget
	Activity 4.3.5. Identify appropriate champions within existing VSLAs in Grand Cape Mount County and provide agent training, focussing on climate-responsive financial products, as well as necessary equipment.	Limited participation of women, youth, and Persons with Disabilities (PWDS).	Gender equality and equity	4.3.5a. Ensure equitable gender participation in ToTs 4.3.5b. Project gender officer ensures the ToTs include content on gender responsive climate actions and disability inclusive climate actions.	Baseline: No Target: 50% Indicator: At least 50% of people trained are women. Baseline: 0 Target: 2 Indicator: 2 training reports with a chapter on gender including analysis on gender and disability content delivered during trainings.	UNDP, Project Gender Officer, EPA, and other relevant MACs including MoGCSP, County Governments, Access Bank and other microfinance	Cost included in project budget

[1] The EPA and UNDP Liberia National Adaptation Plan Project provided one gender mainstreaming training for national staff.

[2] EPA National Policy and Response Strategy of 2018 provides for mainstreaming gender issues in all climate change mitigation and adaptation interventions across the country. Other policies include Liberia National Gender Strategy, Liberia Gender and Climate Change Strategy.

[3] Some MACs such as EPA have gender focal persons. These roles face several challenges- limited capacity in gender and climate change or retention challenges- trained focal persons leave government. Training of existing focal points and identifying focal points at county level is important.

[4] Several projects have undertaken climate change awareness in some of the 9 coastal communities.

[5] Liberia CIS Project: Enhancing Climate Information Systems for Resilient Development in Liberia.

[6] See note 5.

[7] The Collaborative Management Association (CMA) operating in Cape Mount County has set up several committees including science committee and monitoring committees in fishing communities. It is important that such existing structures play key roles in early warning and preparedness information delivery systems to ensure sustainability.
[8] Liberia?s online EKMS platform have the Liberia Climate Change Gender Action Plan. However the site provides very limited information on gender and climate change resources, laws and policies, ESIA reports ect?

[9] Climate Change and Coastal Vulnerability Assessments 1 and 2 Conducted in Sinoe, Grand Cape Mount , Maryland and Grand Bassa Counties

[10] See note 10.

[11] Proposed in SESP

[12] As recommended in the Climate Change and Coastal Vulnerability Assessments, selection of target beneficiaries for livelihood programs should prioritize women-headed households, families that rely on the sea and ecosystems for their livelihood, PWDS and other marginalized groups.
[13] See note 13.

[14] See note 13.x

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

Closing gender gaps in access to and control over natural resources; Yes

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

Does the project?s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

The private sector?s involvement will be streamlined throughout several outputs in the proposed project. To achieve this, private sector participation and representation will be promoted by the cross-sectoral focal points and working groups (Output 1.3), which will be established to facilitate capacity development and awareness raising of climate change information and risks. Through this engagement, businesses within the private sector will be better equipped to enhance the adaptive capacity of their operations ? particularly during extreme rainfall events ? and identify opportunities for climate-resilient business. By climate-proofing business operations, the private sector is adequately positioned to share best practices and encourage adopting climate-resilient practices and adaptation solutions ? specifically for private companies, businesses and MSMEs in the fisheries, agricultural and construction sectors (Output 3.3). The feasibility assessment to be undertaken (Output 3.1) will also consider, *inter alia*, CCA option models driven by private sector stakeholders to ensure the identification of viable and sustainable adaptation solutions specific to the Sinoe County context. Output 3.1 will also include engagement with community businesses and MSMEs in the fisheries, agricultural and construction sectors to ensure that proposed interventions adequately address their specific adaptation needs and do not impact them adversely in any way. Under Output 4.1, private sector representatives under LIFSCAA and other private sector stakeholders will assist the MoCI by providing expertise for business training which will be directed towards empowering and upskilling individuals ? particularly women ? and MSMEs within the target communities. In addition, private sector representatives such as members of the LIFSCAA or businesses involved in fishing, agriculture and construction will be approached to assist in sourcing sustainable and cost-effective equipment as well as providing best practices for livelihood options under Output 4.2. This involvement will include, for example, assisting in piloting the compressed stabilised earth blocks (CSEB) value chains. Through Output 4.2, the uptake of additional and climate-resilient livelihoods by private sector stakeholders in communities in all coastal counties ? including MSMEs, farmers, fisherfolk and individuals involved in construction ? will be facilitated and encouraged. Finally, MFIs such as Access Bank and BRAC will be engaged to assist in developing and providing climate-responsive financial products for entrepreneurs in target coastal communities, including individuals involved in the development of livelihoods under Output 4.2.

Several private sector stakeholders in Sinoe and other coastal counties have been identified, expressing a willingness to participate in and support the implementation of the proposed project. These private stakeholders include, *inter alia*, Golden Veroleum Liberia (GVL), Liberia Ruby Light Forestry Investment Inc, Equatorial Palm Oil, PLC Maryland Oil Palm Plantation, Bea Mountain Mining Corporation, Sime Darby Plantation and Cavalla Rubber Corporation, LIFSCAA, Access Bank and BRAC. Promoting private sector engagement will facilitate consideration of CCA measures into business investments and enable a pathway towards reducing the high costs and risks associated with investing in CCA. The abovementioned private stakeholders will benefit from the project through awareness-raising activities on climate change, climate risk and SRDRM under Output 1.3, 2.2 and 3.3. Other private sector stakeholders that will benefit from this awareness raising include farmers, fisherfolk, construction workers, MSMEs and other entrepreneurs involved in the fisheries, agricultural

and construction sectors within target coastal communities. These stakeholders will additionally benefit directly from adaptation interventions under Output 3.2 as well as business training, livelihood opportunities and climate-resilient financial products developed and provided by Outcome 4.

Private sector engagement has already been initiated during the project prepration phase with representatives from priority economic sectors such as agriculture, coastal management, energy and waste. The engagement focussed on identifying, *inter alia*: i) knowledge gaps regarding CCA; ii) current practices relating to CCA, as well as corporate social responsibility; iii) the support required to invest in CCA interventions, specifically coastal protection activities; and iv) the most effective information products and methods of delivery for disseminating climate change information. The support necessary for including the private sector involves awareness raising and information dissemination on climate change impacts and potential adaptation options, training on climate change impacts and adaptation options and access to financial assistance to implement CCA activities. Many respondents indicated an interest in engaging in CCA within their operations and envisioned potential financial benefits from this engagement.

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

Risks and mitigation measures identified through the Social and Environmental Screening process are presented summarised in Annex 6 -? SESP and in the risk register (Annex 7) along with budgeted activities that mitigate or address these risks in a pre-emptive fashion. A more detailed discussion on the risks and their management and mitigation is provided in the Environmental and Social Management Framework (ESMF, Annex 10).

A summary of risks identified, and the respective mitigation and management measures is provided below.

Table 8. Identified risks, mitigation measures and management approaches for the proposed project.

#	Description	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner

1	Extreme weather events such as storm surges or heavy storms during project implementation may result in delays and damage to project intervention assets, including planted seedlings for restoration and engineered infrastructure before completion. Additionally, it may result in the unsuccessful implementation of sustainable livelihood options and other adverse effects on local communities.	Social and Environmental	Extreme weather events may result in delays and damage to project intervention assets, including planted seedlings for restoration and engineered infrastructure before completion. In addition, these events may result in the unsuccessful implementation of sustainable livelihood options and other adverse effects on local communities. I = 3 P = 2 Moderate.	Assessments and consultations during the PPG phase included a thorough inventory of potential, site-specific hazards, including information provided by local communities and climate experts. Project implementation activities will be scheduled to avoid coinciding with periods of the year when extreme weather events are more prevalent. Provision will be made in workplans and budgets to consider weather-related interruptions to ensure that the project remains on schedule. Project interventions are designed to address the impacts of future climate change and to be resilient to climate change hazards.	EPA, MME.

2	Low human and institutional capacity to implement climate change adaptation projects ? particularly at the county level.	Operational	Limited capacity may result in delays to project implementation or interventions not being designed, implemented or monitored correctly. This has the potential to result in reduced project success. I = 2 P = 2 Low.	The Implementation Partner and Responsible Parties have some experience on project implementation from recent and existing related baseline projects. The proposed project consists of outputs with strong institutional capacity-building elements at the national, county and district levels that are designed to promote intervention effectiveness and sustainability. The above capacity-building elements include the development of ICZM plans, County Resilience Plans and district level Guidance Manuals which will be used to inform county and district level officials (Outputs 1.1, 1.2, 2.4). Institutional capacity in Sinoe County for ICZM, risk management and climate adaptation will also be developed under Output 1.2 and 2.1. Finally, iterative lessons learned and best practices on ICZM, risk management, climate adaptation and livelihoods will be disseminated to coastal county institutions through focal points as well as working groups, knowledge hubs, best practice collection and training (Outputs 1.3, 2.1, 3.3 and 4.1).	UNDP, EPA.

3	Limited awareness and engagement with community leaders and local level development practitioners can potentially result in insufficient buy-in and ownership of project interventions by local communities and officials.	Social	Reduced buy-in may result in insufficient influence of the project on local and regional climate-planning processes and limit the mainstreaming of adaptation interventions. I = 2 P = 3 Low.	Local awareness raising and stakeholder engagement were undertaken during the PPG phase and will continue throughout project implementation. Awareness raising will focus on climate risks, sustainable livelihood opportunities and adaptation options. Specifically, awareness raising will be implemented through a number of project outputs, including: i) the development of county and local level plans and Guidance Manuals Outputs 1.1, 1.2, 2.3 and 2.4; ii) local engagement through focal points and working groups (Output 1.3); iii) an accessible knowledge hub with information on lessons learned (Output 2.2); and iv) training on business identification, development and management for local entrepreneurs, with a focus on climate-resilient livelihood options. In addition to the above, the project will also disseminate information during implementation through regular publications of project newsletters and other media (for example, videos for community screenings), which will enhance awareness of the project and its interventions and improve engagement with local communities.	EPA.

4	Political complications such as changes in political leadership or corruption at a national or county level have the potential to delay or limit the implementation of project interventions by halting institutional progress.	Political	Political complications have the potential to delay or limit the implementation of project interventions by halting institutional progress. I = 4 P = 3 Moderate.	The GoL has indicated a strong commitment to the proposed project, which will ensure strong institutional governance of the project and limit the potential of the ineffective implementation of project interventions.	UNDP, GoL.
5	Conflict or civil unrest in or around project target sites have the potential to delay the on-the-ground implementation of project interventions and jeopardise the safety of stakeholders and local communities.	Safety and security	This has the potential to delay the on-the-ground implementation of project interventions and jeopardise the safety of stakeholders and local communities. I = 3 P = 1 Low.	The majority of on-the-ground interventions will be undertaken in Sinoe County, which ? because of its relative isolation ? is unlikely to experience civil unrest. The potential for unrest will be closely monitored before in-field activities to ensure the security of project implementers.	EPA, GoL.
6	Limited project partner and stakeholder coordination can result in project delays, non-participation of stakeholders and communities and the ineffective implementation of interventions.	Operational	Limited coordination may result in project delays, non-participation of stakeholders and communities, and the ineffective implementation of interventions. I = 2 P = 3 Low.	Project management arrangements have been explicitly made during the PPG phase. To ensure coordination is effective in the long-term, one project manager, county and local community-level site officers, finance experts and one coastal expert will be competitively procured during project implementation to ensure coordination between the Implementing Partner, project partners and stakeholders.	EPA.

7	Limited capacity within the Environment Protection Agency (EPA) to effectively engage, coordinate and integrate district and county planning and investments into national and adaptation processes.	Operational	This has the potential to result in project delays or the ineffective implementation of interventions. I = 2 P = 3 Low.	The proposed project will strengthen the coordination capacity of the EPA while also building the capacity of other project partners including the agriculture, fisheries, mines and energy sectors to be involved in the integration. This will be done by adding adaptation planning into national plans and processes under Output 1.2. County-level capacity also will be built through the project to ensure that adaptation planning is driven through a bottom-up approach and is county specific. This will be achieved through county- and district-level plans and Guidance Manuals (Outputs 1.1, 1.2 and 2.4) as well as the strengthening of the EKMS knowledge hub which will disseminate lessons learned and best practices to all coastal counties (Output 2.2). Additionally, focal points and working groups (Output 2.3) will be capacitated to contribute to national adaptation planning.	UNDP, EPA.

8	Limited response by financial institutions to invest in adaptation-orientated livelihoods. has the potential to reduce access to finance for entrepreneurs and Micro, Small and Medium Enterprises (MSMES) in vulnerable targeted communities, resulting in the possible failure of livelihood options and interventions under Outcome 4.	Financial.	This has the potential to reduce access to finance for entrepreneurs and MSMES in vulnerable targeted communities, resulting in the possible failure of livelihood options and interventions under Outcome 4. I = 3 P = 3 Moderate.	The project will have a strong focus on engagement with the private sector and finance institutions throughout the planning and implementation process. Specifically, the proposed project will work with these institutions to identify solutions to climate change impacts while providing business and investment opportunities within climate-vulnerable sectors, building on existing access to finance projects and initiatives.	EPA, MoCI.
9	Increased cases of Covid-19 in Liberia may threaten the health of communities and project implementers. This may also result in an increase in restrictions to activities and movement within project target areas, resulting in delays to the implementation of interventions.	Safety and Security.	The current Covid-19 pandemic may threaten the health of communities and project implementers. This may also result in an increase in restrictions to activities and movement within project target areas, resulting in delays to the implementation of interventions. I = 2 P = 4 Moderate.	A Covid-19 Strategy has been developed during the PPG stage that outlines risks and contingencies to mitigate against Covid-19 risks to project implementation. The Stakeholder Engagement Plan details safety protocols related to stakeholder engagement during project implementation. Additionally, provisions have been made in the project workplan to ensure the project remains on schedule.	EPA.

10	Failure to commit to and provide co-financing ? potentially as a result of needing to prioritise funds towards Covid-19 recovery.	Financial.	Project interventions dependent on co-financing funding could be compromised resulting in certain activities not taking place. I = 3 P = 3 Moderate.	UNDP and GoL have committed to providing in-kind co-financing for the project, including the costing for rock materials which have been verified by GoL and UNDP.	UNDP, GoL.
11	Limited long-term operations and maintenance of coastal adaptation interventions.	Operational.	This could jeopardise the long-term sustainability and effectiveness of adaptation interventions beyond the project?s lifespan and reduce benefits to vulnerable communities. I = 2 P = 4 Moderate.	An operations and maintenance plan has been developed during the PPG stage, which will be refined in the early stages of implementation once interventions are verified under Output 3.1. GoL has indicated commitments to provide resources for the continued maintenance of hard interventions beyond the project?s lifespan.	UNDP, GoL.

12	Insufficient incorporation of gender sensitivity and responsiveness into the implementation of project activities.	Social and Environmental.	The project may have adverse impacts on gender equality ? for example, increased income by women resulting in gender-based violence ? which would jeopardise the project?s objective of adopting a gender-responsive approach. I = 4 P = 2 Moderate.	A Gender Analysis and Action Plan has been developed which has advised project interventions during the PPG stage and will be implemented during the project to ensure gender equality is incorporated into all activities. A Gender Officer will be included in the PMU to ensure all gender-related aspects of the project are implemented sufficiently. The project has strong gender-responsive outputs that account for the specific vulnerabilities of women and other disadvantaged groups. This includes awareness-raising which will include information on specific climate change challenges women experience (Output 1.3) and gender-responsive Community Action Plans (Output 2.3). Specifically, Outcome 4 has a strong gender focus through business training, livelihood options and access to finance that prioritise women and youth groups.	EPA, MoCI, MoA.

13	Findings and recommendations of Social Environment Screening Procedure (SESP) risks not followed-up on and addressed.	Social and Environmental.	The SESP rating for the project is High, indicating that the insufficient implementation of mitigation measures to the identified social and environmental risks could result in maladaptation and negative impacts on ecosystems and communities. I = 4 P = 2 Moderate.	A Project Safeguard Officer will be included in the PMU to ensure safeguards compliance. The SESP will be updated iteratively throughout the project implementation cycle to ensure all risks are tracked and updated. Additionally, safeguard documents including a Strategic Environmental and Social Assessment (SESA), full Environmental and Social Impact Assessment (ESIA) and Construction Environmental and Social Management Plan (C-ESMP) will be developed before relevant on-the-ground interventions are initiated. Stakeholder engagement will follow the Stakeholder Engagement Plan and adhere to the best practice principles of Free Prior and Informed Consent (FPIC) to ensure any stakeholder concerns regarding the project are acknowledged. Additionally, a Grievance Redress Mechanism has been developed which will be used to receive and address from external stakeholders regarding project interventions.	EPA, UNDP.

14	Community initiatives led by individuals can potentially fail if the individual moves to another town.	Operational	By funding projects led by individuals, there is a risk of failure or short-lived project, particularly if the individual does not have strong ties with the community. I = 3 P = 3 Moderate	When providing funding to community initiatives, the project implementing agencies will favour the initiatives that are led by existing associations, cooperatives over the ones that are submitted by individuals or newly-formed associations. Project activities implemented through existing community associations have a higher chance of success, because even if individuals move away from the project?s intervention sites, the association remains in the community and project activities be continued by new members.	EPA, GoL

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

The project will be executed under National Implementation Modality (NIM), with execution by the Environmental Protection Agency (EPA), following UNDP?s Programme and Operations Policies and Procedures, per its role as implementing agency. Execution of the project will be subject to oversight by a Project Steering Committee. Day to day coordination will be carried out under the supervision of a Project Management Unit, led by a Project Manager. The executing agency will take responsibility for different outcomes/activities according to existing capacities and field realities, ensuring effective and efficient use of GEF resources.

Implementing Partner: The Implementing Partner for this project is the Government of Liberia?s Environmental Protection Agency (EPA). The UNDP Administrator has entrusted the implementation of UNDP assistance as specified in this signed project document to the EPA, along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, set forth in this document.

Responsible Parties: The Responsible Parties are the entities to which UNDP has entrusted the responsibility for implementing specific project focal areas. These responsibilities differ per Responsible Party and project component.

The Ministry of Mines and Energy (MME) will first be responsible for implementing activities that support the development of coastal integrated coastal zone management (ICZM) plans and the pilot Sea and River Defence Investment Management (SRDIM) plan under Component 1. Second, the MME will be responsible for Output 2.4 of Component 2, which involves the development and dissemination of Guidance Manuals on adaptation practices to coastal districts. Finally, working with the EPA and relevant international organisations such as Conservation International (CI) who are able to provide technical

expertise, a critical responsibility of the MME will be the development and implementation of hybrid adaptation solutions in Sinoe County under Component 3.

The Ministry of Commerce and Industry (MoCI) and the Ministry of Agriculture (MoA) will be responsible for outputs under Component 4. Specifically, the MoCI will be responsible for business training for entrepreneurs in vulnerable coastal communities (Output 4.1) and improved access to finance through micro-finance institutions under Output 4.3. The MoA will be responsible for activities that support the implementation of livelihood diversification ? specifically relating to integrated farming systems, climate-resilient fishing practices and compressed stabilised earth block (CSEB) construction ? under Output 4.2.

Project stakeholders and target groups: The composition of the Project Board will include Representative Beneficiaries to ensure that all target groups are represented in the highest governance structure of the project. Capacity-building and training programmes through Outcomes 1 and 2 will enable the Representative Beneficiaries of these groups to be informed about and engage in ICZM and sea and river defence and risk management (SRDRM) practices. This will enable the Representative Beneficiaries to provide the appropriate support to the Project Board while ensuring that the needs and rights of target groups are considered throughout project implementation.

UNDP: UNDP is accountable to the GEF for the implementation of this project. This includes oversight of project execution to ensure it is carried out according to agreed standards and provisions. UNDP is responsible for delivering GEF project cycle management services comprising project approval and start-up, project supervision and oversight, and project completion and evaluation. UNDP is also responsible for the Project Assurance role of the Project Board/Steering Committee.

The Project Board (also called Project Steering Committee) is responsible for taking corrective action as necessary to ensure the project achieves the desired results. To ensure UNDP?s ultimate accountability, Project Board decisions should be made in accordance with standards that ensure management for development results, best value for money, fairness, integrity, transparency and effective international competition.

In case consensus cannot be reached within the Board, the UNDP Resident Representative (or their designate) will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

The composition of the Project Board must include the following roles:

Project Executive: An individual who represents ownership of the project and chairs the Project Board. The Executive is normally the national counterpart for nationally implemented projects. The Project Executive is: Samuel Tweh, Minister of Finance and Development Planning.

Beneficiary Representatives: Individuals or groups representing the interests of those who will ultimately benefit from the project. Their primary function within the board is to ensure the realisation of project results from the perspective of project beneficiaries. Often civil society representative(s) can fulfil this role. The Beneficiary representatives are: Lee Chea, the Superintendent of Sinoe County; Barabah Keah, the Assistant Superintendent for Development, Sinoe County; and William Miller, Regional Development Officer.

Development Partner(s): Individuals or groups representing the interests of the parties concerned that provide funding and/or technical expertise to the project. The Development Partners are: Stephen Rodrigues, the Resident Representative for the UNDP; and the World Bank.

Project Assurance: UNDP performs the quality assurance and supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed, and conflict of interest concerns are monitored and addressed. The Project Board cannot delegate any of its quality

assurance responsibilities to the Project Manager: UNDP provides a three-tier oversight service involving the UNDP Country Offices and UNDP at regional and headquarters levels. Project assurance is entirely independent of project execution.

In addition to the above, the Project Board will also consist of representatives from the EPA, MME, Ministry of Internal Affairs, MoPW, MoCI, MoA and a representative of a CSO in Sinoe County.

Coordination with other projects and programmes of relevance

Throughout project implementation, the proposed project will collaborate with and build on several complementary recent and ongoing projects implemented by partner stakeholders that address the same development challenge as the proposed project. This collaboration will broaden the impact of project interventions, avoid duplication of efforts and enable sharing lessons learned throughout implementation. Table 4 below provides the details of these projects and their alignment with the proposed project, including the objectives, outcomes and budgets, as well as co-finance links to the outcomes of the proposed project. Furthermore, a description of all stakeholder partners and their contributions to achieving project intervention results is provided in the Stakeholder Engagement Plan (Annex 9).

Table Table 9 Recent and ongoing initiatives and alignment with the proposed project.

Project title	Implementation period	Cost	GEF Agency/Executing Entity	Project summary	Coordination and alignment with LDCF project

Monrovia Metropolitan Climate Resilience Project	2021 ? 2027	USD25 million total	UNDP/Government of Liberia (EPA)	The objectives of the ?Monrovia Metropolitan Climate Resilience Project? (MMCRP) are to: i) protect the coastal communities and infrastructure in West Point against erosion caused by sea level rise (SLR) and increasingly frequent high-intensity storms; ii) build institutional capacity and support policies for implementing Integrated Coastal Zone Management (ICZM) across Liberia; and iii) protect mangroves and strengthen gender- and climate-sensitive livelihoods to ultimately build local climate resilience in Monrovia.	The interventions to be implemented under MMCRP align with the outcomes of the proposed LDCF project, specifically: i) strengthening institutional capacity to develop appropriate planning mechanisms for mainstreaming climate change adaptation, which includes the development of county-level ICZM plans (Outcome 1); ii) reducing the vulnerability of coastal communities in Sinoe County to climate change-induced SLR using both engineered and nature-based solutions (Outcome 3); and iii) introducing gender-responsive options for climate-resilient livelihoods in vulnerable coastal communities (Outcome 4). The interventions and lessons learned from the outputs of this GCF project will inform numerous aspects of implementation under the LDCF project.

Enhancing Climate Information systems for Resilient Development in Liberia (Liberia CIS, GCF)	2021?2036	USD11 million	African Development Bank (AfDB)/Government of Liberia (EPA)	The objective of Liberia CIS is to further strengthen Liberia?s climate-related observing and monitoring capabilities, early warning and early action systems, and other environmental-related information systems. It seeks to drive a paradigm shift towards evidence-based climate-informed decision-making, planning and response. The overarching goal is to integrate green growth, environmental resilience and adaptation into national development planning through effective climate information systems.	Liberia CIS will complement the proposed LDCF project by developing a national Multi-Hazard Impact-Based Forecasting and Early Warning System. The project will also involve training and equipping the Liberia Meteorological Service (LMS), Liberia Hydrological Service (LHS), Environmental Protection Agency (EPA) and the National Disaster Management Agency (NDMA) to: i) collect weather and climate data; ii) maintain and calibrate technical instruments; iii) forecast weather events and provide early warnings; and iv) scale-up evidence-based climate-informed decision-making, planning and response actions countrywide ? which will contribute to fulfilling Outcomes 1 and 2 of the proposed LDCF project.

Energy and Environment (E&E) Programme	2020?2024	USD58 million	UNDP/GoL (EPA)	The E&E Programme seeks to support the efforts of the GoL in achieving diversified and inclusive economic growth through investments in sustainable and eco-friendly agriculture, food security, job creation and enhanced resilience to climate change and natural disasters. The programme approach includes enabling diversified and inclusive economic growth within a broader development context to facilitate synergies among four thematic areas, namely: i) Livelihood Diversification, Disaster Resilience and Climate Change; ii) Biodiversity, Conservation Ecotourism and Land Management; iii) Renewable Energy Access; and iv) Waste Management.	The E&E Programme will complement several interventions under the proposed LDCF project and contribute lessons learned to inform the proposed project. The proposed project will particularly build on ?Livelihood Diversification, Disaster Resilience and Climate Change? by: i) strengthening capacity of all Liberian coastal counties' planning institutions to assess climate change risks and integrate into county development processes (Outcome 1); ii) establishing innovative technologies to support coastal adaptation to climate hazards (Outcome 2); iii) implementing hybrid solutions to reduce the vulnerability of coastal communities to climate change-induced sea-level rise (Outcome 3); and iv) developing and implementing gender-responsive income

To advance the National Adaptation Plans (NAP) process for medium-term investment planning in climate-sensitive sectors (i.e. agriculture, energy, waste management, forestry and health) and coastal areas in Liberia	2017?2020	USD2,3 million	UNDP	Liberia began its National Adaptation Plan (NAP) process in 2015 with the development of a road map based on an evaluation of the existing climate adaptation and mitigation initiatives, an assessment of the knowledge, capacity and implementation gaps, as well as an assessment of the capacity development needs. The objective of the project ?To advance the National Adaptation Plans (NAP) process for medium-term investment planning in climate-sensitive sectors and coastal areas in Liberia? was to strengthen institutional frameworks and coordination for the implementation of the NAP process, expand the knowledge base for scaling up adaptation, build capacity for mainstreaming climate change adaptation into planning, and budgeting processes and systems, and formulate financing	The proposed project will contribute to: i) expanding the knowledge base for scaling up interventions by introducing innovative technologies to support coastal adaptation planning under Outcome 2; ii) mainstreaming climate change adaptation into planning, budgeting processes and systems by strengthening and institutional capacity to address the vulnerability of coastal ecosystems (Outcome 1).

GCF Readiness and Preparatory Support: Liberia	2017?2019	USD727,553	Government of Liberia (EPA)	The proposed LDCF project will build on the two main objectives of this GCF project, specifically by: i) strengthening the capacity of the NDA to coordinate climate change activities in Liberia; and ii) assisting the development of Liberia?s climate change country programme ? which included identifying the country?s priorities and potential projects, conducting stakeholder training and identifying opportunities for engaging with non-governmental stakeholders. While most of the work under this project was at a national level, a foundation for engagement with several local stakeholders has been established under the project.	The LDCF project will employ the NDA?s enhanced capacity to coordinate other actors and ensure strong engagement at the subnational level and across different sectors. The enhanced capacity at the national level will be localised at the county level, linking the climate change focal points between these levels.

[1] GCF. Projects and programmes. FP160: Monrovia Metropolitan Climate Resilience Project. Available at: https://www.greenclimate.fund/project/fp160#details

[2] USD17 million GCF financing; USD8 million co-financing.

[3] GCF. Projects and programmes. SP108: Enhancing Climate Information Systems for Resilient Development in Liberia (Liberia CIS). Available at: https://www.greenclimate.fund/sites/default/files/document/sap018-afdb-liberia.pdf

[4] USD10 million GCF funding; USD1 million co-financing.

[5] UNDP. Climate Change Adaptation. GCF National Adaptation Plans project in Liberia. Available at: https://www.adaptation-undp.org/projects/gcf-national-adaptation-plans-project-liberia

[6] GCF. Readiness Proposal: Liberia. Available at: https://www.greenclimate.fund/sites/default/files/document/readiness-proposals-liberia-epa-nda-strengthening-strategic-frameworks_1.pdf

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

National Strategy or Plan	Alignment
Technology Needs Assessment (TNA, 2019)[1]	Liberia?s TNA identified coastal zones as a priority sector for climate change adaptation (CCA). In addition, the TNA prioritised three technologies for improving the resilience of Liberia?s coastal zones, which specifically include: i) integrated coastal zone management (ICZM); ii) flood early warning systems (EWS); and iii) armour or rock revetments.
National Policy and Response Strategy on Climate Change (NPRSCC, 2018)[2]	The NPRSCC was developed to ensure a comprehensive and consolidated approach to addressing the impacts of climate change in Liberia, with additional consideration of Liberia?s developmental objectives. Accordingly, coastal zones have been identified as a priority for urgent adaptation intervention in Liberia ? specifically, ensuring the protection of ~500 km of the country?s coastline. The NPRSCC includes several components for achieving this objective, including to: i) promote disaster risk management and infrastructure to protect against; ii) engage with coastal communities to facilitate participatory action for protecting and ensuring the continued viability of coastal areas; and iii) design and implement a strategic communication action plan to inform and educate Liberian communities on the extent of climate change-related impacts on coastal areas and the adaptation required to overcome these challenges.

Pro-Poor Agenda for Prosperity and Development (PAPD, 2018?2023)[3]	The PAPD is the second series of National Development Plans (NDP) ? following the Agenda for Transformation (AfT, 2012?2017) ? expected under the Liberia Vision 2030 framework. The objectives of the agenda include: i) building more capable and trusted state institutions that lead to a stable, resilient and inclusive nation embracing, its triple heritage and anchored on its African identity; and ii) providing greater income security to an additional one million Liberians, and reduce absolute poverty by 23% through sustained and inclusive economic growth driven by scaled-up investments in agriculture, in infrastructure, in human resource development, and in social protection.
National Biodiversity Strategy and Action Plan (NBSAP, 2017)[4]	The NBSAP ? first established in 2004 and later revised in 2017 ? aims to ensure the protection of Liberia?s biodiversity heritage by enabling awareness-raising programmes for Liberia?s population about the importance of biodiversity, as well as by assessing and valuating ecosystem goods and services in the country. Moreover, it includes the development of a framework for mainstreaming biodiversity into Liberia?s national accounting systems as well as into its development policies, plans and programmes. The NBSAP includes five strategic goals for achieving its overarching aims.
National Agenda for Transformation (AfT, 2012?2017)[5]	Liberia?s AfT was a medium-term economic growth and development strategy created to enable Liberia?s goal of reaching middle-income status by 2030. The objectives of the strategy were supported by four sector-specific pillars[6], with an additional fifth pillar further acknowledging cross-cutting challenges that impact the Liberian population?s overall productivity and wellbeing. The strategic goals of the AfT included: i) developing and implementing clear environmental policies and quality standards to guide environmental management ? such as a national plan for a low-carbon, climate-resilient economy; ii) strengthening ownership and capacity of government and private sector agencies as well as civil society organisations (CSOs) for understanding and monitoring environmental policies and regulations; and iii) strengthening ownership and participation of communities in decentralised natural resource management and decision-making on environmental issues.
Nationally Determined Contribution (NDC)	Liberia?s NDC ? which is currently under development ? includes two specific targets to build the resilience of coastal zones to climate change, namely: i) design and implement green-grey infrastructure approaches along 60% of Liberia?s highly vulnerable coastline by 2030; and ii) establish an early warning system and predictive scenario modelling for climate disasters and coastal flooding by 2030.
Advance the NAPs process for medium-term investment planning in climate-sensitive sectors (i.e. agriculture, energy, waste management, forestry and health) and coastal areas in Liberia (2016)	Liberia began its National Adaptation Plan (NAP) process in 2015 with the development of a roadmap based on an evaluation of the existing climate change adaptation and mitigation initiatives, and assessments of the knowledge, capacity and implementation gaps, as well as the capacity development needs. With support from the GCF, the objective of the project ?To advance the National Adaptation Plans (NAP) process for medium-term investment planning in climate-sensitive sectors and coastal areas in Liberia? was to: i) strengthen institutional frameworks and coordination for the implementation of the NAP process; ii) expand the knowledge base for scaling up adaptation; iii) build capacity for mainstreaming climate change adaptation into planning; and budgeting processes and systems; and iv) formulate financing mechanisms for scaling-up adaptation, including public, private, national and international mechanisms. The proposed project will contribute to expanding the knowledge base for scaling up interventions by introducing innovative technologies to support coastal adaptation planning under Outcome 2 and mainstreaming climate change adaptation into planning, budgeting processes and systems by strengthening the institutional capacity to address the vulnerability of coastal ecosystems (Outcome 1).

Intended Nationally Determined Contribution (INDC, 2015)[7]	Liberia?s INDC outlines short-, medium- and long-term planned actions for enabling the adaptation of Liberia?s coastal zones to the impacts of climate change.
Initial National Communications (INC, 2013)[8]	Liberia?s INC identifies the need for coastal protection technologies to address climate change-induced SLR and coastal erosion in the country. These technologies include: i) groynes; ii) sea walls; iii) revetments; iv) offshore breakwaters; and v) beach nourishment. Moreover, the INC outlines Liberia?s plan to develop an effective early warning system (EWS) for the provision of timely and effective information through relevant institutions to enable vulnerable communities to adequately prepare for climate hazards.
National Policy for Disaster Risk Management (2012)[9]	The objectives of the National Policy for Disaster Risk Management are to: i) enhance national and local capacities for minimising vulnerability and disaster risks; and ii) prevent, mitigate and prepare for adverse impacts of hazards within the context of long-term development planning. The policy supports five strategies, which include: i) establishing effective and functional legal and institutional frameworks for disaster risk management (DRM); ii) strengthening disaster preparedness for efficient emergency response; iii) establishing improved risk identification, assessment, monitoring and EWS for disaster risks; iv) enhancing information and knowledge management for disaster risk management; and v) contributing to local and national risk management applications for poverty reduction.
National Adaptation Plan of Action (NAPA, 2008)[10]	The proposed project aligns with three adaptation priorities identified in Liberia?s NAPA, specifically: i) capacity building for the integration of climate change into institutions, development planning, infrastructure design, as well as land and coastal zone management planning (Outcome 1); ii) awareness raising through the dissemination of climate change and adaptation information, particularly for vulnerable communities such as farmers and coastal settlements (Outcome 2); and iii) mainstreaming CCA into policy through programmes in agriculture, forestry, fisheries, energy, health, gender and meteorology/hydrology (Outcome 1).
National Environmental Policy (2002)[11]	The overarching objective of Liberia?s National Environmental Policy (NEP) is to ensure the improvement of the: i) natural environment; ii) quality of life of the Liberian population; and iii) economic and social living conditions of the country?s current and future generations. In addition, its objective is to ensure reconciliation and coordination between Liberia?s economic growth with its sustainable natural resource management.

[1] Government of Liberia (GoL). 2019. Technology Needs Assessment report. Available at: https://ekmsliberia.info/wp-content/uploads/2020/12/tna-report-coastal-zone-liberia.pdf

[2] Government of Liberia. Environmental Protection Agency. 2018. National Policy and Response Strategy on Climate Change. Available at: https://www.epa.gov.lr/sites/default/files/National%20Policy%20and%20Response%20Strategy%20on%20Climate%20Change%20Final%20Document-min_0.pdf

[3] Consulate of the Republic of Liberia State of Georgia. 2017. Pro-Poor Agenda for Prosperity and Development (PAPD). Available at: http://liberianconsulatega.com/wp-content/uploads/2017/07/PAPD-Pro-Poor-Agenda-for-Prosperity-and-Development.pdf

[4] Convention on Biological Diversity. CBD National Strategy and Action Plan ? Liberia. Available at: https://www.cbd.int/doc/world/lr/lr-nbsap-v2-en.pdf

[5] Government of Liberia (GoL). 2019. Agenda for Transformation: Steps Toward Liberia RISING 2030. Available at: https://ekmsliberia.info/wp-content/uploads/2019/11/Liberia-Agenda-for-transformation.AfT_.pdf

[6] Pillar I? Peace, Justice, Security and Rule of Law; Pillar II ? Economic Transformation; Pillar III ? Human Development; and Pillar IV ? Governance and Public Institutions.

[7] Government of Liberia (GoL). 2015. Intended Nationally Determined Contribution (INDC). Available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Liberia%20First/INDC%20Final%20Submission%20Sept%2030%202015%20Liberia.pdf

[8] Government of Liberia. 2013. Initial National Communication to UNFCCC. Available at: https://unfccc.int/sites/default/files/resource/lbrnc1.pdf

[9] Government of Liberia. 2012. Disaster Management Policy. Available at: https://www.climate-laws.org/geographies/liberia/policies/national-disaster-management-policy

[10] Government of Liberia. 2008. National Adaptation Plan of Action (NAPA). Available at: https://unfccc.int/resource/docs/napa/lbr01.pdf

[11] Ministry of Foreign Affairs. 2003. Government of Liberia. The National Environment Policy of the Republic of Liberia (2002). Available at: http://extwprlegs1.fao.org/docs/pdf/lbr175141.pdf

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

Knowledge management will be a crucial aspect of the project to strengthen capacities for evidence-based decision-making based on the management, interpretation and application of data on integrated coastal zone management (ICZM), sea and river defence and risk management (SRDRM) and coastal adaptation to climate change. The knowledge management approach will include: i) capacity building of national, county and district-level planners and decision-makers; ii) awareness raising of climate change and coastal adaptation for target coastal communities and the private sector; and iii) collection, storage and dissemination of lessons learned and best practices from this as well as other similar projects.

Capacity building of national, county and district-level planners and decision-makers will primarily occur through Outcomes 1 and 2. Under Outcome 1, training will be provided to policymakers on incorporating ICZM and SRDRM into development plans and policies. Outcome 2 will contribute to the capacity building of district-level decision-makers by disseminating Guidance Manuals which focus on climate-

resilient coastal management, while hydrometeorological observers, forecasters and climatological technicians will be trained on using weather station equipment acquired through the project as well as incorporating climate change into early warning systems (EWS).

Awareness raising and capacity building of communities and the private sector will occur through all project outcomes. Under Outcome 1, climate change information and risk management focal points and working groups will engage with communities and the private sector on climate change adaptation. Similarly, Community Action Plans (CAPs) under Outcome 2 will support coastal communities in Sinoe County to adopt gender-responsive adaptation and livelihood opportunities and participatory community-based monitoring of ecosystems. Community training on these monitoring practices will be further supported through Outcome 3 as part of the project?s nature-based solutions to coastal climate risks. Under Outcome 4, communities across all coastal counties will receive awareness-raising programmes and training on business development and management as well as climate-resilient and sustainable livelihoods such as sustainable fisheries, integrated farming systems and compressed stabilised earth block construction. Besides engagement with focal points and workings groups in Outcome 1, private sector stakeholders will receive awareness-raising through climate change adaptation best practice dissemination in Outcome 3 and training for financial institutions on incorporating climate change considerations into their financing frameworks.

Lessons learned and best practices on ICZM, SRDRM and coastal adaptation will be collected and stored under the project by supporting and updating the EPA?s Environmental Knowledge Management System knowledge hub (Outcome 2). This will include general information on lessons learned but also draw on best practices generated through other project activities, including the Sinoe County hybrid adaptation solution pilot.

Continuous monitoring and evaluation (M&E) of the project?s activities will also support the systematisation of best practices and lessons learned. The M&E process includes the production of knowledge and communication products that provide inputs for the project?s management and will also be used as an information instrument for sharing the knowledge generated through the project?s activities in the target area and across the country.

Project Components	Knowledge management activities and products, including timelines and budget

Component 1. Institutional capacity strengthening for climate change adaptation planning in Liberia?s coastal counties.	Output 1.2: Two three-day training workshops on incorporating SRDRM and coastal adaptation into policies and development plans designed and facilitated by international policy and development planning experts. These workshops will be presented to national and county-level policymakers, planners and decision-makers (Y3; USD57,400; see budget notes 9, 12 and 13 in Annex 1 of the Project Document).
	Output 1.3: County-level focal points and working groups established and trained to provide awareness-raising engagements with communities and the private sector. Costs include the training of the focal points and working groups, design and printing of knowledge products and annual awareness-raising sessions with communities and the private sector (Y4?6; USD217,100; see budget notes 14, 15, 17, 18, 19 and 20 in Annex 1 of the Project Document).
Component 2. Innovation, technologies and climate information introduced for coastal adaptation planning.	Output 2.1: Three-day training workshops on climate change and EWS as well as using weather station equipment acquired through the project delivered by a national climate change and EWS expert to LMS staff. An information delivery system will also be developed, including website development, radio programmes and mobile weather apps (Y3; USD24,316; see budget notes 22, 24, 26 and 27 in Annex 1 of the Project Document).
	Output 2.2: Enhancement of the EPA?s EKMS knowledge hub, including the collection and storage of lessons learned on ICZM and SRDRM as well as the development of a decision support tool (Y5?6; USD45,000; see budget notes 28?31 in Annex 1 of the Project Document).
	Output 2.3: Development of CAPs for Sinoe County, including a framework for participatory community monitoring of ecosystems and their services. This includes three-day training workshops for community representatives and local authorities on implementing the CAPs (Y2; USD159,700; see budget notes 32?35 in Annex 1 of the Project Document).
	Output 2.4: Development and dissemination of Guidance Manuals for integrated coastal adaptation practices to district officials. Costs include the procurement of national and international experts to design the Guidance Manuals as well as the printing and dissemination of the manuals (Y6; USD113,700; see budget notes 36, 37, 38, 39 and 40 in Annex 1 of the Project Document).
Component 3. Solutions for reducing vulnerability to climate change-induced sea level rise and coastal erosion.	Output 3.2: Two five-day training workshops on community-based monitoring delivered to representatives from target communities in Sinoe County (Y5?6; USD108,200; see budget notes 47, 48, 50, 51 and 55 in Annex 1 of the Project Document).
	Output 3.3: The collection and dissemination of best practices on the Sinoe County hybrid adaptation solution pilot interventions. Costs include the development of technical methodologies for the collection of best practices, collation of lessons learned and dissemination to officials and private sector actors in all coastal counties through nine two-day workshops and the printing of reports (Y6; USD107,500; see budget notes 58?63 in Annex 1 of the Project Document).

Component 4. Livelihood diversification for climate resilience.	Output 4.1: Business identification, development and management training for coastal community entrepreneurs, including nine five-day training of trainer workshops and 30 business development training workshops (Y2?4; USD447,200; see budget notes 65?70 in Annex 1 of the Project Document).
	Output 4.2: Training on livelihood practices and equipment usage for participating coastal communities, including 63 three-day workshops on fisheries, IFS and CSEBs (Y2?5; USD467,500; see budget notes 71, 72, 73, 74, 75 and 77 in Annex 1 of the Project Document).
	Output 4.3: Six five-day training workshops for participating financial institutions on incorporating climate risk management considerations into inclusive finance and guidelines for financing adaptation-orientated livelihoods (Y2?5; USD175,000; see budget notes 78?82 in Annex 1 in the Project Document).

9. Monitoring and Evaluation

Describe the budgeted M and E plan

Table 10. Monitoring and Evaluation Plan and Budget.

Monitoring and Evaluation Plan and Budget: This M&E plan and budget provides a breakdown of costs for M&E activities to be led by the Project Management Unit during project implementation. These costs are included in Component 3 of the Results Framework and TBWP. For ease of reporting M&E costs, please include all costs reported in the M&E plan under the one technical component. The oversight and participation of the UNDP Country Office/Regional technical advisors/HQ Units are not included as these are covered by the GEF Fee.			
GEF M&E requirements	Primary responsibility	Indicative costs (USD)	Time frame
Inception Workshop and Report	UNDP Country Office, M&E Officer	2,500	Inception Workshop within 2 months of the First Disbursement
M&E of GEF core indicators and project results framework	Project Manager, M&E Officer	30,000 (5,000 per annum)	Annually and at mid-point and closure.

Monitoring and Evaluation Plan and Budget:

This M&E plan and budget provides a breakdown of costs for M&E activities to be led by the Project Management Unit during project implementation. These costs are included in Component 3 of the Results Framework and TBWP. For ease of reporting M&E costs, please include all costs reported in the M&E plan under the one technical component. The oversight and participation of the UNDP Country Office/Regional technical advisors/HQ Units are not included as these are covered by the GEF Fee.

GEF M&E requirements	Primary responsibility	Indicative costs (USD)	Time frame
GEF Project Implementation Report (PIR)	Project Manager, UNDP Country Office, UNDP-GEF team and M&E Officer	21,000 (3,500 per annum)	Annually typically between June-August
Monitoring of Social and Environmental Safeguards Screening	Safeguards Officer, M&E Officer	24,000 (4,000 per annum)	On-going.
Monitoring of Stakeholder Engagement Plan	Project Manager, M&E Officer	12,500 (2,084 per annum)	On-going.
Monitoring of Gender Action Plan	Gender Officer, M&E Officer	12,500 (2,084 per annum)	On-going.
Supervision missions	UNDP Country Office, Project team and UNDP-GEF team	None	Annually
Independent Mid-term Review (MTR)	UNDP Country Office, Project team, UNDP-GEF team and independent consultants	45,200	26 September 2025
Independent Terminal Evaluation (TE)	UNDP Country Office, Project team, UNDP-GEF team and independent consultants	45,200	26 March 2028
TOTAL indicative COST		192,900 (~2%)	

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

Socioeconomic benefits from the project include the: i) increased the resilience of physical assets and infrastructure to climate change impacts; ii) diversified and strengthened livelihood sources for vulnerable communities; iii) reduced vulnerability of coastal communities to climate change through improved early warning and climate information systems; iv) strengthening of protective ecosystems and their services; and v) improved access to financial instruments such as micro-finance. In Sinoe County, infrastructure in targeted communities ? in particular those within Greenville ? will be strengthened by constructing hard interventions such as revetments and groynes and restoring protective mangrove and forest ecosystems (Output 3.1 and 3.2). This will reduce financial losses to communities and local governments resulting from the direct cost of replacing infrastructure and the disruption of income streams. The restoration and conservation of ecosystems in target areas ? as well as the training of communities to participate in community-based monitoring programmes ? will contribute to their climate resilience, particularly the impacts of flooding and erosion (Output 2.3 and 3.2). In turn, this will enable these ecosystems ? including mangroves and coastal forests ? to better provide ecosystem services to local communities such as coastal protection and natural resources. In the long term, coastal communities, the private sector and local governments as well as ecosystems in other coastal counties will benefit from increased institutional capacity of the GoL to implement similar adaptation interventions by developing ICZM plans and incorporating ICZM and SRDRM principles into development planning processes (Output 1.1 and 1.2). The vulnerability of coastal communities to climate change impacts will be further reduced by improving existing early warning systems (Output 2.1), which will increase the preparedness of these communities for future climate hazards. Improved preparedness and the ability of communities to recover from climate hazards will be further enhanced by awareness-raising campaigns and knowledge sharing on climate change and adaptation options through the strengthening of the EKMS knowledge hub (Output 1.3 and 2.2).

The climate resilience of coastal communities? livelihoods and income streams will be increased through training on best practices and the introduction of equipment for IFS, sustainable fisheries and CSEBs (Output 4.2). These livelihoods will be designed to be climate resilient (for example, through the construction of dykes on farms or provision of safety equipment for fisherfolk), provide a diversity of income throughout the year to enable individuals to have more financial security and reduce existing pressures on protective ecosystems by limiting demands on natural resources. The promotion of these livelihoods ? and other adaptation-orientated income streams ? will be supported by business development and management training for communities (Output 4.1) and improved access to finance for entrepreneurs and MSMEs (Output 4.3). This improved access to finance will be facilitated by improving linkages between financial institutions and communities and increasing the capacity of these financial institutions to incorporate climate change considerations into their frameworks.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
	High or Substantial		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

Please see the full Social and Environmental Screening Report and the Environmental and Social Management Framework (ESMF) uploaded here which can also be accessed directly via the links below:

- SESP
https://gefportal.worldbank.org/api/spapi/LoadDocument?fileName=https%3A%2F%2Fworldbankgroup.sharepoint.com%2Fsites%2Fgefportal%2FGEFDocuments%2F4ef75270-e0eb-e911-a83d-000d3a37557b%2Fceoendorsement%2FESSSupportingDocument_6470%20SESPLiberia6470v4.126Oct21clean.docx

- ESMF
https://gefportal.worldbank.org/api/spapi/LoadDocument?fileName=https%3A%2F%2Fworldbankgroup.sharepoint.com%2Fsites%2Fgefportal%2FGEFDocuments%2F4ef75270-e0eb-e911-a83d-000d3a37557b%2Fceoendorsement%2FESSSupportingDocument_6470%20ESMFLiberia6470v4.126Oct21clean.docx

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
6470 ESMF_Liberia_6470_v4	**CEO Endorsement ESS**	
6470 SESP_Liberia_6470_v4	**CEO Endorsement ESS**	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

This project will contribute to the following Sustainable Development Goal (s): Goal 1 ? No poverty; Goal 5 ? Gender equality; Goal 8 ? Decent work and economic growth; Goal 11 ? Sustainable cities and communities; and Goal 13 ? Climate action.				
This project will contribute to the following country outcome: UNDAF: Outcome 2 ? By 2024, Liberia has diversified and inclusive economic growth underpinned by investments in sustainable and environmentally friendly agriculture, food security, job creation and improved resilience to climate change and natural disasters.				
	Objective and Outcome Indicators (no more than a total of 20 indicators)	**Baseline**	**Mid-term Target**	**End of Project Target**

Project Objective To protect coastal communities and their assets from future climate change while enhancing their income streams through livelihood diversification by implementing sea and river defence and risk management approaches.	**Mandatory** Indicator 1: Number of direct project beneficiaries disaggregated by gender (individual people)	0	Total: 186,787 (92,370 males, 94,417 females) National-, county- and district-level officials and decision-makers receiving capacity training for incorporating coastal management into development plans: 250 (122 males, 128 females) 5,864 (2,974 males, 2,889 females) people protected through hybrid adaptation measures in Sinoe County consisting of: ? Downtown-Mississippi ? 2,939 (1,528 males, 1,411 females) ? Sebeh ? 2,925 (1,446 males, 1,478 females) Individuals receiving business identification, development and management training: 4,500 (1,125 males, 3,375 females) At least 10% of the population of coastal counties receiving improved access to climate risk early warning information: 186,787 (92,370 males, 94,417 females)	Total: 560,362 (277,110 males, 283,252 females) National-, county- and district-level officials and decision-makers receiving capacity training for incorporating coastal management into development plans: 500 (245 males, 255 females) 7,487 (3,827 males, 3,660 females) people protected through hybrid adaptation measures in Sinoe County consisting of: ? Downtown-Mississippi ? 2,939 (1,528 males, 1,411 females) ? Sebeh ? 2,925 (1,446 males, 1478 females) ? Nanakru ? 936 (475 males, 461 females) ? Pungbor ? 173 (97 males, 76 females) ? Tournata ? 87 (49 males, 38 females) ? Bafu Bay ? 428 (232 males, 196 females) Individuals who receive business identification, development and management training: 9,000 (2,250 males, 6,750 females) At least 30% of the population of coastal counties receiving improved access to climate risk early warning information:

	Indicator 2: Area of mangrove and forest restored and protected in Sinoe County through the project.	0	68 ha, including: ? 52 ha in Downtown-Mississippi ? 16 ha in Sebeh	260 ha, including: ? 52 ha in Downtown-Mississippi ? 16 ha in Sebeh ? 16 ha in Nanakru ? 3 ha in Pungbor ? 11 ha in Bafu Bay ? 162 ha in Tournata
Component 1	Institutional capacity strengthening for climate change adaptation planning in Liberia?s coastal counties.			
Outcome 1 Strengthened capacity of all Liberian coastal counties' planning institutions to assess climate change risks and integrate into county development frameworks.	Indicator 3: Change in the GEF Adaptation and Monitoring Assessment Tool (AMAT) capacity score for coastal county- and district-level planning institutions to consider climate change risks and adaptation into planning and budgeting processes. Details on the capacity score are included in the Monitoring Plan (Annex 5)	0	Each targeted institution progresses by at least one point in the capacity score index. (Max 10, Min 0)	Each targeted institution progresses by at least three points in the capacity score index. (Max 10, Min 0)
	Indicator 4: Number of plans developed to consider climate change risks and adaptation.	0	9 including: ? 9 ICZM plans	13, including: ? 9 ICZM plans ? 1 SRDIM plan ? 3 County Resilience Plans

Outputs to achieve Outcome 1	*Output 1.1.* County-level ICZM plans prepared for all coastal counties to address climate hazard risks on infrastructure, livelihoods and health, as well as to enable adaptation planning, monitoring, protection and the maintenance of sea and river defence. *Output 1.2*. Identified climate change risks and adaptation priorities incorporated into coastal County Resilience Plans as well as county and national planning and budgeting processes. *Output 1.3.* Cross-sectoral climate change information and risk management focal points and working groups established and trained in all coastal counties.			
Component 2	Innovation, technologies and climate information introduced for coastal adaptation planning.			
Outcome 2 Innovative technologies ? including response planning and communication mechanisms ? introduced to support coastal adaptation.	Indicator 5: Procurement and installation of hydrometeorological stations that improve climate monitoring and response planning.	Six synoptic stations and 11 automatic weather stations.	Three synoptic stations and 20 automatic rainfall stations procured through the project.	Five synoptic stations and 40 automatic rainfall stations procured through the project.
	Indicator 6: Improved response planning of district officials and communities through the development of Community Action Plans and Guidance Manuals.	0	Two Community Action Plans and 10 Guidance Manuals developed and disseminated.	Six Community Action Plans and 30 Guidance Manuals developed and disseminated
Outputs to achieve Outcome 2	*Output 2.1.* Coastal flood and erosion early warning and risk management systems supported to provide climate information, products and services that meet the needs of end users. *Output 2.2.* Existing EPA Environmental Knowledge Management System enhanced to support the collection and dissemination of lessons learned on sea and river defence based on Sinoe County adaptation solutions. *Output 2.3.* Community Action Plans developed for all coastal districts of Sinoe County. *Output 2.4.* Guidance Manuals for integrated coastal adaptation practices developed and disseminated to all coastal counties.			
Component 3	Solutions for reducing vulnerability to climate change-induced sea level rise and coastal erosion.			

Outcome 3 Reduced vulnerability of Sinoe County coastal communities to climate-induced sea level rise impacts through hybrid solutions (nature based and engineering).	Indicator 7: Length of road and number of residential and non-residential buildings with reduced exposure to current and future coastal flooding and erosion in Greenville as a result of hybrid solutions.	0	0	At least 2 km of road in Downtown-Mississippi area and 0.5 km of road in Sebeh At least 400 buildings in Downtown-Mississippi and 70 in Sebeh.
Outputs to achieve Outcome 3	*Output 3.1.* Viable solutions to address climate vulnerabilities in Sinoe County developed and designed using multi-criteria and participatory processes for identifying, prioritising and planning adaptation and resilience solutions. *Output 3.2.* Coastal- and catchment-level adaptation solutions implemented to improve the resilience of communities to the impacts of climate change in Sinoe County. *Output 3.3.* Best practices on adaptation solutions documented and disseminated to other coastal counties for adoption and upscaling, including engagement with the private sector.			
Component 4	Livelihood diversification for climate resilience.			
Outcome 4 Gender-responsive options for climate-resilient income and livelihood diversification introduced to climate-vulnerable communities in coastal counties.	Indicator 8: Number of households receiving access to equipment and training that provide diversified climate-resilient livelihood options that are gender responsive.	0	140 households receiving training and equipment for diversified livelihood options.	480 households receiving training and equipment for diversified livelihood options.
Outputs to achieve Outcome 4	*Output 4.1.* Business identification, development and management training programmes designed and delivered to communities and Micro, Small and Medium Enterprises in coastal counties, targeting women and the youth. *Output 4.2.* Opportunities for integrated farming systems, fisheries, compressed stabilised earth blocks and their value chains created for coastal communities. *Output 4.3.* Access to finance and technologies to develop livelihood and income diversification enterprises of coastal livelihoods and resources facilitated in collaboration with national and county financial institutions.			

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

1. Theory of change: Germany appreciates that the proposal builds on the climate risk and vulnerability studies undertaken in the country?s ongoing NAP process. Still, the final project document requires more detailed information on (i) the project-relevant outcomes of the climate risk and vulnerability studies, (ii) chosen adaptation measures, as well as (iii) how exactly these measures will contribute to adaptation. Germany suggests reviewing the theory of change at outcome and output level and link it to more specific indicators. This applies particularly to components 3 and 4.

More reference to the NAP climate risk and vulnerability studies has been made throughout the CER. Indeed, recommendations made from these studies have actively informed the type and placement of proposed adaptation options in Sinoe County. Flooding risk and vulnerability maps from these studies have also assisted in informing the selection of target sites for hybrid interventions. Selected adaptation measures include two revetments in the communities of Downtown-Mississippi and Sebeh in Greenville, groynes along beach areas around Downtown-Mississippi and the restoration and conservation of mangroves and coastal forest in Greenville, Tournata, Bafu Bay, Pungbor and Nanakru. These measures have been selected based on the NAP climate risk and vulnerability studies in combination with site visits and consultations and have been further elaborated on and validated through Output 3.1. Elaboration on how these adaptation options will contribute to adaptation has been presented in the ProDoc, CEO Endorsement and Annex 13d: Adaptation Options Report. Specific indicators, including the number of hectares restored, area in hectares protected from flooding and erosion and number of beneficiaries have been included in the Project Results Framework and LDCF Core Indicator sheets.

2. Co-financing: Germany welcomes the high volume of co-financing. Among others, the proposal refers to indicative co-financing from the World Bank (USD 15 million) and USAID (USD 28 million). Germany requests to specify how and to which project outcomes and outputs this co-financing would contribute. The same is true for government co-financing. The proposal indicates Government co-financing of USD 10 million in all coastal counties rather than specifying the amount for Sinoe county only and attributing it to project activities. As the national budget 2019/2020 assigns USD 11 million to the Energy & Environment Sector, Germany would appreciate further elaboration on the numbers.

Details have also been added on the specific elements of the project that this co-financing contributes to. The GoL co-financing has been adjusted from USD10 million to USD1.7 million, which will contribute towards acquiring rocks for the construction of the revetments and groynes within Greenville under Output 3.2 as well as project management and procurement costs.

3. Synergies with other development efforts: Germany appreciates the inclusion of other relevant development activities. Germany is funding a scholarship for a master?s in water science and engineering at the University at the IHE Delft Institute for Water Education for a project manager of the Ministry of Public Works and suggests using this developed capacity should for the project. In addition, Germany is supporting private sector activities in infrastructure development. Please explore synergies regarding transparent procurement, the implementation of construction contracts and capacity development for low-cost construction.

The Ministry of Public Works (MoPW) has been identified as an important partner to assist the Ministry of Mines and Energy (MME) in the implementation of adaptation options under Output 3.2. The German-funded water science and engineering capacity within the MoPW is welcome and will be utilised during project implementation. The Responsible Party for the construction of the hard infrastructure adaptation options is the MME, which has experience in implementing similar

construction projects across Liberia. Efforts will be made to procure appropriate construction contracts that utilise low-cost approaches and use local labour that benefits the surrounding communities.

4. Private sector: Germany appreciates the inclusion of the private sector. Compressed Earth Block Stabilisation (CSEB) technology is proposed as key private sector involvement. However, Sinoe has only 100.000 inhabitants; there might be limited demand and the final project proposal should develop additional business ideas to boost the private sector.

Livelihood opportunities will be implemented in all coastal counties, meaning that demand for CSEBs will be larger than only that of Sinoe County. The demand potential for the construction of CSEBs will be investigated further and confirmed in the early stages of project implementation to ensure there is a local demand for this product, as some counties are more open to the technology than others. Where CSEBs are not viable, other alternative livelihood and value-chain options will be implemented, including integrated farming systems and the support of climate-resilient fishing.

5. Clearly state what sea or river protection techniques or structures will be deployed.

Selected adaptation measures include two revetments in the communities of Downtown-Mississippi and Sebeh in Greenville, groynes along beach areas around Downtown-Mississippi and the restoration and conservation of mangroves and coastal forest in Greenville, Tournata, Bafu Bay, Pungbor and Nanakru. These measures will be further elaborated on and validated through Output 3.1 during project implementation.

6. Clearly customize the concept to the actual risks and hazards to be addressed. Most of the references are 10+ years old and much of that information is now outdated including settlements and population density. The proposal does not reference anything related to anticipation of climate-related shocks and planning for them such as floods early warning, storms, sea wave surges etc.

Supporting information ? specifically relating to baseline drivers and current and future climate change risk ? has been substantially expanded in the Project Document and accompanying annexes. Efforts have been made to update information provided in the PIF with the most up-to-date values and sources available. In addition, a detailed problem statement, solution tree and theory of change have been incorporated into the Project Document, accompanied by diagrams for each.

7. Review the expected co-financing amount from USAID. The USAID-funded West Africa Biodiversity and Climate Change (WABiCC) project provides support for transboundary protected areas in Liberia (e.g. Gola Rainforest National Park) and does not support any coastal activities in Liberia. Additionally, WABiCC is scheduled to end in 2020. Therefore, there should be no expectations of $28 million in co-financing from WABiCC.

The originally identified co-financing from the World Bank and USAID have been omitted because the World Bank was unable to commit to co-financing while the USAID project has now ended. These have been replaced by commitments of USD1.5 million from the EPA through the project ?Enhancing Climate Information systems for Resilient Development in Liberia? and USD803,000 from Conservation International through the project ?Conservation and Sustainable Use of Liberia?s Coastal Natural Capital?. Co-financing from these sources will support Outputs 2.1 and 3.2, respectively.

8. Project coordination: Germany appreciates the Environmental Protection Agency to be the project host. However, Sinoe and Greenville are remote areas that are not accessible by road transport from its office during rainy season. Germany suggests addressing this issue in the final proposal.

The EPA will work closely with other Responsible Parties and county-level officials ? including superintendents ? to implement on-the-ground activities. The involvement of county-level partners will assist in reducing travel requirements between counties. Moreover, for counties where travel is difficult during the rainy season, efforts will be made to prioritise activities during the drier times of the year. The coordination across different Counties, institutions and at policy level means the EPA remains

relevant for the overall coordination, while expert institutions focus on specific components of the project.

9. Sinoe County selection: Adequately justify why Sinoe county is being selected. The document vacillated between discussions facing the entire Liberian coast and Sinoe-specific references. Sinoe is one of the least-populated counties in Liberia with low existing infrastructure capacity. Also, the number of community members set to benefit relative to the budget seems low, which would imply that the budget numbers are inflated.

The original project idea was focusing on Sinoe County, and on infrastructural interventions to protect the highly vulnerable communities and assets in the County. During PIF development, potential to increase the impact of the project through a more integrated approach that covered other coastal counties, while maintaining the need to address the vulnerability of Sinoe County. This is why the geographical scope of the project is broad with Sinoe serving as the epicenter. The majority of interventions ? including some on-the-ground activities such as improving early warning systems under Output 2.1 and livelihood diversification under Output 4.2 ? have been expanded to cover all nine coastal counties. This increases the expected scope of the project and the total number of beneficiaries to ~560,000. Several interventions, including the development of Community Action Plans and implementing hybrid adaptation solutions, will be restricted to targeted areas within Sinoe County. Although it is one of the more isolated counties and has a relatively small population compared to other parts of the country, it is also one of the most vulnerable counties to climate change and subsequently in need of urgent interventions within the next few years to reduce further infrastructure losses. Other more populous and vulnerable counties ? such as Montserrado and Grand Cape Mount ? have or are currently implementing coastal adaptation projects, while no such activities have occurred in Sinoe. Details of the justification for the selection of Sinoe County are provided in the Project Document and elaborated on in Annex 13c: Site Selection Report.

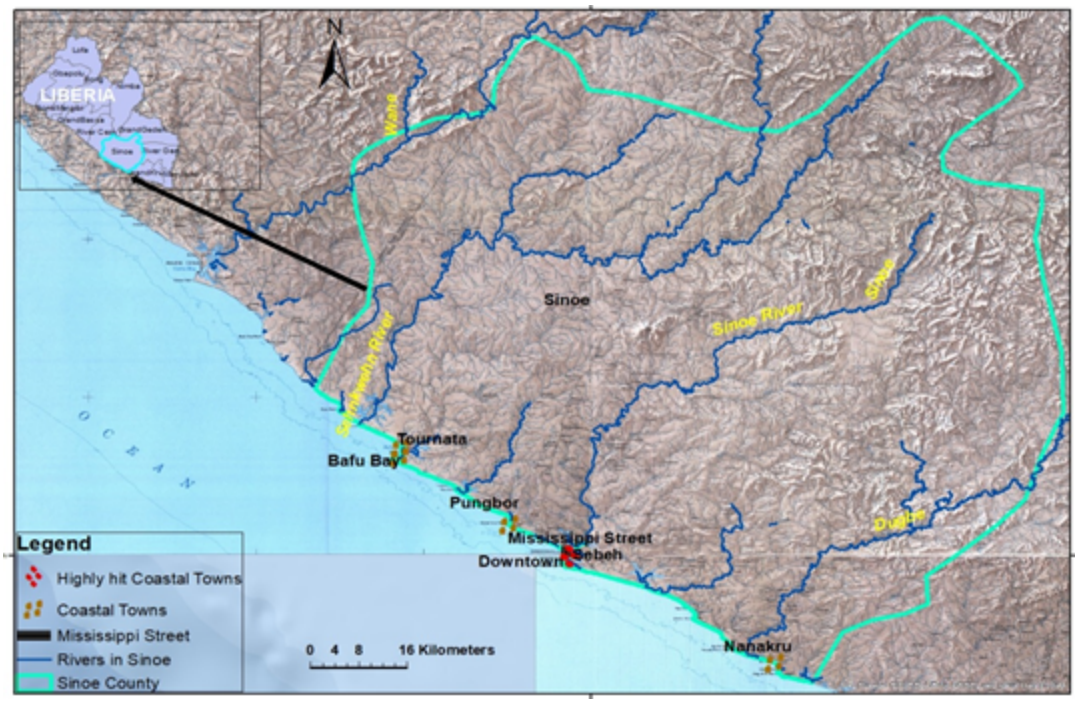
ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF: 200,000			
Project Preparation Activities Implemented	GEF/LDCF/SCCF Amount ($)		
	Budgeted Amount	Amount Spent To date	Amount Committed

Preparatory Technical Studies & Reviews. Formulation of the UNDP-GEF Project Document, CEO Endorsement Request, and Mandatory, Project Specific Annexes, *The project document package was prepared by a team of national and international consultants. Three national consultants (1 coastal engineer, 1 livelihood and value chain expert, and 1 gender specialist) worked in collaboration with an international PPG team lead consultant, and an international environmental and safeguard specialist.*	182,100	97,198	84,902
Validation Workshop and Report Delivery of final outputs	10,900	5,793	5,107
HACT assessment of the Implementing partner	7,000	0	7,000
Total	200,000	102,991	97,009

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.



County	Community name	Longitude	Latitude
Sinoe	Tournata	-9.283802?	5.177191?
	Bafu Bay	-9.289861?	5.152091?
	Pungbor	-9.122458?	5.048611?
	Downtown-Mississippi (Greenville)	-9.036171?	4.999627?
	Sebeh (Greenville)	-9.032484?	4.998422?
	Nanakru	-8.727388?	4.829784?

ANNEX E: Project Budget Table

Please attach a project budget table.

Expenditure Category	*Detailed Description*	Component (USDeq.)							Total (USD eq.)	Responsible Entity
		Component 1	*Component 2*	*Component 3*	*Component 4*	*Sub-Total*	*M&E*	*PMC*		(Executing Entity receiving funds from the GEF Agency) [1]

Equipment	? General equipment and furniture for project management (USD18,000)					-		18,000	18,000	EPA

Equipment	? Equipment for identified livelihood options, including for: - IFS, consisting of cassava cuttings (USD15), fishponds (USD900), fishing nets (USD15), African catfish fingerlings (USD300), Nile tilapia fingerlings (USD177), lime (USD63), poultry house (USD59), feeding trough (USD500), water trough (USD221), chicks (USD100), feed (USD500) and vaccines (USD150); - fisheries, consisting of boat motors (USD2,846), fuel tanks (USD115), life jackets (USD216), sustainable fishing nets (USD256) and solar-powered refrigeration units (USD2730); and- CSEBs, consisting of production site costs (USD6,472), diameter wire mesh (USD40), wheelbarrow				1,207,900	1,207,900			1,207,900	EPA

Equipment	? Monitoring equipment for use in target communities for community-based monitoring. The cost includes GPS, office equipment (laptop), water quality testing kits, river gauges, invasive plant management equipment; biodiversity monitoring equipment (fish monitoring equipment, binoculars, camera traps, field guides etc.) (USD96,000; Activity 3.2.3).			96,000		96,000			96,000	EPA

Equipment	? Thick woven needle punched geo textile to prevent erosion of the revetments (USD300,000). The cost is for USD10,000 per 6X100 m roll. Since the 1,500 m of revetment will require a geomat width of 12 m, the total geo textile length is doubled to a total length of 3,000 m.PPE includes reflector jackets (USD505), safety boots (USD5,000) and rain suits (USD2,970) (Activity 3.2.2). Please see the Mini-quarry Cost Sheet in Annex 1 for further details. Information on best available practices for the selection of equipment is provided in Section IV.1 of the Prodoc under the description for Output 3.2.			338,475		338,475			338,475	EPA

Equipment	? Procurement of communication materials (USD6,000)					-		6,000	6,000	EPA
Equipment	? Synoptic weather stations, based on needs identified in Activity 2.1.1 (USD100,000; Activity 2.1.2).? Automatic rainfall stations, based on needs identified in Activity 2.1.1 (USD400,000; Activity 2.1.2).		500,000			500,000			500,000	EPA
Equipment	? Rental of 4 wheel drive vehicle to facilitate travel (USD12,000)					-		12,000	12,000	EPA

Equipment	? Construction equipment for setting up a mini-quarry from which rocks for the revetments and groynes will be sourced. This includes 4 steel-bodied trucks (USD500 per 365 days each), 2 excavators (USD800 per 365 days each) and one front end loader (USD600 per 365 days) (USD1,533,000; Activity 3.2.2).			1,533,000		1,533,000			1,533,000	EPA

Contractual services-Individual	? Project Manager to guide the overall project implementation over 6 years (USD150,000). ? Project Assistant to assist the Project Manager with overall project implementation over 6 years (USD90,000). ? Procurement Expert contract over 6 years (USD110,000).? Administration and Finance Assistant contract over 6 years (USD75,320).					-		341,320	341,320	EPA

	? Safeguards Officer to ensure safeguard principles are followed across project implementation for 5 years. Costed at USD134,000 divided across Outcome 1 @ 16%, Outcome 2 @ 16%, Outcome 3 @ 34% and Outcome 4 @ 34% (USD21,000).? Gender Officer to ensure gender mainstreaming across project implementation for 5 years. Costed at USD134,000 divided across Outcome 1 @ 16%, Outcome 2 @ 16%, Outcome 3 @ 22% and Outcome 4 @ 46% (USD21,000).?											
Contractual services-Individual	Individual to undertake a needs assessment of gaps in the Liberia CIS project (USD6,000; Activity 2.1.1).? Contractual services to update lessons learned and		60,000			60,000			60,000	EPA		

Contractual services-Individual	? Safeguards Officer to ensure safeguard principles are followed across project implementation for 5 years. Costed at USD134,000 divided across Outcome 1 @ 16%, Outcome 2 @ 16%, Outcome 3 @ 34% and Outcome 4 @ 34% (USD46,000). ? Gender Officer to ensure gender mainstreaming across project implementation for 5 years. Costed at USD134,000 divided across Outcome 1 @ 16%, Outcome 2 @ 16%, Outcome 3 @ 22% and Outcome 4 @ 46% (USD62,000). ? Contractual services to undertake a needs assessment for the business training curriculum (USD12,000; Activity 4.1.1).? Individual to plan and facilitate the				216,300	216,300			216,300	EPA

Contractual services-Individual	? M&E Officer to implement monitoring and evaluation tasks for project implementation, including facilitating the M&E Inception Workshop, monitoring of core indicators, project results and indicators from other plans (USD100,000; Activity 3.2.4)					-	100,000		100,000	EPA

Contractual services-Individual	? Safeguards Officer to ensure safeguard principles are followed across project implementation for 5 years. Costed at USD134,000 divided across Outcome 1 @ 16%, Outcome 2 @ 16%, Outcome 3 @ 34% and Outcome 4 @ 34% (USD21,000).? Gender Officer to ensure gender mainstreaming across project implementation for 5 years. Costed at USD134,000 divided across Outcome 1 @ 16%, Outcome 2 @ 16%, Outcome 3 @ 22% and Outcome 4 @ 46% (USD21,000). ? Individual service to evaluate and approach candidates for the coastal county working groups (USD6,000; Activity 1.3.1).	48,000				48,000			48,000	EPA

		? Safeguards Officer to ensure safeguard principles are followed across project implementation for 5 years. Costed at USD134,000 divided across Outcome 1 @ 16%, Outcome 2 @ 16%, Outcome 3 @ 34% and Outcome 4 @ 34% (USD46,000).? Gender Officer to ensure gender mainstreaming across project implementation for 5 years. Costed at USD134,000 divided across Outcome 1 @ 16%, Outcome 2 @ 16%, Outcome 3 @ 22% and Outcome 4 @ 46% (USD30,000).? Contractual services to collate best practices into a report using the methodologies developed in Activity 3.3.1 (USD12,000; Activity 3.3.2).? Contractual services to facilitate										
	Contractual services-Individual				106,000		106,000			106,000	EPA	

Contractual services-Company	? Auditing firm for annual financial audits (USD24,000)					-		24,000	24,000	EPA

Contractual services-Company	? Technical services of international conservation organisation to implement restoration in Sinoe target areas @ USD1,000 per ha for 260 ha. The cost includes growing of indigenous seedlings and planting activities, as well as a 10% contingency cost (USD260,000; Activity 3.2.1).? Coastal Engineering firm to provide quality control and oversight on the development of the revetment and groyne construction plan, including a environmental and social management plan (ESMP) (USD200,000; Activity 3.2.2).? Contractual services for the excavation of the mini quarry to supply rocks for the revetments and groynes in Greenville and the			742,000		742,000			742,000	EPA		

Contractual services-Company	? Contractual services for representatives trained under Activity 4.1.3 to facilitate and present training workshops for target communities (USD75,000; Activity 4.1.4).? Firm to construct/establish livelihood training and awareness facilities. Costs include the construction of the training hall, furniture and equipment, vehicle use, working capital, land and pre-operating expenses, costs will be divided up into initial construction and operation as well as maintenance in project year 3 (USD270,000) and operations across years 4, 5 and 6 (USD90,000) (USD540,000; Activity 4.2.2). ? Project partners with experience in the livelihood				707,000	707,000			707,000	EPA	

Contractual services-Company	? Contractual services of firm to print and distribute Guidance Manuals (USD1,500; Activity 2.4.3).		1,500			1,500			1,500	EPA

Contractual services-Company	? Development planners in relevant sectors to draft changes to plans and budgeting processes (USD25,000; Activity 1.2.2).? Development decision-makers in relevant sectors to draft CRPs (USD30,000; Activity 1.2.3).? Company to design campaign and knowledge products in the first year and update annually (30 days for the first year and 10 days for the remaining 3 years) (USD40,000; Activity 1.3.3).? Working groups to host annual community meetings and workshops to raise awareness on climate risks (including gender considerations) and host radio programmes (USD60,000; Activity 1.3.4).	155,500				155,500			155,500	EPA

International Consultants	? International specialist on climate change and coastal adaptation to lead the vulnerability mapping exercise (USD49,000; Activity 3.1.1).? International specialist on climate change and coastal adaptation to lead the multi-criteria analysis (USD70,000; Activity 3.1.2).? International specialist on climate change and coastal adaptation to deliver recommendations during the validation workshop (USD7,000; Activity 3.1.3).? International social and environmental safeguard specialist to conduct project SESA/ESIA, including the development of the ESMP, GRM and LAP (USD42,000).? Independent international engineering expert for			315,000		315,000			315,000	EPA		

International Consultants	? International consultant to conduct mid-term and terminal evaluations for all project interventions (USD56,000 ; Activity 3.2.4).					-	56,000		56,000	EPA

International Consultants	? International consultant to develop business training programme (USD35,000; Activity 4.1.2).? International consultant to present business training during ToT programme (USD56,000; Activity 4.1.3).? Working with project partners and the private sector, develop curricula for training communities on sustainable fisheries, IFS, CSEBs and their values chains at the training facilities (USD42,000; Activity 4.2.2).? International livelihood and value chain specialist to lead the development of standards and codes of conduct for the selected livelihood options (USD28,000; Activity 4.2.3).? International inclusive finance specialist to assist in designing				210,000	210,000			210,000	EPA	

International Consultants	? International expert on decision tools to provide recommendations on the development of the decision support tool (USD21,000; Activity 2.2.3).? Procurement of international community coastal adaptation specialist to develop CAPs (USD56,000; Activity 2.3.2).? Procurement of international community monitoring expert to design the participatory community monitoring framework (USD28,000; Activity 2.3.3).? International coastal adaptation specialist to collect district-specific information to inform the Guidance Manuals (USD42,000; Activity 2.4.1).? International coastal adaptation specialist to draft district-specific Guidance Manuals (USD49,000		196,000			196,000			196,000	EPA

International Consultants	? International gender expert to give specialised gender-responsiveness training for the PMU, including the Gender Officer (USD7,000). ? International specialist on ICZM for implementing Phase 1 - development of the 9 ICZM plans, and Phase 2 - update the ICZM plans three years after the original development (USD112,000; Activity 1.1.1). ? International specialist on sea and river defence and risk management to lead the development of a SRDIMP (USD56,000; Activity 1.1.2)? Procurement of International expert development planning with a focus on SRDM and coastal adaptation to develop and lead training programmes (USD35,000; Activity 1.2.1).? International climate	231,000				231,000			231,000	EPA	

Local Consultants	? National consultant to support the international consultant in the vulnerability mapping exercise (USD12,000; Activity 3.1.1).? National consultant to support the international consultant in the multi-criteria analysis (USD18,000; Activity 3.1.2).? National consultant to support the international consultant in delivering recommendations during the validation workshop (USD1,500; Activity 3.1.3).? Local livelihood specialist to assist in the project SESA and ESIA, including the development of the ESMP, GRM and LAP (USD12,000).? National consultant to assist the international consultant in designing and implementing training on community-based monitoring			58,500		58,500			58,500	EPA	

Local Consultants	? Gender expert to assist in analysing gender-related information as part of the needs assessment (USD3,000; Activity 4.1.1).? National consultant to assist in developing a business training programme (USD9,000; Activity 4.1.2).? National consultant to assist in presenting the business training during the ToT programme (USD18,000; Activity 4.1.3).? Livelihood and value chain specialist to conduct a site-specific needs and costs assessment of equipment requirements for the identified livelihoods and to identify priority communities and champion households to receive equipment under Activity 4.2.4 (USD12,000				75,000	75,000			75,000	EPA

Local Consultants	? National climate change and EWS expert to design and deliver training on climate change and EWS to LMS staff (USD18,000; Activity 2.1.3).? Procurement of individual to collect data on SRDM lessons learned, including information generated from the project, in Liberia as a whole and in other countries (USD15,000; Activity 2.2.1).? Procurement of national coastal specialist to perform baseline study of coastal communities and their adaptation needs (USD18,000; Activity 2.3.1).? Procurement of national coastal adaptation specialist to assist in the development of the CAPs (USD15,000; Activity 2.3.2).? Procurement of national community monitoring		102,000				102,000			102,000	EPA

Local Consultants	? National consultant to assist with mid-term and terminal evaluations (USD12,000; Activity 3.2.3).					-	12,000		12,000	EPA

Local Consultants	? Two national consultants, including a national coastal specialist and national social and gender specialist to support the international consultant (USD33,000; Activity 1.1.1).? National consultant to support the IC in the development of a SRDIMP (USD14,400; Activity 1.1.2).? National gender expert to assist in developing gender action plans for each County Resilience Plan (USD9,000; Activity 1.2.3).? Procurement of national climate risk and SRDM specialist to assist in the development of knowledge products to be used by focal points and working groups (USD6,000; Activity 1.3.2).	62,400				62,400			62,400	EPA

Training, Workshops, Meetings	? 5-day ToT workshop to train representatives of business collectives on delivering business training to target communities (USD49,500; Activity 4.1.3).? 5-day training workshop to train MSMES and entrepreneurs in target communities on business development (USD165,000; Activity 4.1.4).? Validation workshop for the site-specific needs and livelihood opportunities (USD13,500; Activity 4.2.1)? 3-day training workshops for the livelihood options, particularly for IFS and CSEBs. Workshops to be held three times a year per facility for 3 years (USD220,500; Activity 4.2.2). ? 5-day training workshop on incorporating climate risk management considerations				479,000	479,000			479,000	EPA

Training, Workshops, Meetings	? Inception workshop for the vulnerability mapping exercise and multi-criteria analysis (USD1,500; Activity 3.1.1).? Validation workshop for the vulnerability mapping exercise and multi-criteria analysis (USD1,500; Activity 3.1.3). ? 1-day workshop on the GRM, conflict resolution, cultural sensitivities and SEA for hybrid coastal adaptation intervention implementers and labourers (USD4,600; Activity 3.2.1 and Activity 3.2.2).? 5-day training workshop for representatives of target communities on community-based monitoring (USD54,000; Activity 3.2.3).? 2-day workshop to engage with private sector entities on			80,500		80,500			80,500	EPA	

Training, Workshops, Meetings	? 3-day training workshop on updated EWS for information services and end users (USD31,500; Activity 2.1.3).? 2-day workshop to ensure CAPs integrate gender considerations (USD3,000; Activity 2.3.2).? Validation workshops for community representatives and local authorities to validate CAPs (USD9,000; Activity 2.3.4).? 3-day training workshops for community representatives and local authorities on implementation of the CAPs (USD21,000; Activity 2.3.5).? Validation workshops for district officials to validate the Guidance Manuals (USD13,500; Activity 2.4.2).		78,000			78,000			78,000	EPA

Training, Workshops, Meetings	? Inception workshop for the project's monitoring and evaluation (USD1,500; Activity 3.2.4).? Inception and validation workshops for the MTR and TE (USD6,000; Activity 3.2.4).					-	7,500		7,500	EPA

Training, Workshops, Meetings	? 2-day training workshops to build the capacity of key project implementation partners on project and UNDP safeguards-related topics (USD2,500; Outcome Project Management).? 2-day specialised training workshop for PMU on gender-responsiveness (USD2,300; Outcome Project Management).? Inception workshop for the ICZM and SRDIMP (USD1,500; Activity 1.1.1).? 2 two-day working sessions to ensure the integration of gender into ICZM plans, SRDIMP and the updating of national and county-level policies, plans and budgeting processes (USD5,000; Activity 1.1.1).? Validation workshop for the ICZM and SRDIMP (USD1,500;	112,700				112,700			112,700	EPA	

Travel	? International return flights for international consultant for the vulnerability mapping exercise (USD2,200; Activity 3.1.1).? Car hire/domestic flights to Sinoe for the international and national consultants conducting the vulnerability mapping exercise (USD1,800; Activity 3.1.1).? DSA for the international and national consultants while visiting Sinoe for the vulnerability mapping exercise (USD1,800; Activity 3.1.1).? Transportation for 50 participants to attend the vulnerability mapping exercise and multi-criteria analysis inception workshop @ USD20 per person (USD1,000) (USD1,000; Activity 3.1.1).? International return flights for international consultant			67,600		67,600			67,600	EPA

Travel	? Transportation for 50 participants to attend the M&E inception workshop @ USD20 per person (USD1,000; Activity 3.2.4).? International return flights for international consultant conducting the MTR and TE (USD4,400; Activity 3.2.4).? Car hire/domestic flights for the international and national consultant conducting the MTR and TE (USD4,000; Activity 3.2.4).? DSA for the international and national consultants undertaking the MTR and TE (USD4,000; Activity 3.2.4).? Transportation for 50 participants to attend the MTR and TE inception and validation workshops @ USD20 per person (USD4,000; Activity 3.2.4).					-	17,400		17,400	EPA

Travel	? Car hire/domestic flights between and within counties for individual undertaking business training needs assessment (USD2,000; Activity 4.1.1).? DSA while visiting coastal districts for individual undertaking business training needs assessment (USD2,000; Activity 4.1.1).? International return flights for international consultant presenting ToT business training programme (USD2,200; Activity 4.1.3).? Car hire/domestic flights between and within counties for international and national consultants presenting ToT business training programme (USD6,000; Activity 4.1.3).? DSA while visiting coastal counties for international and national				203,900	203,900			203,900	EPA	

Travel	? Transportation for 50 participants to attend the training workshop @ USD20 per person (USD1,000; Outcome Project Management).? Car hire/domestic flights between and within counties for international and national consultants for the development of the ICZM plans (USD4,000; Activity 1.1.1).? International return flights for international consultant for the ICZM plans (USD6,600; Activity 1.1.1).? DSA for International and national consultants for site visits between all coastal counties for the ICZM plans (USD8,000; Activity 1.1.1).? Transportation for 50 participants to attend the ICZM plans and SRDIMP Inception workshop @ USD20 per person (USD1,000;	81,000				81,000			81,000	EPA

	Travel	? Car hire/domestic flights to coastal counties for the national consultant delivering training on climate change and EWS (USD4,200; Activity 2.1.1).? DSA for national consultant for site visits to coastal counties to deliver training on climate change and EWS (USD4,200; Activity 2.1.3).? Transportation for 50 participants to attend the training programme on climate change and EWS @ USD20 per person (USD18,000; Activity 2.1.3).? Car hire/domestic flights to coastal counties for the national consultant to collect data on SRDM lessons learned (USD2,000; Activity 2.2.1).? DSA for the national consultant to visit coastal counties to collect data on SRDM		86,500			86,500			86,500	EPA	

Travel	? Travel expenses for PMU for implementation and supervisions of project activities (USD18,000)					-		18,000	18,000	EPA
Office Supplies	? Stationary and office supplies (USD6,000)					-		6,000	6,000	EPA
Other Operating Costs	? Printing for best practice reports (USD400; Activity 3.3.2).			400		400			400	EPA

	? Costs for the development of the information delivery system, including website development costs (USD10,000), radio programme costs (USD10,000), mobile weather app (USD30,000) etc (USD70,000; Activity 2.1.4). ? Development and distribution of Guidance Manuals to district officials in all coastal districts (USD6,000; Activity 2.4.3). Costs include:i) USD8 each for 750 manuals (25 manuals per district).									
Other Operating Costs			76,000			76,000			76,000	EPA

Other Operating Costs	? Printed knowledge products for use by the working groups for each coastal county (USD9,400; Activity 1.3.2) Costs include:i) USD3 per poster for 450 posters per year for 3 years (USD4,000) (50 posters per county per year); andii) USD4 per brochure for 450 brochures per year for 3 years (USD5,400) (50 posters per county per year).	9,400				9,400			9,400	EPA
Other Operating Costs	? Cost of fuel for rock transport from the mini-quarry to the sites in Greenville, estimated as USD12 for a round trip (USD77,625; Activity 3.2.2).			77,625		77,625			77,625	EPA
	Project Total	**700,000**	**1,100,000**	**3,415,100**	**3,099,100**	**8,314,200**	**192,900**	**425,320**	**8,932,420**	EPA

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template

provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

N/A

Due to lack of space, please see the table below on LDCF Core Indicators

Table 1. Core indicators for the LDCF

Climate Change Adaptation Strategy Objective		**Corresponding Core indicator**	**Sex-disaggregated?**
1	*Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation*	**Number of direct beneficiaries**[1] Total: 570,969 (288,951 males, 282,018 females) 7,487 (3,827 males, 3,660 females) people protected through hybrid adaptation measures in Sinoe County consisting of: ? Downtown-Mississippi ? 2,939 (1,528 males, 1,411 females) ? Sebeh ? 2,925 (1,446 males, 1478 females) ? Nanakru ? 936 (475 males, 461 females) ? Pungbor ? 173 (97 males, 76 females) ? Tournata ? 87 (49 males, 38 females) ? Bafu Bay ? 428 (232 males, 196 females) 560,362 (277,110 males, 283,252 females) with improved access to improved climate information systems Individuals receiving improved access to climate risk early warning information: 560,362 (283,252 males, 277,110 females)	**Yes**

2		**Area of land under climate-resilient management (ha)** 830 ha in total, including: 204 ha of agricultural land through climate-resilient IFS. 264 ha of urban landscape, including: ? 192 ha in Downtown-Mississippi ? 72 ha in Sebeh 362 ha of rural landscape, including: ? 38 ha in Nanakru ? 7 ha in Pungbor ? 17 ha in Bafu Bay ? 300 ha in Tournata	**n/a**
3	*Mainstream climate change adaptation and resilience for systemic impact*	**Number of policies, plans or development frameworks that mainstream climate resilience** 19, including: ? 9 Integrated Coastal Management plans ? 1 Sea and River Defence Investment Management Plan ? 3 County Resilience Plans ? 6 Community Action Plans	**n/a**

4	*Foster enabling conditions for effective and integrated climate change adaptation*	**Number of people with enhanced capacity to identify climate risk and/or engage in adaptation measures**[2] Total: 13,590 (4,499 males, 9,091 females), including: 500 (245 males, 255 females) National, county and district level line ministry officials receiving capacity training for incorporating coastal management into development plans: 500 (245 males, 255 females) 400 (196 males, 204 females) community association members receiving training in the implementation of CAPs and community-based monitoring 600 (294 males, 306 females) extension officers trained as working group representatives to deliver climate change awareness raising, delivering business training or as VSLA champions 450 (220 males, 230 females) for hydrometeorological observers, forecasters and climatological technicians on the updated EWS system. 11,640 (3,544 males, 8,096 females) small business holders and entrepreneurs on business management and climate-resilient livelihoods.	**Yes**

[1] This is a GCF Board-approved indicator.

[2] Corresponds to Board-approved GCF adaptation indicator: ?No. of males and females made aware of climate threats and related appropriate responses?

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

N/A

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).

N/A