



Request for CEO APPROVAL  
 Project Type: Full-sized Project  
 Type of Trust Fund: LDCF  
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## PART I: PROJECT INFORMATION

Project Title: Building Resilience to Climate Change Resilience in the Water and Sanitation Sector			
Country(ies):	Sierra Leone	GEF Project ID: <sup>1</sup>	
GEF Agency(ies):	AfDB	GEF Agency Project ID:	5209
Other Executing Partner(s):	Ministry of Finance and Economic Planning; Ministry of Water Resources (MWR)	Submission Date:	
GEF Focal Area (s):	Climate Change	Project Duration (Months)	48
Name of Parent Program (if applicable):		Agency Fee (\$):	380,000
➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/>			

### A. FOCAL AREA STRATEGY FRAMEWORK<sup>2</sup>

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
<b>Focal Area Objectives</b>	<b>Expected FA Outcomes</b>	<b>Expected FA Outputs</b>	<b>Trust Fund</b>	<b>Indicative Grant Amount (\$)</b>	<b>Indicative Co-financing (\$)</b>
CCA-1	1.2 Reduced vulnerability to climate change in the water and sanitation sector	1.2.1 Vulnerable physical and natural assets strengthened in response to climate change including climate variability	LDCF	900,000	12,000,000
CCA-2	2.1: Increased knowledge and understanding of climate variability and change-induced threats at country level and in targeted vulnerable areas	2.1.1 Risk and vulnerability assessments conducted and updated at District level	LDCF	450,000	1,500,000
CCA2	2.2 Strengthened adaptive capacity to reduce risks to climate-induced economic losses	2.2.1 Capacity of national and regional centers and networks strengthened to monitor climate change indicators and trends and rapidly respond to extreme weather events	LDCF	1,000,000	4,000,000

<sup>1</sup> Project ID number will be assigned by GEFSEC.

<sup>2</sup> Refer to the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.  
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CCA-3	3.1 Successful demonstration and deployment of relevant adaptation technology in targeted areas.	3.1.1 Relevant adaptation technology transferred to targeted group	LDCF	900,000	4,867,500
CCA-3	Enhanced enabling environment to support adaptation-related technology transfer	3.2.1 Skills increased for relevant individuals in transfer of adaptation technology	LDCF	750,000	6,367,500
Total Project Cost				4,000,000	28,735,000

## B. Project Framework

Project Objective: Building resilience to climate change in the water and sanitation sector						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
1-Ensuring access to climate-resilient water supply and sanitation	Inv	Vulnerable physical and natural assets strengthened in response to climate change including climate variability	<ul style="list-style-type: none"> <li>-local CCR risk assessments completed in all 5437 target villages</li> <li>-5 District CCR Plans adopted.</li> <li>-1087 Priority villages for CCR measures identified</li> <li>-284 out of 1423 rehabilitated wells to be given special CCR attention</li> <li>-466 new wells located and dug to required depth to withstand CC to 2100</li> <li>- 84 boreholes located and drilled to required depth</li> <li>-110 spring boxes created at CCR sites</li> <li>-18 Gravity flow schemes constructed with CCR responsive designs</li> <li>-18 CCR rainwater harvesting schemes in place</li> <li>-71 standpipes equipped with solar power</li> </ul>	LDCF	1,400,000	16,000,000

			-389 ecosan toilets constructed -5 solid waste disposal/recycling sites established			
2-Building the institutional framework required for climate-resilient management of the water and sanitation sector	TA	Capacity of national and regional centers and networks strengthened to monitor climate change indicators and trends and rapidly respond to extreme weather events  National, District and Local level institutions equipped to handle CCR management tasks	- MWR and Met Office supported with technology, real time data recording telemetry station and analytical capabilities to observe climate trends - Existing Climate Change Secretariat strengthened with one new staff member responsible for CCR in water and sanitation sector - Existing Donor Coordination Group strengthened with more frequent meetings and fully briefed on CCR issues -4 key staff identified in MWR, Met Office, SALWACO and GVWC to act as CCR advisers - National Rural Water and Sanitation Sector Program Document published that incorporates understanding of climate risk and appropriate management options, including future technology transfer - Communication network established for emergency action guided by Disaster Management Committee -District Councils & Traditional	LDCF	125,000	1,000,000

			Authorities given training and TA to manage CCR			
3-Building improved awareness of climate-resilient WASH practices	TA	Relevant adaptation technology transferred to targeted groups	<ul style="list-style-type: none"> <li>- 60 WASH professionals fully trained at national and local levels</li> <li>-100 Community trainers trained (40% female)</li> <li>-1000 WASH and water point committees established and trained in CCR evaluation and response processes (50% female)</li> <li>-20 study tours arranged for national staff and local government staff from non-project districts</li> </ul>	LDCF	175,000	6,000,000
4-Establishing collaborative research and monitoring to enable efficient, climate-resilient, water management	Inv	Capacity of national and regional centers and networks strengthened to monitor climate change indicators and trends and rapidly respond to extreme weather events National, District and Local level institutions equipped to handle CCR management tasks	<ul style="list-style-type: none"> <li>-Reduction in the adverse effects of floods due to improved early warning through accurate forecasting and unified data collection methods</li> <li>- 25 river catchments equipped with 23 stream flow gauges and 2 lake level gauges</li> <li>- 100 groundwater monitoring stations established;</li> <li>- 60 rain gauges set up</li> <li>-Headquarters of MWR/Met Office equipped to handle CC trend analysis</li> </ul>	LDCF	1,800,000	1,000,000
5. Managing Knowledge and Monitoring and Evaluation	TA	Skills increased for relevant individuals in transfer of adaptation technology	-11 national and local level water resources management staff trained in understanding the risks of climate	LDCF	317,500	1,000,000

			change and how to isolate them for effective early warning -Report on analysis of experiences and lessons learnt in building CCR for rural water & sanitation			
Sub-Total					3,817,500	25,000,000
Project Management Cost <sup>3</sup>				LDCF	182,500	3,735,000
Total Project Cost					4,000,000	28,735,000

**C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$)**

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
Other Multilateral Agency (ies)	African Development Bank - ADF	Soft Loan	10,848,000
Other Multilateral Agency (ies)	African Development Bank - ADF	Grant	1,489,000
Other Multilateral Agency (ies)	African Development Bank - FSF	Grant	3,477,000
Other Multilateral Agency (ies)	African Development Bank -RWSSI	Grant	5,686,000
Bilateral Aid Agency (ies)	DFID-UK	Grant	4,977,000
National Government	Republic of Sierra Leone	Grant	2,258,000
Total			28,735,000

**D. trust fund Resources Requested by agency, Focal Area and country<sup>1</sup>**

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) <sup>2</sup>	Total c=a+b
AfDB	LDCF	Climate Change	Sierra Leone	4,000,000	380,000	4,380,000
Total Grant Resources				4,000,000	380,000	4,380,000

<sup>1</sup> In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

<sup>2</sup> Indicate fees related to this project.

**F. Consultants working for technical assistance components:**

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	200,000	114,000	314,000
National/Local Consultants	100,000	28,000	128,000

**G. Does the project include a “non-grant” instrument?**

N/A

<sup>3</sup> GEF will finance management cost that is solely linked to GEF financing of the project. PMC should be charged proportionately to focal areas based on focal area project grant amount.  
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## PART II: PROJECT JUSTIFICATION

### A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF<sup>4</sup>

**1 National strategies and plans or reports and assessments under relevant conventions**, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.

Since the PIF was prepared the Government of Sierra Leone has adopted a new Poverty Reduction Strategy and Paper (PRSP) entitled PRSP, Agenda for Prosperity. This strategy updates the earlier PRSP and contains additional information on water and sanitation issues but, taken in the round, the project design remains entirely consistent with the new guidelines. A number of working papers and reports have also been produced covering aspects of the National Water and Sanitation Policy produced in 2010, but again, these documents simply advance the state of knowledge and the Project design does not require amendment.

The PRSP has six sections dealing with Water Resources (p.48), Health (p.65), Potable Water (p.73), Sanitation and Hygiene (p.77) and Climate Change (p.151). Issues of special relevance to climate change resilience in the five rural districts include the need to set up Adaptation Strategies to control Coastal Erosion (p.47), the lack of policies to respond to climate variability and change (p.49), challenges to health from unsafe drinking water and poor sanitation (p.66). Detailed measures are set out for improving access to potable water and environmental sanitation and hygiene, with a major focus on strengthening Human and Resources capacity of the ministries and directorates. One of the eight Pillars for Progress is entirely directed to Gender Equality and Women's empowerment which is a mainstay of the planned GEF contribution to rural water supply and sanitation. The GEF project, and the co-financing of the Rural Water Supply and Sanitation Project (RWSSP), addresses the human development pillar by focusing on water supply and sanitation in rural areas. In addition, the preparation of Climate Change Resilience (CCR) Plans for each district will help to deliver the PRSP objectives stated above.

#### A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities.

N/A

#### A.3 The GEF Agency's comparative advantage:

N/A

#### A.4. The baseline project and the problem that it seeks to address:

N/A

#### A. 5. Incremental /Additional cost reasoning:

Describe the incremental (GEF Trust Fund/NPIF) or additional (LDCE/SCCF) activities requested for GEF/LDCE/SCCF/NPIF financing and the associated [global environmental benefits](#) (GEF Trust Fund) or associated adaptation benefits (LDCE/SCCF) to be delivered by the project:

The Project Framework Expected Outcomes have been revised to match the expected Focal Area Strategy Framework outputs, but no component level changes have been made between the PIF approval and Request for CEO Endorsement (RCE) submission. A number of intermediary steps and outputs have been introduced and are accounted for below and in the Project Results Framework presented in Annex A.

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<sup>4</sup> For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter "NA" after the respective question.

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## **Projected Climate Change**

All activities have been developed in order to respond to the predicted Climate Change scenarios that have been examined in the course of the detailed project design. Annual temperatures are expected to rise by between 2<sup>0</sup> and 3<sup>0</sup> centigrade in the North and Eastern parts of Sierra Leone and 1.5<sup>0</sup> to 2.5<sup>0</sup>C in the West and South by 2100, given average global warming of 2<sup>0</sup>C. Changes in climate variability have already reduced the length of the rainy season from around 6 to 4 months but the future pattern of rainfall is uncertain since some regional climate models show an increase while others show a decrease in total precipitation. What is likely to occur is greater variation in conditions from one year to the next. The uncertainties stem from the position of Sierra Leone in relation to the Intertropical Convergence Zone (ITCZ) where a shift of only 100 miles in the meeting of continental and Atlantic air masses can have a significant effect on local conditions.

Reduced water availability and droughts will impede the effectiveness of water and sanitation measures; whilst increased rainfall and flooding may overwhelm infrastructure that is not built to cope with it and increase the prevalence of water-borne diseases. As a general rule, all water and sanitation infrastructure will need to be designed to respond to longer periods of drought and consequent reductions in rainfall at the end of the dry season and lowering of ground water tables.

## **Additionality of the project:**

The LDCF (Least Developed Countries Fund) funded elements of the project will ensure that interventions within the baseline AfDB project are climate-resilient. This means improving the efficiency of existing water supply systems and providing new and appropriate water supply and sanitation systems, including rainwater harvesting and ecological sanitation to mitigate incidence of water borne diseases, such as cholera, resulting from extreme weather events. In parallel with the modification of hard infrastructure, climate change resilience measures will be incorporated into the software elements of the projects including the policy and institutional frameworks, and the use of local WASH committees to increase awareness of the need for adaptation to climate change, including more efficient ways of using and conserving water and planning for high rainfall and flooding events.

## **Component 1: Ensuring access to climate-resilient water supply and sanitation**

The design of all new or renovated infrastructure and construction methods will need to be enhanced to accommodate longer droughts, increased flooding and falling water tables. However, the risk and vulnerability analysis undertaken as part of the project preparation has highlighted the fact that up to 20% of locations (1087 out of 5437 villages) will be more exposed than the average. Existing priorities for year 1 of the implementation programme focus on repairs or reconstruction of deficient water points. Work undertaken as part of the GEF technical appraisal has included the development of a survey framework and questionnaire which will be applied in the implementation phase to ensure that subsequent year's priority villages are targeted based on climate change risks. This selection process would have been initiated under the GEF endorsement phase but had to be deferred due to restrictions on travel within Districts imposed by the Ebola curfews and lock-down. The questionnaire survey (see Annex E) will cover all localities in the five districts in order to pinpoint the areas that have been exposed to severe flooding or drought in the last ten years. The results of the survey and projection of trends under the influence of CC will be used to develop District CCR Plans and to identify villages and communities that are most at risk over the next two decades for priority attention, alongside others which are selected on the basic criteria of poor water supply and lack of sanitation, especially for children under 5, women and vulnerable groups.

The CCR (Climate Change Resilience) plans will highlight those villages that are most exposed to climate change risks and the information will be used to identify villages requiring new water points already allowed for under the Baseline Project budgets. New sanitation infrastructure will be constructed in priority schools and other public locations. Finally, communal WASH (Water/Sanitation/Hygiene) facilities will be constructed in five selected public marketplaces. These will be designed with climate change resilient technology, including solar power units, boreholes sunk to the required depths to tap permanent groundwater, water harvesting and filtration, and display

boards and posters explaining the importance of WASH and observance of climate change adaptation measures in order to act as demonstration projects, one within each of the districts.

## **Component 2: Building the institutional framework required for climate-resilient management of the water and sanitation sector**

It is important to note that the outbreak of Ebola has radically affected priorities for investment in Sierra Leone (as well as neighbouring countries) and the country's development partners, including AfDB, are engaged in discussions with the Government on restructuring existing commitments. Water and sanitation remain as one of the highest priorities because of the cross-cutting links with health and livelihoods but there is an urgent need to extend the programme to make up for time lost over the last twelve months.

The institutional framework for water resource management in Sierra Leone is currently being reformed and the process will take a number of years to complete. Enactment of the Water Resources Bill, scheduled for June 2016, will represent an important milestone. Once established, new bodies like the Water Resources Council and individual River Basin Committees will need time to build up experience and expertise. The National Rural Water and Sanitation Programme Document will be developed using the TA resources of the LDCF. In addition, the technical capacity and resources of the Climate Change Secretariat will be strengthened and technical staff in key ministries will be trained to strengthen awareness of the importance of CCR relating to WASH within all national institutions.

Responsibility for maintaining climate change data and management of records in the water sector will be allocated to two designated officers within the Ministry of Energy and Water Resources and the Meteorological Office. It is recommended that the Climate Change Secretariat, assisted by the designated officers in the MWR and Meteorological Office should prepare annual reports on CCR measures taken in the Water and Sanitation sector. The format of the annual report is set out in Annex F.

## **Component 3: Building improved awareness of climate-resilient WASH practices**

This component will add climate change awareness and responses to the basic training of 60 WASH professionals at national level, so that these professionals are able to impart climate-resilient WASH practices to local communities at District level the existing WASH Committees will be supported and strengthened to act as the principal focus for climate change resilience planning in each district. Paramount and Section Chiefs and individual community headmen will be encouraged to form water source committees in their communities. 1000 water source committees (of which 50% female members) will be formed and trained in maintenance and management of water (including availability of water, and water quality) and sanitation facilities. The 1000 water source committees will be given detailed briefs on the threats posed by climate change to their local water sources and increased risks to hygiene and health caused by reduced water availability in the dry seasons and flooding during the rains.

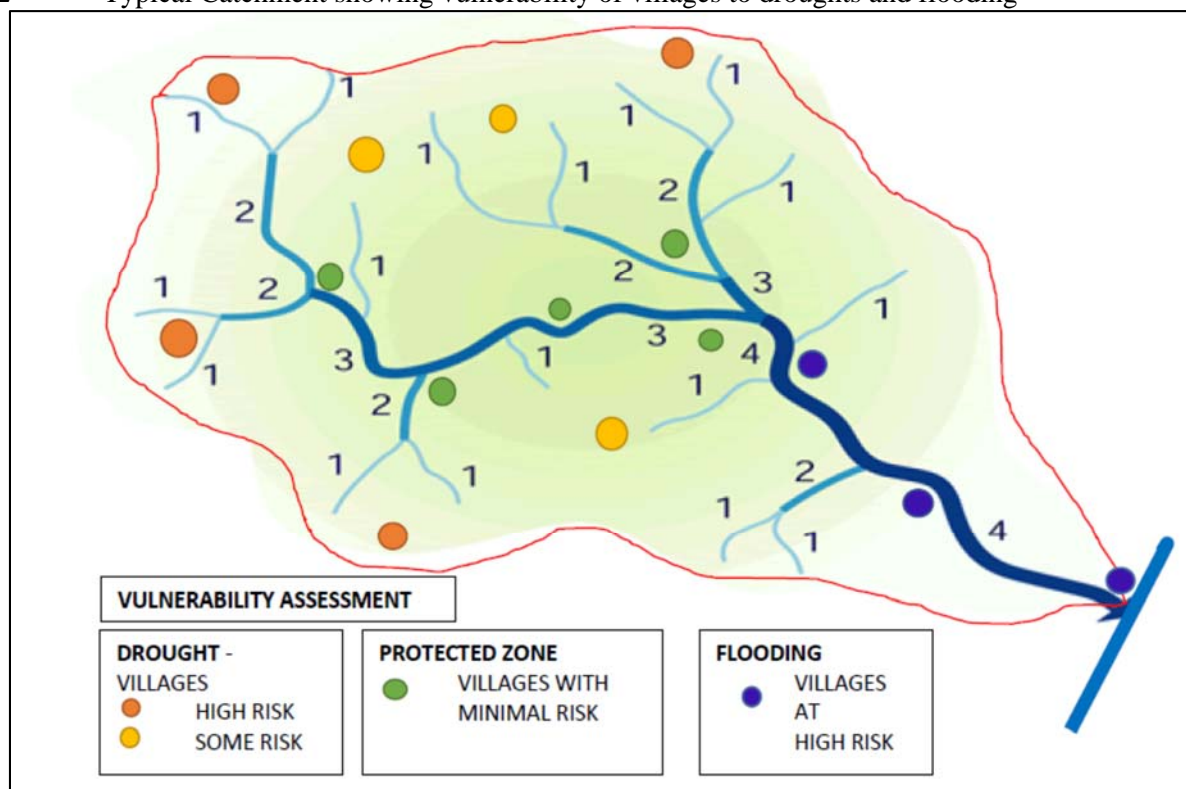
100 community trainers (40% female) will also be trained in improved WASH knowledge (including water availability and maintaining quality), attitudes and practices to impart that to the committees themselves. Critical elements of the training will include instruction in conducting climate change resilience surveys in each village /locality and guidance on how to recognise incipient climate change and develop appropriate response mechanisms including preparation CCR Plans. Since the baseline project also allows for greater WASH stakeholder coordination through sponsoring participation of key stakeholder representatives in stakeholder coordination fora, such as the annual Government of Sierra Leone/Development Partners joint sector reviews, the knowledge from such training is likely to be disseminated also through the broader networks.

The baseline RWSS (Rural Water Supply and Sanitation) project includes 20 study tours for national government staff and local government staff from non-project districts to raise awareness of the technologies and specific guidance on CCR planning and management will be prepared and circulated to all delegates to spread awareness of CC (Climate Change) issues and adaptation techniques.



The Government of Sierra Leone and its international partners need to take the first steps to build new infrastructure and institutions for tackling the effects of climate change in the WASH sector. However, it is ultimately individual citizens and local community leaders who will need to ensure that people are aware of the risks and take steps to adapt to increasing drought and flooding caused by global temperature rise. An important innovation in the Climate Change Resilience programme is the introduction of the concept of catchment planning. Mapping has been undertaken to identify the watersheds of all primary catchments in the five districts as shown in Annex G. Depending on their location, villages within these primary catchments share the same challenges so, for example those communities lying closest to the watershed are most exposed to drought and groundwater drawdown whereas those communities located in valley bottoms are most at risk to flooding events. (See example presented in Figure 2 below). This information will be incorporated in District CCR Plans shared with all communities (through section chiefs, village elders and TA members, and the Water Source Committees).

Figure 2 Typical Catchment showing vulnerability of villages to droughts and flooding



Development of Climate Change Resilience Plans for each of the five Districts will ensure that both local and national data is synthesized and translated into practical measures and responses for dealing with climate change pressures on all settlements and, in particular those communities which are identified as most at risk to drought and flood.

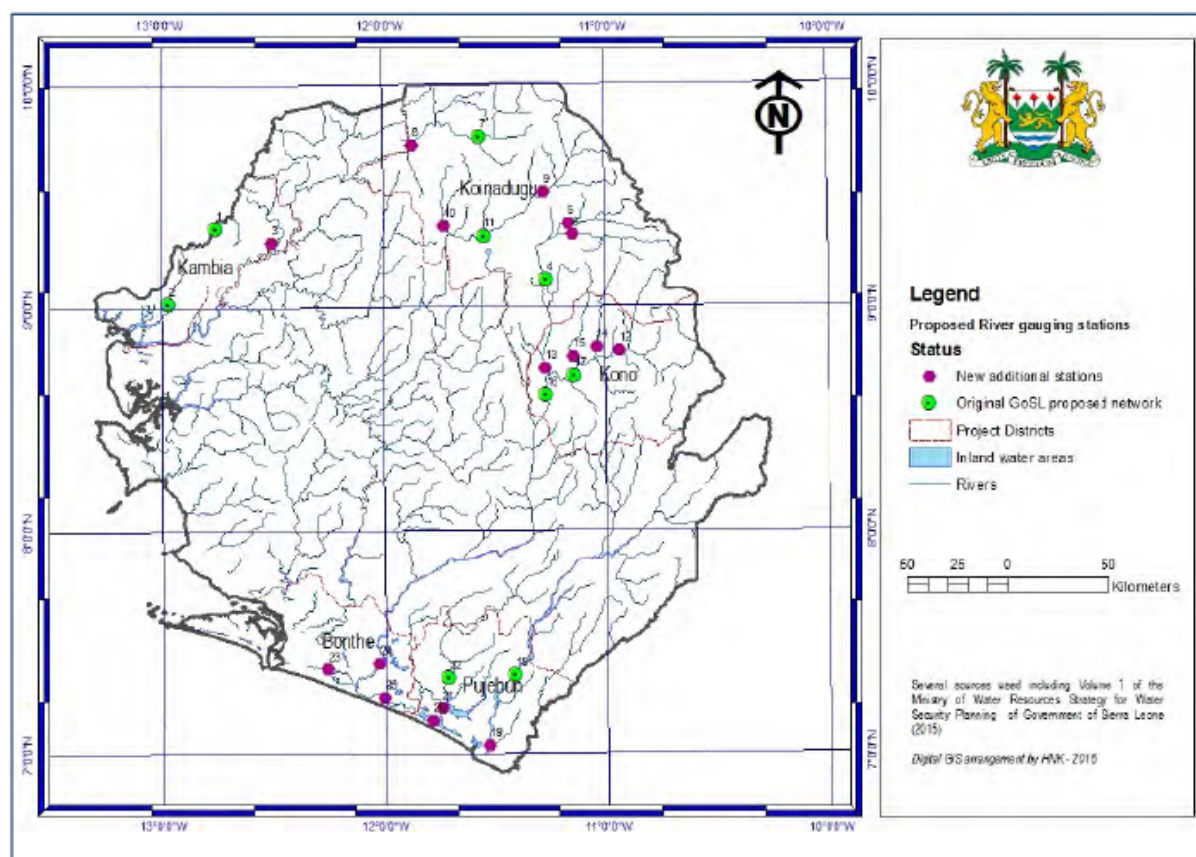
A training manual will be developed as part of a programme for building public awareness in CCR. A specialist will be recruited to provide technical assistance in training a group of 28 WASH sector professionals of whom 11 will be women. The professionals will be drawn from the Ministry of Water Resources, Ministry of Health and Sanitation, Ministry of Women and Youth and selected NGOs participating in the RWSSP. The specialist will also be responsible for developing the syllabus and work content of a national and district-based series of workshops

to be attended by 90 individual groups of CCR trainers. Finally under this component of the overall programme, a series of national study tours will be arranged for national government staff and local government staff and leaders from within and outside the project districts to showcase successful examples of climate change resilience planning and the installation of appropriate technology.

#### Component 4: Establishing collaborative research and monitoring to enable efficient, climate-resilient, water management

The primary objective of putting up the hydro-meteorological stations is to capture the weather variables and hydrological parameters and develop the capacity to model and understand the natural water cycle components within the project area over a long period on the basis of which the Government of Sierra Leone (GoSL) may develop efficient, climate-resilient water management for the area. It is recognised that relevant meteorological and hydrological data will have to be assembled and analysed to enable more effective modelling of projected future conditions so as to ensure that the project infrastructure and practices are adapted to become more climate-resilient. In order to contribute to the need for a country-wide network of stations, the project (PIF) had originally envisaged the installation of 20 stream flow gauges and groundwater monitoring stations, and 200 rain gauges in 5 river catchments. After analysis of the hydrology of the project areas, these numbers have now been revised to 25 surface water stations (23 stream flow gauges and 2 lake water levels gauges); 60 rainfall gauges, and 100 groundwater monitoring stations. The number of rain gauges has been significantly reduced from 200 to 60 and the savings realised channelled into basic groundwater monitoring in the project area (100 well water-level recording stations).

Figure 3 Location of Proposed Stream Gauges (in Purple) within the five districts



These changes have been introduced to increase the efficiency of the overall investment in CCR measures. The large number of rain gauges originally proposed is not required in order to build an efficient national network of climate stations. In particular it is preferable to ensure continuous accurate monitoring through a smaller number of sites, than to build a very large network of stations which cannot be effectively monitored. What is of much greater importance is to introduce monitoring of groundwater levels since the principal impact of climate change will be a lowering of the water table in most parts of the five districts during the dry season. It is for this reason that 100 boreholes and wells will be equipped with water level automatic logging devices.

The installation of 23 main river flow gauges and 2 lake level gauges, together with associated meteorological stations will greatly enhance the national capacity to monitor average, dry weather and flood flows and record long-term trends in precipitation, temperature and other parameters. This, in turn will create the necessary data base for monitoring long term climate change and defining thresholds and trigger points for activating flood warning systems and response to drought conditions.

In the process of making infrastructure and practices climate-resilient, this project also sets up infrastructure to improve water research, monitoring and management. Mapping of the groundwater resources and installation of ground water monitoring stations enables certainty in siting of shallow and deep groundwater wells which would not dry out during extreme dry weather events, and also enables enhancement of water supply and sanitation infrastructure to prevent flood damage as necessary. Installation of surface water monitoring stations (stream gauges and rain gauges) play a key role in the creation of effective Early Warning Systems, in turn reducing potential adverse effects of flooding, such as outbreaks of cholera, typhoid and other diarrheal diseases.

The work of analyzing and interpreting meteorological and streamflow data will be undertaken by a team of 11 specialists attached to the, Ministry of Energy and Water resources and Meteorological Office. This team will be given special training in meteorological and hydrological analysis. An important goal is to provide the necessary data to facilitate early warnings regarding drought or flood situations, which also forms a critical input in the assessment of the risk and measures to prevent outbreak of extreme climate-related diseases, such as cholera and typhoid.

In addition to the identification of permanent stream flow gauging stations, a mapping exercise has been undertaken for all first order catchments in the five districts. This information will provide the framework for gauging the sensitivity of individual villages (water point localities) to climate change as part of the CCR-W&S District Plans.

#### **Component 5: Knowledge management and monitoring and evaluation**

Monitoring and evaluation, using recognized international frameworks for results-based M&E, will form an integral part of all components. At national level the minutes of the donor and government liaison group will be reviewed in order to confirm that CCR issues are being addressed in an integrated manner. At district and local level, a mid-term evaluation mission will be arranged to assess how effectively District WASH committees and community leaders within a sample of villages have absorbed the critical messages about climate change and building resilience in water and sanitation. In addition, a final evaluation mission will be undertaken with the aim of reporting on the overall experience and sharing lessons that have been learnt within the five districts with related programmes in other parts of Sierra Leone. Monitoring and Evaluation will be carried out in synergy with the baseline project, including the undertaking of impact and flagship studies.

Many of the requirements for M&E are defined in the Environmental and Social Analysis for the Baseline RWSS Project, which was classified as a Category 2 project under AfDB safeguard standards and subjected to an Environmental and Social Impact Assessment and accompanying ESMP (Environmental and Social Management Plan). A number of different departments are identified with responsibility for M&E activities. The Ministry of Health and Sanitation, Ministry of Education, and Ministry of Social Welfare, Gender and Children Affairs will undertake M&E with regard to sanitation and education-related activities; the Environmental Protection Agency will be responsible for M&E of environmental and social impact mitigation measures (e.g. during the construction

of climate-resilient water and sanitation infrastructure and thereafter); and the Meteorological Department will be responsible for M&E of the monitoring stations. In order to ensure effective coordination of M&E for the purposes of the project, the Water Directorate and Sierra Leone Water Company will coordinate the activities of all other partners in addition to their mandatory role technical oversight and quality assurance of the work which by the local councils.

In addition, explicit emphasis will be placed on knowledge management, vested within the Water Directorate of the Ministry of Energy and Water Resources, to ensure that lessons learned from the implementation of this project are available for application to other adaptation projects.

## A.6 Risks

Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks are detailed below. These concerns remain relevant as potential risks, although the risk of civil strife has receded. However, two additional risks have been identified during project preparation. These concern delays resulting from Ebola, and shortcomings in other economic sectors.

A number of risks highlighted in the PIF are still relevant and mitigation measures haven been identified. These concerned:

<b>Risk</b>	<b>Level</b>	<b>Mitigation measure</b>
Lack of technical capacity among national agencies and District Councils (DCs) to meet technical standards	M	Provision is made for capacity building DCs, to be complemented by results based agreements between the DCs and Central Government Agencies to carry out monitoring activities. Technical assistance and capacity building to central government level agencies which are involved in project implementation will also be provided to ensure that their activities do not go beyond their strategic oversight and quality assurance mandate.
Political interference affects the extent to which District Councils (DCs) can be taken to task for non-performance. It is not unusual for Chieftaincies to contest the role of elected DCs and the requirement to share revenues with them. The lack of coordination between Ward Committees (WC) and DCs also poses potential risks.	L	The new decentralization policy provides the legal and policy support necessary for DCs to mitigate this risk. The World Bank financed DSDP II (Decentralized Service Delivery Program) provides for support to the WCs and DCs to allow for enhanced coordination and cooperation. Resources from the Rural Water Supply and Sanitation Project (RWSSP) co-financing will also be utilized to promote sector coordination at the Local Government level
Lack of capacity in the Ministry of Energy and Water Resources to implement the project (oversight and quality assurance)	M	Provision is made for Technical Assistance (TA) to all key implementing agencies (DCs, WD, IPAU and LGFD). TAs will be required to undertake the necessary activities in the absence of MDA staff
Absence of sector coordination weakens capacity to manage the water sector and mobilize resources	M	Provision is made under the project to facilitate the institutionalization of sector coordination mechanisms
Civil strife or social unrest	M	Project interventions are not planned in areas with a history of civil strife or social unrest, but the situation will be monitored regularly and closely as part of the M&E plan
Project implementation delays resulting from Ebola	M	The country has been declared “Ebola Free” and measures are taken by the country to avoid deterioration of the health situation
Shortcomings in other economic sectors	M	The country is recovering from Ebola and economic sectors are expected to be supported by external aid and bilateral donors for quick recovery

- **Consequences of programme delays caused by the Ebola outbreak**

The severe downturn in the economy created by the Ebola outbreak in West Africa (Guinea, Sierra Leone and Liberia) has had a demoralizing influence on local communities. Lack of progress in implementing the RWSSP and GEF component over the period July 2014-July 2015, through largely unavoidable constraints on normal functioning of national/district relationships, has left a strong sense of frustration at District and Community level with slow progress in implementing physical works on the ground. Renewed effort will be required by AfDB, all Ministry and District staff, and the district implementation teams to stimulate new enthusiasm and renewed confidence.

- **Failure to adapt to multi-faceted threats from climate change arising in other economic sectors, which may then impact water and sanitation.**

Additional risks (outside the water and sanitation sector) may arise due to the multi-faceted nature of climate change impacts on water, agriculture, other land uses and most forms of human activity. There is an urgent need to adopt a comprehensive approach to climate change adaptation at the District level and to create overarching long term plans which will integrate the efforts being made in different sectors. The concept of a **Climate Change Adaptation Plans** (CCAP) for each district is outlined in section B. Implementation of an integrated cross-sectoral CCR process will require additional funding and support beyond that allocated to the RWSS Project. However, the first steps in producing District CCR Plans for water and sanitation are budgeted for under the GEF component of this project.

Description	Ranking	Mitigation measures
The severe downturn in the economy created by the Ebola outbreak in West Africa (Guinea, Sierra Leone and Liberia) has had a demoralizing influence on local communities. Lack of progress in implementing the RWSSP and GEF component over the period July 2014-July 2015, through largely unavoidable constraints on normal functioning of national/district relationships has left a strong sense of frustration at District and Community level with slow progress in implementing physical works on the ground.	M	AfDB, will put increased emphasis on training and encouraging Sierra Leone Water Company (SALWACO) all Ministry and District staff and the district implementation teams to stimulate new enthusiasm and renewed confidence.
The subtleties of Climate Change and Climate Variability are not recognized by most practitioners in the WASH sector and the effects are largely indistinguishable from those caused by seasonal change in rainfall and groundwater conditions	L	GEF finance is targeted on increasing awareness at all levels and this will ensure that the message that CC is real will reach all trainers, WASH committee leaders and community groups.  Preparation of District WASH CCR Plans will highlight for the first time, those villages that are particularly vulnerable to climate change and climate variability
Existing procedures for identifying wells, boreholes, spring boxes and other water sources for repair do not include an	L	The measures for community mapping and development of District WASH CCR Plans will

Description	Ranking	Mitigation measures
effective test for exposure to climate change risk		provide the framework for increasing efficiencies in the selection of priority water sources
Previous attempts to set up a national hydrometric network and national monitoring station for climate and climate change have failed and the present programme could suffer the same fate if appropriate measures are not put in place to install infrastructure and monitoring equipment.	M	<p>The Project team will place a high priority on identifying suitable sites for river gauging stations and building the necessary infrastructure.</p> <p>National Government will be encouraged to provide the resources for strengthening the Climate Change Secretariat and recruiting qualified staff to the Ministry of Water Resources and Meteorological Office.</p>
The process of identifying Climate Change trends is long-term and will require data gathering over several decades. Consequently, there is a risk that the lessons learnt in this five year programme may not be sustained into the future	M	<p>Institutional capacity building in terms of staff, equipment and resources will play a critical role in ensuring that long-term programmes are developed and maintained.</p> <p>The international donors' group also has an important role in ensuring that CCR is given due attention in the WASH sector and other related economic sectors.</p>
<p>Additional risks (outside the water and sanitation sector) arise from the multi-faceted nature of climate change impacts on water, agriculture, other land uses and most forms of human activity.</p> <p>Logging and agriculture are examples of development areas that could undermine the provision of secure surface and ground water resources, despite efforts under the RWSSP to make these climate proof.</p>	H	<p>Preparation of District WASH CCR Plans will mark the first step towards introducing a comprehensive approach to climate change adaptation at District level and create overarching long term plans which will integrate the efforts being taken in different sectors.</p> <p>Implementation of an integrated cross-sectoral CCR process will require additional funding and support beyond that allocated to the RWSS Project. However, the first steps in producing District CCR Plans for water and sanitation are budgeted for under the GEF component of this project.</p>
District administrations lack the resources and capacity to engage fully with the project and integrate project outputs with development plans.	L	District Officers and District WASH engineers will play a key role, alongside NGOs, in delivering training programmes throughout the five Districts. Project implementation will be supported with a competent team of professionals that are dedicated full time to the project.
International partners may promote CCR projects in parallel without ensuring sufficient cross- linkages.	L	The strengthening of the International Donor Group and Climate Change Secretariat will reduce the risks of duplication and help to ensure that there are positive synergies in approaches to CCR.
Failure to create ownership of the project at the local level to project interventions.	L	Project design team will involve the key stakeholders in problem identification, project design, implementation and phase out activities to create ownership at the community level and build in sustainability

## A.7. Coordination with other relevant GEF financed initiatives



Two other international partners are engaged in the water and sanitation sector and are actively cooperating with AfDB. These are UK Aid (DFID) and UNDP, both members of the inter agency coordinating group.

**DFID** has been funding a three-year programme in the water and sanitation sector through the Ministry of Water Resources. This has concentrated on training, developing policy and creating a new institutional framework for river basin management, undertaking extensive research on rebuilding the country's water resource data archives, (see [www.salonewatersecurity.com](http://www.salonewatersecurity.com)) and assisting the Ministry of Water Resources to collate, apply quality controls, and publish hydrometric data from gauging station networks across Sierra Leone. Part of the programme has concentrated on the Rokel River and extensive experimentation and training of local community groups in taking meteorological records has taken place which has a direct relationship and bearing on this programme for RWSS in the five districts. DFID is a co-sponsor of the RWSSP. A number of guidelines have been written under the DFID supported programme, which are directly transferable to the AfDB-GEF project. DFID has now approved a further four-year extension to the program under its increased aid to compensate for the impacts of Ebola.

**UNDP** has been actively involved in supporting climate change adaptation projects in Sierra Leone over the last five years, beginning with a project that started in 2010 in collaboration with the UK Meteorological Office, under which six automatic weather stations were installed. Two parallel LDCF projects have been "*Building adaptive capacity to catalyze active public and private sector participation to manage the exposure and sensitivity of water supply services to climate change*" and "*Strengthening climate information and early warning systems in Africa for climate resilient development and adaptation to climate change*". The latter project includes an initiative to establish an environmental monitoring system for the Guma Valley, which supplies water to Freetown, and also the coordination required to support the Water Sector Project on climate risk by mapping the country's vulnerability.

It is important to note that other partnerships between government and international agencies are actively engaged in climate change adaptation including:

IFAD which has a GEF funded project, entitled: "*Sierra Leone: Integrating Adaptation to Climate Change into Agricultural Production and Food Security*" in Sierra Leone. This includes measures to reinforce the capacity of the Meteorological Office services in relation to climate and hydrometric stations.

The World Bank has also been funding a study on "Rapid Response Growth Poles in Sierra Leone": This includes proposals for community-based construction of six Communications Centres for risk management which will provide services in weather forecasting, disaster risk prevention, and prevention information dissemination using telecommunications.

The Climate Change Adaptation element of the RWSSP will make a major contribution to the coordination of inter-agency activities under Component 2; Building the Institutional Framework (See A.5 above).

## **B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:**

### **B.1 Describe how the stakeholders will be engaged in project implementation**

Stakeholders have been defined at four levels: international, national, district and local. The different levels of engagement are illustrated in the flow diagram below.

#### **International Stakeholders**

At the highest level it is important that the international partners establish an effective coordinating committee to ensure that all new initiatives for funding support in climate change adaptation and monitoring are integrated with existing programmes and add value to each other. The existing Sector Donor Working Group which is co-led by AfDB and DFID (with UNDP, JICA, EU, World Bank and UNICEF as regular participants) will be given an

extended remit to coordinate new initiatives and investment in the water and sanitation sector. This committee will meet regularly with the Ministry of Finance to agree action programmes with the Government of Sierra Leone and encourage a similar approach within government. This process should lead to agreement of an investment programme for climate change adaptation across all economic sectors.

### **National Level Stakeholders**

The Climate Change Secretariat (supported by officers of the Ministry of Water Resources and the Meteorological Office, who have received training under the LDCF component of the WRSSP) will be strengthened with financial and technical support under the LDCF component of the RWSSP. This in turn will ensure that there is closer cooperation between all relevant ministries and agencies, including the Ministry of Finance, Ministry of Water Resources, Ministry of Health and Sanitation, the Sierra Leone Water Company, SALWACO, Meteorological Office, Environment Protection Agency, Ministry of Lands, Country Planning and Environment, Ministry of Agriculture and Food Security, Ministry of Minerals and Mining, the National Minerals Agency, the Ministry of Gender and Social Welfare.

### **District Level Stakeholders**

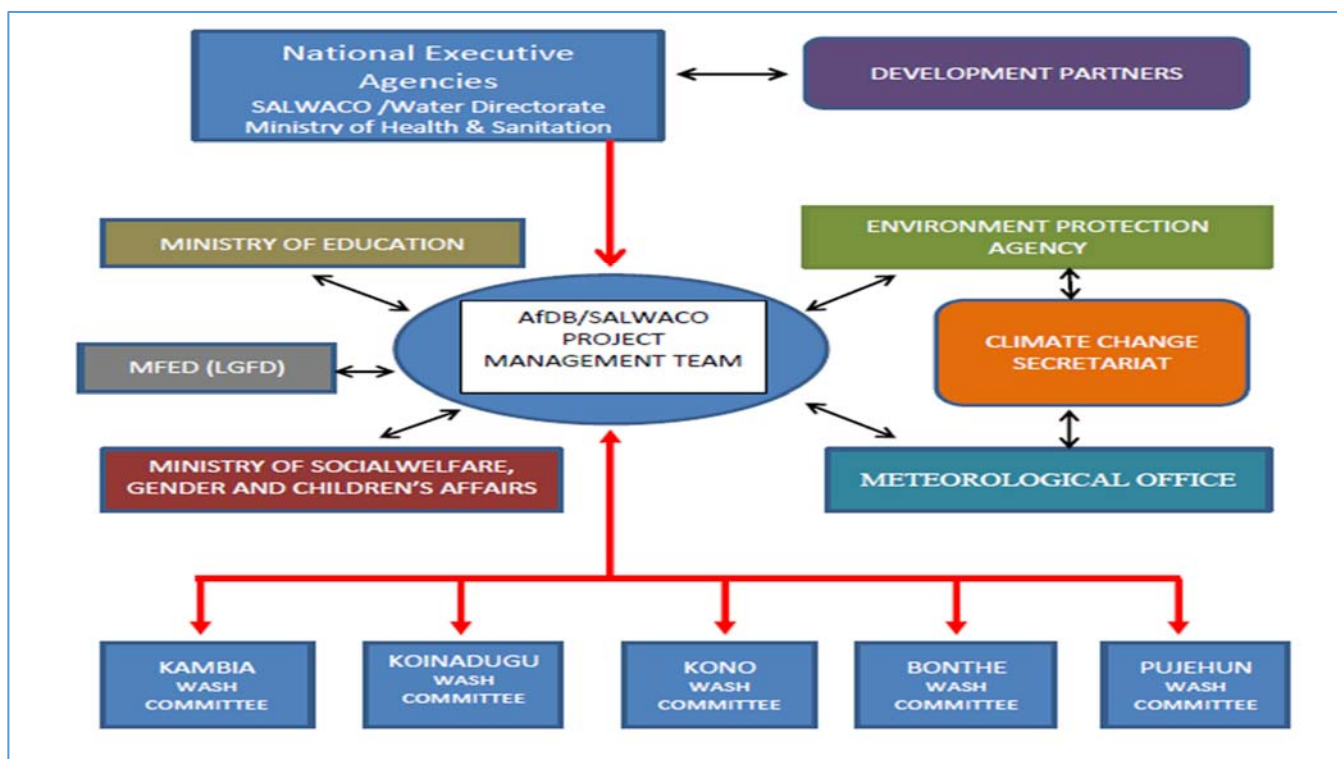
Decentralisation of government and administration is proceeding effectively in Sierra Leone and the biggest contribution to resolving long term threats from climate change in the water and sanitation sector can be made by engaging and influencing all elected and official members of District Administrations and Traditional Authorities, including the Paramount Chiefs as well as women leaders. This is a formal requirement of the National Water and Sanitation Policy.

Climate Change Resilience Plans for the Water and Sanitation Sector will be produced collaboratively with the full engagement of district stakeholders. The plans will be prepared by a technical group of officers led by the WASH Engineers for each district in conjunction with the District Environmental Officers and the NGOs appointed to carry out basic survey work and monitoring. CCR Water and Sanitation Plans will require the endorsement of the respective District Committees and formal approval will be given for plan adoption and implementation by SALWACO and the Ministry of Water Resources. All CCR W&S Plans will be monitored as part of the RWSSP and the results will be passed to the Climate Change Secretariat and CCR technical officers in MWR and the Meteorological Office. Guidance will be published using LDCF funding, outlining the methodology and approach required for preparing CCR water and sanitation plans. The guidance will include advice on how to extend these plans to cover multi-faceted aspects of climate change at the district level.

### **Local Stakeholders**

Ensuring whether climate change resiliency measures are adopted in relation to individual water points and sanitary installations will rest with the Sierra Leone Water Company (SALWACO), its engineers and consultants and the local water source committees ensuring the proposed 50% representation. Water source committees in each large village (or group of smaller localities) will be the principal point of contact between local people (the ultimate beneficiaries) and the support services at national and district level.





Key Links Between The Principal Stakeholders In The RWSSP CCR Network

**B.2. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels,** including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF).

The activities in this project have the overarching aims of improving public health, in order to achieve the Sustainable Development Goals relating to child and maternal health (including SDGs 3, 6, and 10). By improving health, they in turn bring about improvements in the quality of lives of Sierra Leoneans, particularly for women and children. In addition to bearing the brunt of water-borne illnesses, women typically take responsibility for collecting water. If safe water supplies are available near the home, time previously spent collecting water will be freed up for other productive activities, including increased attention to family welfare. Children, especially girls, will have more time for school work and other social activities. In addition, provision of sanitation facilities in schools will enhance girl child school enrollment and attendance rates. The formation and training of WASH committees, 40% of which will be headed by women, will empower vulnerable and disenfranchised communities and also help improve quality of life. Youth will be targeted for training in the operations & maintenance of the water supply and sanitation facilities, and youth representation will be mandatory on the WASH committees. In addition to public health and social development benefits, this project will also contribute to environmental integrity through improved water management (quantity and quality) and reduced groundwater pollution due to unmanaged human waste.

The initial RWSS project preparation phase included an Economic and Financial Analysis (Annex B7 of the AfDB's project appraisal report) which examined the economic return from improved health benefits and showed a Net Present Value (NPV) of US\$9.1million and EIRR of 25%. No allowance was made for the additional benefits that would accrue from building in climate change resilience and adaptation measures to the project.

It is estimated that the CCR proposals will benefit all communities to some extent but they will also secure permanent improvements for around 20% of all the targeted villages, which are particularly vulnerable to climate change. Using the same assumptions as were employed in the baseline, it has been calculated that the additional

benefits from CCR measures for the most vulnerable communities will be in the order of 1.6 million USD per annum. This compares with the NPV from non-CCR water and sanitation infrastructure of 9.1 million USD. Allowing for the 30-year project life, the cumulative benefits of CCR measures will be substantially greater than the planned GEF investment in the project.

The specific benefits accruing from GEF funding will be the enhanced focus of the overall RWSS project on priority communities that are most at risk from drought, floods and other climate change induced threats to water supply and sanitation. All personnel receiving CCR training will be better equipped to identify specific threats and hazards and to guide communities in terms of appropriate response mechanisms.

### **B.3. Explain how cost-effectiveness is reflected in the project design:**

A high degree of uncertainty surrounds the prediction of climate change, and differentiating between natural variations in climatic conditions and those that can be attributed to global warming is far from an exact science. These challenges are compounded in Sierra Leone by the lack of hydrological and meteorological data. An important debate has taken place during the planning stages of this project over where the emphasis should lie in terms of providing new data. The choice lay between developing a network of climate stations within the five individual districts or focusing attention on the national framework. It has been agreed that the immediate priority is to strengthen the national monitoring network by setting up new gauging stations on major rivers and creating a primary network of weather stations. These locations have been chosen to cover the five districts. This programme needs to be implemented progressively because the key institutions (Ministry of Water Resources and Meteorological Office) have very limited capacity to monitor and analyze results and it will take several years to build the necessary infrastructure.

In the longer term it will be important to extend the monitoring programme to individual catchments within the five districts and the necessary framework is being created through preparation of District WASH CCR Plans. This process will allow the identification of those communities and areas that are most vulnerable to climate change and will ensure that climate change adaptation efforts are targeted in these areas. This in turn will greatly increase the efficiency and effectiveness of project expenditure. The process of creating CCR Plans for each district involves a simple questionnaire survey administered in face-to-face interviews with section chiefs, village headmen, and elders from the Traditional Authority and water source committee members. This survey elicits information on the longevity and severity of historic flooding and drought events. Based on analysis of all questionnaire results together with information on the location (height and geographic position within the primary catchment) and socio-economic characteristics of each village, the technical team (WASH engineer and Environment Officer) will identify those communities that are most at risk to climate change. This information will allow particularly vulnerable communities to be targeted as priorities for investment.

Another important adjustment from the PIF has been the decision to reduce the number of rain gauges from 200 to 60 and to use the savings to introduce 100 groundwater monitoring stations. Most of these monitoring stations will be installed in existing or new wells and boreholes. Water level data loggers will be used to record groundwater levels. The decision to reduce the number of rain gauges is based on a pragmatic view of the difficulties in ensuring that accurate records are kept and transmitted from remote locations where most inhabitants have low literacy levels, rather than the practicality of installing the equipment. By comparison, the information that can be gathered from borehole data loggers will be of much greater significance in starting to understand regional and district-wide variability in water tables and the effects which both seasonal fluctuations and long term climate change is likely to have on rural water supplies.

### C. DESCRIBE THE BUDGETED M & E PLAN:

Two monitoring and evaluation frameworks have been developed: the first is based on AMAT and is designed to give information at the CEO Endorsement stage, at Project Mid-term and at Project Completion; the second is a project level framework which is designed to track performance on individual activities on a month-by-month basis throughout the project.

The AMAT M&E Framework addresses performance under each of the LDCF objectives of:

- Reduced vulnerability to the adverse impacts of climate change, including variability at local, national, regional and international level.
- Increased adaptive capacity to respond to the impacts of climate change,
- Promoting transfer and adaptation of adaptation technology

A total of 13 indicators will be employed as part of the assessment.

Each of the three stage AMAT Framework Assessments will require the input of an independent Assessor. Each review will involve a mission of 7 working days duration.

The Project level framework is based on monitoring the delivery of each output, as summarised below:

Type of monitoring and evaluation activity	Responsible parties	Time frame	Budget (USD)
Quarterly Project Reports	National Project Coordinator leads the organization, in close consultation with SALWACO and AfDB.	Every 3 Months	10,000
Project Implementation Review (PIR)	AfDB LTO with inputs from the National Project Coordinator and AfDB Budget Holder. Submitted by the AfDB GEF Coordination Unit to the GEF Secretariat. Final report also submitted to the PSC and the GEF Operational Focal Point by the National Project Coordinator.	Annually	30,000
Design and implementation of monitoring and evaluation system	National Project Coordinator with support from the Chief Technical Adviser (CTA) and the AfDB Lead Technical Officer	Within the first six months after the project inception	10,000
Field-based impact monitoring	National Project Coordinator with support from other project partners (NGOs / District WASH Engineers)	Continually	50,000
Technical reports	National Project Coordinator, Consultants, AfDB	As appropriate	Component budgets
Mid- term evaluation	External Consultant, AfDB independent evaluation unit in consultation with the project team and other partners	At mid-point of project implementation	40,000

Type of monitoring and evaluation activity	Responsible parties	Time frame	Budget (USD)
Final evaluation	External Consultant, AfDB independent evaluation unit in consultation with the project team and other partners	At the end of project implementation	50,000
Project completion Report (PCR)	Project Coordinator	At least one month before end of project	None
NPC, CTA and project admin assistance estimate total cost for all M&E activities			30,000
<b>TOTAL</b>			<b>220,000</b>


### PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY (IES)

**RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):**  
(Please attach the Operational Focal Point endorsement letter(s) with this form. For SGP, use this OPF endorsement letter).

Name	Position	Ministry	DATE (MM/dd/yyyy)
Dr. Kolleh Bangura	Director (GEF Operational Focal Point)	ENVIRONMENT PROTECTION AGENCY	05/26/2012

#### B. GEF agency(ies) certification

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Mahamat ASSOUYOUTI, AfDB		04/07/2016	Rogers Lubunga	+23230338012	R.LUBUNGA@AFDB.ORG

**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).

RESULT-BASED LOGICAL FRAMEWORK <b>Building Resilience to Climate Change through the water and sanitation sector in urban and rural areas of Sierra Leone</b>							
GOAL: Ensure that the interventions of the Rural Water and Sanitation Supply Project (RWSSP) are resilient and proofed against the adverse effects of climate change; in accordance with the NAPA, First and Second National Communications and GEF Programming Strategy on ACC for the Least Developed Countries Fund (LDCF) and Special Climate Change Fund							
Results chain		Performance indicators			Means of verification	Risks/mitigation measures	
		Indicator (including CSI)	Baseline	Target			
Impact	<b>Project Components</b> 1. Ensuring access to climate resilient water supply and sanitation in five rural districts of Sierra Leone 2. Building the institutional framework required for climate-resilient management of the water and sanitation sector 3. Building improved awareness of climate-resilient WASH practices 4. Establishing collaborative research and monitoring to enable efficient, climate-resilient water management 5. Managing knowledge and Monitoring and Evaluation						
	OUTCOMES	<b>Outcome 1:</b> Vulnerable physical and natural assets strengthened in response to climate change including climate variability	# of people in 5 districts provided with safe water and improved sanitation  # of people in targeted communities provided with improved CCR facilities and technology	0% (2010)  0% (2010)	625,000 people, of whom 293,750 are female  125,000 people, of whom 60,000 are female	CSO MDG Progress Report JMP Project Impact & Flagship Studies	<b>Risk:</b> Failure to carry out systematic surveys and identify real targets. <b>Mitigation:</b> Bank to retain competent CCR adviser for duration of the project.
		<b>Outcome 2:</b> Capacity of national and district centers and networks strengthened to monitor climate change indicators and trends and rapidly respond to extreme weather events.	Climate change Secretariat staffing level  # of meetings of all key institutions with CCR on agenda  Effective functioning of Emergency communications system (# of advanced warnings)	1  0  N/A	3  Donor group - 2 per annum District WASH committees - 10 per annum 12 Risk reports (monthly) on national media services	Annual monitoring review	<b>Risk:</b> Failure to secure all agencies’ commitment to role of CCS and Donor Group <b>Mitigation:</b> Greater engagement of AfDB and RWSSP advisers in training and guiding the respective committees / groups
		<b>Outcome 3:</b> Relevant adaptation technology transferred to targeted groups	Community participation in WASH service delivery increased (in %)	0	Up to 80% of the targeted communities, of which 50% of residents are women	Quarterly and Annual Progress Reports, Supervision reports M&E Reports Mid Term Review PCR	<b>Risk:</b> Communities lack of capacity and skill to implement a climate resilient WASH services <b>Mitigation:</b> The project will provide relevant training through the technical assistance and support traditional councils, District authorities and communities
		<b>Outcome 4:</b> National, District and Local level institutions equipped to handle CCR management tasks	Hydro meteorological structures and equipment installed and functioning within districts  Headquarters staff trained and facilitated	0  0	All targets for individual equipment and staffing numbers met	Quarterly and Annual Progress Reports, Supervision reports M&E Reports Mid Term Review PCR	<b>Risk:</b> Delays to programme through lack of technical capacity and inadequate staffing <b>Mitigation:</b> This part of the overall RWSSS to be given top priority by AfDB / SALWACO

	<b>Outcome 5:</b> Skills increased for relevant individuals in transfer of adaptation technology	# of key personnel trained in CCR adaptation technology	0	All individuals in targeted groups are trained	M&E Report Reports from Baries Court meetings	<b>Risk:</b> Delays to programme through lack of technical capacity and inadequate staffing <b>Mitigation:</b> Early programme to be arranged for trainers of trainers
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Results chain		PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS/ MITIGATION MEASURES
		Indicator (including CSI)	Baseline	Target		
	Project Component 1 – Ensuring access to climate-resilient water supply and sanitation					
OUTPUTS	Output 1.1: Local CCR risk assessments completed in all target villages	CC Vulnerability and Risk surveys completed for each district	0	Draft Maps by December 2016	Project Report	<b>Risk:</b> Existing provisions for TA may not be adequate to cover this assignment <b>Mitigation:</b> AfDB to consider providing additional resources
	Output 1. 2: District CCR –WASH Plans adopted	# of completed plans	0	5 plans (1 in each district) by June 2017	Planning Documents M&E Report	<b>Risk:</b> Lack of technical ability of those implementing this component of the project <b>Mitigation:</b> Training of CCR planners given high priority
	Output 1. 3: Priority villages for CCR measures identified	# of priority villages/localities selected	0	200	APRs / Mid term review M&E Report	<b>Risk:</b> Political and personal interest interference in selection process <b>Mitigation:</b> Independent review to be undertaken of selection process
	Output 1.4: Physical infrastructure constructed and operational in target communities	# of boreholes drilled following CCR assessment # of rainfall harvesting facilities in place # of standpipes equipped with solar power # of demonstration Market Integrated WASH facility projects established in each district	0	20% of all infrastructure targeted within priority communities	Site inspections / Annual project report M & E Report	<b>Risk:</b> Coordinating multiple interests in busy urban centers is challenging and can be frustrated by bureaucracy <b>Mitigation:</b> effective liaison required with all District council agencies and private sector

	<b>Project Component 2 – Building the institutional framework required for climate-resilient management of the water and sanitation sector</b>				
	<b>Output 2.1:</b> MWR and Met Office supported with technology, real time data recording and analytical capabilities to observe climate trends	Published annual report	N/a	From Jan 2017	Project Report <b>Risk:</b> Staff shortages may delay purchase of equipment and training <b>Mitigation:</b> Early recruitment of competent staff is recommended
	<b>Output 2.2:</b> Existing Climate Change Secretariat strengthened with reference to the water and sanitation sector	# of staff Climate change secretariat minutes Project Reports	N/a	2 permanent staff	Annual project report M & E Report <b>Risk:</b> Competing priorities and historical lack of cross sectorial engagement could limit the secretariat's effectiveness <b>Mitigation:</b>

	<b>Output 2.3:</b> Existing Donor Coordination Group strengthened and briefed on CCR issues	Minutes of Meetings	N/a	Minutes from March 2016	Annual project report	<b>Risk:</b> Too many competing pressures on time to ensure effective commitment <b>Mitigation:</b> AfDB and DFID should encourage wider donor support
	<b>Output 2.4:</b> Key staff in MWR and Met Office trained to act as CCR advisers	Staff performance reviews	N/a	Staff review	Annual project report	<b>Risk:</b> Staff shortages may delay purchase of equipment and training <b>Mitigation:</b> Early recruitment of competent staff is recommended
	<b>Output 2.5:</b> National Rural Water and Sanitation Sector Program Document that incorporates understanding of climate risk and appropriate management options, including future technology transfer	Programme Document	N/a	Published Report	Project Report Final Evaluation Report	<b>Risk:</b> Lack of commitment from all parties to contribute and collaborate on developing the program <b>Mitigation:</b> Obtain joint commitment from the Donor Team Leaders to secure the program
	<b>Output 2.6:</b> Communications network established for emergency action	Annual Report	N/a	Published Report	Project Report Final Evaluation Report	<b>Risk:</b> Lack of coordination between key agencies <b>Mitigation:</b> Seek political and media support for the network and publicize successful interventions
	<b>Output 2.7:</b> District Councils and Traditional Authorities assisted to manage CCR	Project Project Reports	N/a	Published Report	Project Report Final Evaluation Report	<b>Risk:</b> Too many other priorities may dilute the message on CCR for water and sanitation <b>Mitigation:</b> Prepare clear short guidance and publicity leaflets in local language
	<b>Project Component 3 – Build Improved Awareness of Climate –resilient WASH practices</b>					
Outputs	<b>Output 3.1:</b> Sector professionals (including 40% women) trained in the ability to deliver improved climate-resilient WASH knowledge, attitudes and practices (including water availability and quality)	# of certified trainers	None currently exist	28 professionals trained by Jan 2017 90 groups of community trainers trained by Jan 2017	Quarterly and Annual Progress Reports, Supervision reports M&E Reports MTR PCR	<b>Risk:</b> Untimely mobilization and sensitization of communities <b>Mitigation:</b> Community mobilization and participation at the onset of the program
	<b>Output 3.2:</b> WASH committees established and trained in CCR evaluation and response procedures	# of committees trained	N/a	1000		<b>Risk:</b> Apathy and lack of interest to engage, participate and own the program from communities <b>Mitigation:</b> Effective mobilisation strategy to actively engage communities; training and capacity building provided throughout project implementation.
	<b>Output 3.3:</b> Study tours arranged for national government staff and local government staff from non-project districts with 40% female representation	# of tours successfully completed	N/a	20		
	<b>Project Component 4- Establish collaborative research and monitoring to enable efficient, climate-resilient contribution to restoration of hydrometric network and monitoring of climate change</b>					

Outputs	<b>Output 4.1</b> National water resources monitoring framework created	Operational WR monitoring framework	N/A	Completion by 2017	Published Report	<b>Risk:</b> Staff shortages may delay purchase of equipment and training <b>Mitigation:</b> Early recruitment of competent staff is recommended
	<b>Outcome 4.2</b> Hydrometric Data processing centre and assessment unit operational	Unit operational	N/A	Completion by 2017	Quarterly and Annual reports	
	<b>Output 4.3</b> Part of hydrometric network installed Operational rain gauges; stream gauges and well gauges	Functioning Network	N/A	50 rain gauges, 100 well gauges, and 25 stream gauges fully operational by 2018	Annual Reports from respective Met/DWR Offices Monitoring Surveys and Audit	
	<b>Output 4.4</b> Coastal retreat/sea level rise surveillance system introduced	Field Measurements	N/A	Completion by 2017	Annual Reports (EPA)	
	<b>Output 4.5</b> Cadre of experienced officers with detailed knowledge of CCA in post	# of officers trained	N/a	Completion by 2017	Evaluation Report	
	<b>Output 4.6</b> Stream and River Gauges operational	# gauges and flow records	N/a	Annual increments	Published reports	
	<b>Project Component 5 – Establish effective Monitoring and Evaluation and Knowledge Management System</b>					
	<b>Output 5.1</b> Monitoring and Evaluation Framework established	Full Project Report	N/a	Completion by mid-2016	Project Review	<b>Risk:</b> Lack of technical ability of those implementing long term M & E <b>Mitigation:</b> Early recruitment of competent staff is recommended
	<b>Outcome 5.1</b> Accurate results provided on CCR and CCA in the RWSSP using Monitoring and Evaluation framework	Proper implementation of M&E protocols for the project	N/a	Completion by 2018	Performance Audit Comparison with parallel findings from 3 <sup>rd</sup> National Communication	
	<b>Output 5.3</b> Report on analysis of experience and lessons learnt in building CCR for rural water & sanitation	Final Report	N/a			



**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).

**US GEF Council questions** (in written communications to GEF secretariat/AfDB)

*Expand on how the installation of 20 stream flow gauges and groundwater monitoring stations as well as 200 rain gauges will result in an early warning system (e.g., what will be the scientific basis for making forecasts and generating accurate and timely warning, how will warnings reach those at risk, how will AfDB ensure that the risks and warnings understood, that the warning information is clear and usable, and that people prepared and ready to act to the warnings?)*

In addition to earlier comments it is noted that the primary purpose of the meteorological and hydrologic gauging stations is to build up a long-term database of climatic information so that trends can be discerned and this is the most important output and function of the monitoring sites. Capacity to provide early warning of a flood event will exist on major river systems and the relevant officers in MWR/MO will telephone the emergency response center for each downstream district council giving details of the time lapse and anticipated height of the flood crest, based on rainfall data and stream gauging in upper catchments. It will take a number of years to build up a sufficiently accurate database to give precise information on the height and duration of flood events.

*Expand on how it plans to maintain and operate the monitoring equipment that the project will procure and install, including training of staff.*

Maintenance and operation of the equipment will be the primary responsibility of the Water Directorate in partnership with the community, in accordance with the Water Resources Management Act. Rapid advances have been made in the sophistication and reliability of instruments for recording stream flow velocities, rainfall, temperature and other climatic data. The specifications for monitoring equipment will ensure that only robust instruments are used. In most cases, these instruments are precision engineered and must be returned to the manufacturer for servicing or repairs. However, most of the equipment should give trouble free operation over many years without requiring any form of servicing and it will generally be cheaper to buy replacements rather than seek to maintain the units.

*Expand on how it will ensure the sustainability of climate change adaptation education for decision makers at the national and district level;*

The project involves preparation of a National WASH programme; strengthening of the Climate Change Secretariat; identification of CCR officers in the Ministry of Water Resources and Meteorological Office and the engagement of District Officers in the preparation, implementation and monitoring of District WASH CCR Plans. These measures are all mutually reinforcing and will ensure that the lessons learnt, and training delivered, on CCR in the WASH sector is constantly reviewed.

*Clarify how it will communicate results, lessons learned and best practices identified throughout the project to the various stakeholders both during and after the project;*

Results, lessons and best practices will be communicated through Joint Donor/Government Sector Reviews once every year, Implementation Progress Results Reports by Bank's supervision missions twice every year, Impact Surveys and Annual Technical Audits, Reports Project Completion Report, and Post Evaluation Report, all of which are provided for under the project.

The measures outlined above, and the wider programme of community awareness-raising through training of trainers and the creation of 1000 WASH committees in the individual villages will ensure that all stakeholders are fully informed during the course of the programme. In the longer term the emphasis on CCR in the WASH sector will have been passed on through the Climate Change Secretariat to the project teams revising and developing NAPA, and to the new institutions constituted under the Water Resources Management Act. The work of strengthening WASH within rural communities will need to be expanded and extended to all other parts of the five districts and remaining districts in Sierra Leone so the RWSSP should be seen as only a first stage in reaching out to all stakeholders for the foreseeable future.

*Engage local stakeholders, including women, in both the development and implementation of the program.*

The project already draws on a gender expert for the design of relevant sections of the programme and SALWACO, the implementing agency has employed a female full time gender and community development specialist to help train the

trainers and liaise with the NGOs who will deliver the climate change adaptation and other WASH messages to their counterparts at community level.

#### **GEF Secretariat Review Sheet Comment 17**

*The mention of the role of local and indigenous communities and that of the WASH committees is made. However, this is done in a general manner. Recommended action: by CEO endorsement, please clarify the civil society and indigenous groups involved as well as the mechanisms for their involvement.*

As explained in the CEO endorsement report, the process of engaging village communities in the five districts will be undertaken strictly in accordance with established practice for district level consultations which involves direct contact and discussion with the paramount chiefs, section chiefs, village headmen (and women) and the traditional authority (TA) elders. All training workshops and training activities will take place with the full knowledge and approval of the TA and local representatives of civil society and the indigenous community is guaranteed through the process of establishing 1000 WASH and water source committees at village level with full gender representation including women, youths and disadvantaged groups. The process of developing District WASH CCR Plans will involve publication of draft plans and full discussion through the baries courts (TA community meetings) with the same range of community representatives.

#### **ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS<sup>5</sup>**

A. provide detailed funding amount of the ppg activities financing status in the table below:

PPG Grant Approved at PIF:			
Project Preparation Activities Implemented	GEF/LDCF/SCCF/NPIF Amount (\$)		
	Budgeted Amount	Amount Spent To date	Amount Committed
Climate Change and Water Impacts	60,000	60,000	60,000
Consulting firm for project preparation	100,000	80,0000	100,000
Surveys and inception/validation missions	40,000	15,000	40,000
Total	200,0000	155,000	200,000

#### **ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)**

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

Not Applicable N/a

<sup>5</sup> If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

## ANNEX E DRAFT CLIMATE CHANGE QUESTIONNAIRE

To be administered as a structured interview with the Traditional Authority members for each locality (village)

We need to understand past weather patterns in order to learn how the climate is changing. Please answer the following questions (as a group) by thinking about your experience over the last ten years,

RAINFALL		
Has the amount of rainfall each year	Increased	
	Decreased	
	Stayed the same	
Does the rainy season start and finish at the same time	Yes	
	No	
If the answer is no has the season	Increased in time (by how many weeks)	
	Decreased in time (by how many weeks)	
10 years ago in which month did the rainy season	Begin?	
	End?	
Now, when does the rainy season	Begin?	
	End?	
TEMPERATURE		
Ten years ago which was the hottest month of the year?		
Now which is the hottest month of the year?		
DROUGHTS		
In the last ten years how many severe droughts have you experienced? I.e. when your usual water supply has dried up for more than:	4 weeks	
	Two months	
	Three months	
In which years did the droughts take place?	2005	
	2006	
	2007	
	2008	
	2009	
	2010	
	2011	
	2012	
	2013	
	2014	
	2015	
FLOODS		
In the last ten years how many severe floods have you experienced? I.e. when houses have been made uninhabitable:	Give the year and number of houses affected	
In which years did the floods take place?	2005	
	2006	
	2007	
	2008	
	2009	
	2010	
	2011	

	2012	
	2013	
	2014	
	2015	

## **ANNEX F      ANNUAL REPORT ON CCR MEASURES IN THE WASH SECTOR**

An annual report will be prepared by the Ministry of Water Resources and the Meteorological Office in conjunction with the Climate Change Secretariat to report progress on the implementation of CCR Measures in the WASH Sector

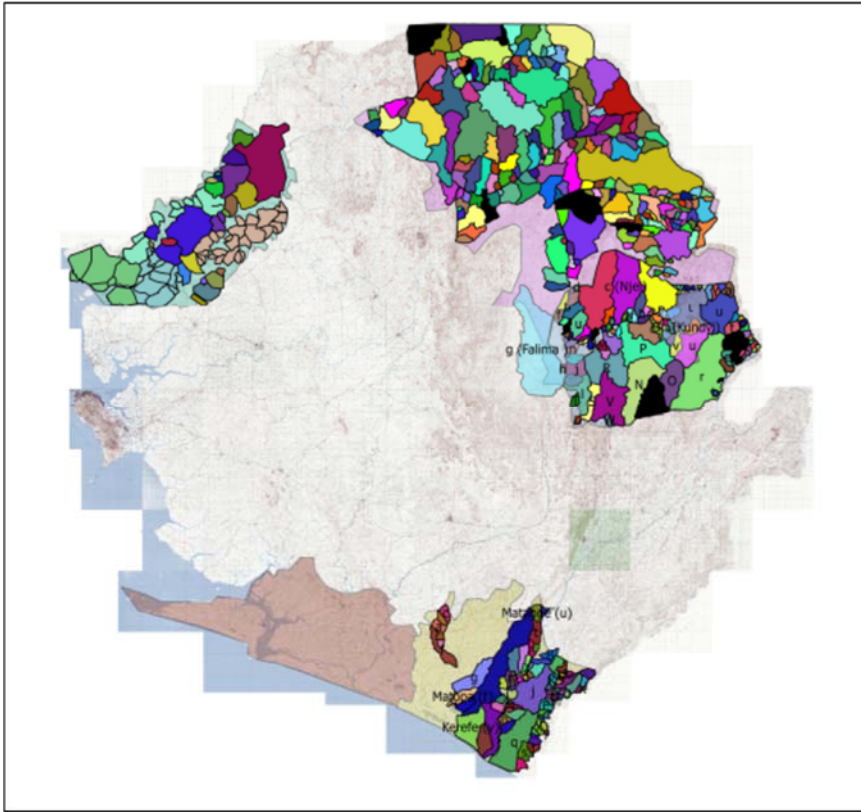
### **Outline Contents of the Report**

1. Aims and Objectives
2. Results of the Questionnaire Survey and Vulnerability Mapping
3. Progress in Developing and Implementing WASH CCR Plans for the Five Districts
4. Description of natural disasters and extreme events in the WASH sector attributed to CC,
4. Progress in installing and operating stream flow gauges and Met Stations
5. Analysis of flow records and climatic data
6. Emergence of trends in long-term Climate Change
7. Progress in CCR building in other economic sectors, with direct impacts on WASH.

## **ANNEX G      CATCHMENT MAPPING**

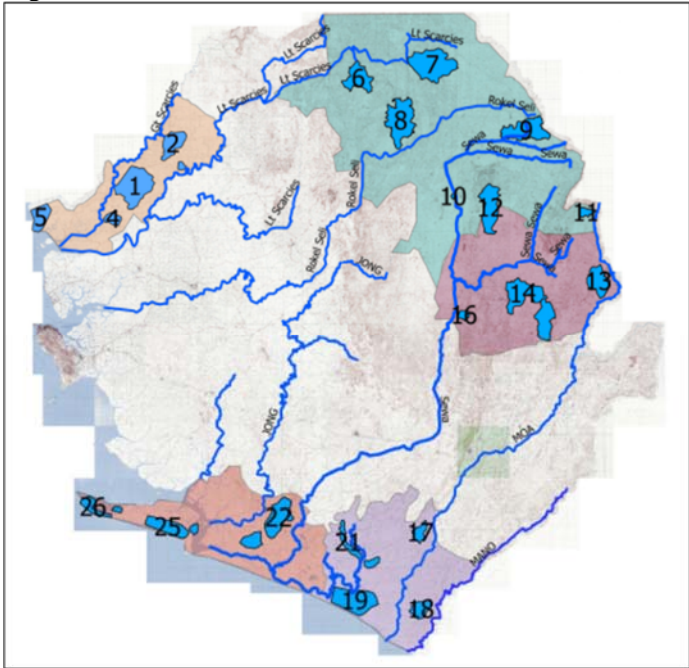
This annex illustrates the process of catchment mapping which has been undertaken during project preparation. Figure G.1 shows the breakdown of primary catchments (watersheds) within four of the five districts. (Kambia, Koinadugu, Kono and Pujehun). No mapping has been undertaken within Bonthe District because there are very few discernable catchments within the coastal plain.

Figure G.1      Distribution of Primary Catchments



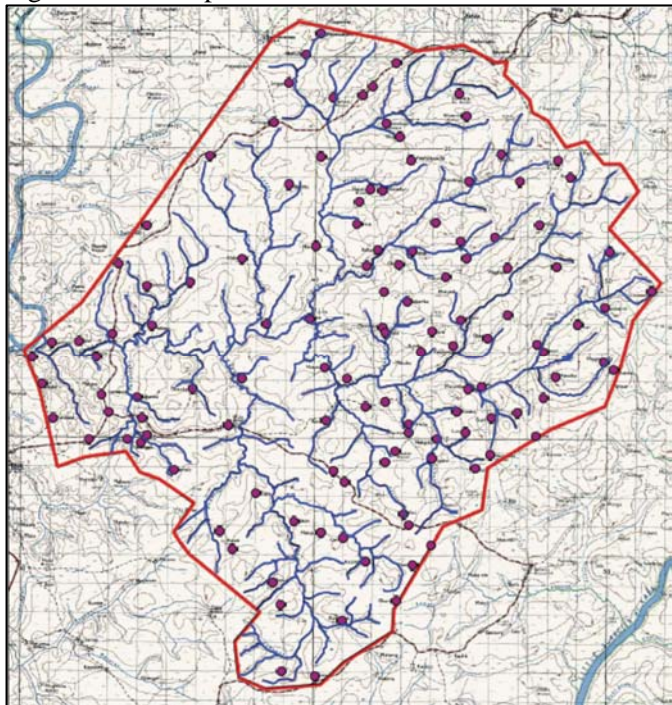
Twenty five (25) catchments were selected for closer analysis in order to develop the climate change vulnerability assessment and details are contained with the working paper. These catchments (see Figure G.2) will be used to pilot the questionnaire survey and develop the full framework of the District WASH CCR Plans.

Figure G.2 Location of Pilot Catchments



Two catchments in Kambia (sites 1 and 5) have been selected to show the characteristics of the village localities in relation to the river systems.

Figure G.3 Sample Catchment 1 Kankana River Catchment (Great Scarcies River Basin)



This is the largest of the five sample catchments in Kambia. It covers approximately 275 km<sup>2</sup>. There are 134 settlements within the watershed. The distribution of streams is typical of the central plains and upland areas of Kambia.

The second example is chosen because it represents the typical conditions found along the coast. There is no discernable watershed and a high degree of hydraulic conductivity across the entire plain with extensive marshes, swamps and mangrove forest where saline water penetrates inland.

This coastal area does not represent a true catchment since the boundaries are drawn at random. However it includes the main watershed of the Mahela Creek and an important island that has several exposed settlements facing open the sea, which are vulnerable to storms and sea-level rise. The overall area is 90km<sup>2</sup> with 29 settlements

Figure G.4 Sample Catchment 5 Yelibuya Island and Mahela Creek





## **ANNEX H Monitoring and Evaluation Programme**

### *Introduction*

The Monitoring and Evaluation Framework for the Project has been developed at strategic and project level.

### **Strategic level AMAT Framework**

The strategic level framework is designed to meet the criteria laid down by GEF in guidance on the Adaptation Monitoring and Assessment Tool (AMAT). This requires that a number of indicators are chosen (a minimum of one for each of the Project Components) that can be tracked quantitatively at three stages in the project – at CEO Endorsement / Approval request, at programme Mid-term and at project completion. The documents used in developing the strategic framework are:

- Table 7: Adaptation to Climate Change Focal Area Results Framework and (LDCF/SCCF) Framework;
- Climate Change Adaptation – LDCF/SCCF Adaptation Monitoring and Assessment Tool (AMAT); and,
- AMAT Excel Spreadsheet.

### **Project Level Framework**

The project level framework is designed to track performance on individual activities on a month-by month basis throughout the project.

Both the Project Level and Strategic Frameworks are closely linked and the project level evaluations are designed to feed into the Strategic framework.

### **Strategic Level AMAT Framework**

ADAT is structured around the three principal objectives of the Least Developed Countries Fund and the three key stages in the life of a project or programme; these stages are: at CEO Endorsement / Approval request, at Programme Mid-term, and, at Programme Completion. Targets are set at the Approval request stage against a set of outcomes and outputs using quantifiable indicators.

The targets are described in the PIM and are outlined below in summary form. (It is important to note that the objectives listed below are those established for the LDCF, rather than for the Climate Change Resilience programme itself.)

### **Objective 1: Reduced vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and international level**

**Outcome 1.1** is concerned with measures incorporated into country level development frameworks and looks for evidence that adaptation actions have been implemented, using three indicators which record the number of actions, whether or not these actions involve firm budgets and targets and to what extent the targets are achieved within the programme.

The Climate Change Resilience component of RWSSP will address a number of specific goals set out in the NAPA Second Communication and the third Poverty Reduction Strategy Paper (PRSP) Agenda for Prosperity. These are not budgeted for in the national programmes, but costs have been allocated to the work being undertaken in CCR of RWSSP and it will be possible to track under indicator 1.1.1.2 whether or not specific objectives of NAPA and PRSP are delivered. There are also proposals for policy reform (for example under the Water Resources Management Act which will be monitored under indicator 1.1.1.3.

**Outcome 1.2** deals with reduced vulnerability to climate change in relation to individual development sectors. The specific indicators that are being used for CCR of RWSSP are listed below:

1.2.1	Infection rates of population to climate-sensitive (water borne) diseases as compared to past population infected per year;
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1.2.3	Number of additional people provided with access to safe water supply and basic sanitation services given existing and projected climate change;
1.2.4	Increase in water supply targeted areas;
1.2.11	% of population with access to improved flood and drought management;
1.2.14	Scores in the Vulnerability and Risk Perception Index, based on surveys to be undertaken within the five districts.

**Output 1.2.1** aims to ensure that vulnerable physical, natural and social assets are strengthened in response to climate change impacts, including variability. The specific indicators that are relevant under CCR of RWSSP include:

1.2.1.1	Health measures introduced to respond to climate-sensitive waterborne disease. (Such measures include WASH training and CLTS);
1.2.1.4	Sustainable drinking water management practices introduced to increase access to clean water drinking water;
1.2.1.8	Type and level of integrated disaster response measures to extreme climate events introduced to increase number of lives saved.

## **Objective 2: Increase adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global level**

Outcome 2.1 and Outputs 2.1.1 and 2.1.2 seek to ensure that there is increased knowledge and understanding of climate variability and change-induced risks at country level and in targeted vulnerable areas and all four indicators are relevant to the CCR of RWSSP. These are:

2.1.1	Updated risk assessments are in place;
2.1.1.1	Risk and vulnerability assessments have been conducted,
2.1.1.2	Relevant risk information disseminated to stakeholders
2.1.2.1	Appropriate monitoring systems are in place

The most important of these indicators is 2.1.2.1. and the specific monitoring systems that will be evaluated, including stream flow gauging, rainfall and temperature recording, water quality (both surface and underground), and sea level rise.

Outcome 2.2 seeks strengthened capacity to reduce risks to climate-induced economic losses. Although the focus of the RWSSP is on water and sanitation rather than economic wellbeing, it is a simple fact that the state of the local economy in any areas is inextricably linked to health and individual livelihoods. Consequently any serious drought, flood or water-borne epidemic has serious economic repercussions. The relevant indicators for measuring strengthened capacity are:

2.2.1	Number and type of targeted institutions with increased adaptive capacity to reduce risks and responses to climate variability,
2.2.2	Capacity perception index

All institutions described in the PIM will be monitoring and evaluated under 2.2.1. These include:

- the International Partners' forum
- Climate Change Secretariat
- SALWACO
- Participating NGOs
- District Council WASH Committees
- All water source and water user committees

AMAT provides a framework for assessing the extent to which capacity building and knowledge transfer has succeeded in any given project or programme. This is based on an independent survey of the participating institutions and a score (disaggregated by gender) from 1 to 5 ranging from 1 = No capacity built to 5 = Full ability to supply or disseminate knowledge has been demonstrated. This survey will be undertaken at Programme Midterm and Completion.

A specific output (2.2.1) considers the extent to which the adaptive capacity of national and regional centers and networks has been strengthened to rapidly respond to extreme weather events. The themes under which this evaluation will be made include:

- Existence of Early Warning System and Vulnerability Mapping
- Policy reform
- Capacity development
- Strengthened infrastructure
- Coastal management
- Community based adaptation
- Special programmes for women
- Water storage
- ITC – development of GIS

### **Objective 3: Promote transfer and adoption of adaptation technology**

The two outcomes under this objective look for successful demonstration of the deployment and transfer of relevant technologies and an enhanced enabling environment to support the transfer processes. The related outputs look for evidence that technologies have been successfully transferred to targeted groups (3.1.1), that skills have been increased for relevant individuals (3.1.2) and that relevant policies and frameworks have been developed (3.1.3). Indicators that have been selected under this objective are the following:

3.1.1	% of targeted groups adopting adaptation technologies by technology type,
3.1.1.2	Type of relevant climate change adaptation technology implemented in selected areas by participatory stakeholders
3.2.1	Policy environment and regulatory framework for adaptation-related technology transfer established or strengthened
3.2.1.1	Number of individuals trained in adaptation-related technologies
3.2.2.3	Number of policies developed or strengthened

### **Project Level Activities Framework**

The overall programme evaluation will take place at the mid-term and on completion, but the delivery of climate change resilience objectives will be dependent on ensuring that each stage of the detailed work programme is completed to time and budget.

In the short term the most critical activity is to complete questionnaire surveys for all communities in the five districts and to translate the results into District-wide WASH plans, setting out the priorities for infrastructure improvement and development. It will only be possible to judge the full extent of the task of adapting WASH to the impacts of climate change when the results for each community have been assessed and the level of exposure to risk from droughts, flooding, water shortages and lack of sanitation has been confirmed.

Progress in completing each element of the programme will be assessed through monitoring reports to be prepared by the lead NGOs and submitted to the District WASH committees and SALWACO simultaneously.

### **Cross Cutting Activity Implementation Procedures (Gender, Youth and Disabled Mainstreaming)**

The success of WASH and the incorporation of climate change resilience activities into the overall programme depends heavily on engaging those sectors of local communities who are most affected by poor health and sanitation and who are in the best position to introduce remedial actions. All the evidence points to the fact that it is women, young children (and girls in particular), youths and the disabled and elderly who fit into these category and if these groups are not adequately catered for in planning, management and decision-taking then the programme will fail.

Building climate change resilience into the rural water supply and sanitation programme depends upon engaging women at all stages of implementation, including training and awareness raising, equal representation on committees and management boards, staffing of NGOs and training organisations, and management of the local water source and water user committees.

## **Generic Activity Implementation Procedures**

(Identify all generic activities, such as reporting, requisition for funds, procurement, communication and correspondences record keeping, etc. and list the logical sequence of tasks with respect to each activity including forms where necessary)

ACT-IVITY	DESCRIPTION	PROCEDURES	FREQUENCY/TIMING	RESPONSIB-ILITY
A.1	Undertake Catchment Surveys	Distribute questionnaire	May-July 2016	District WASH Engineers & NGOs
		Process results	August-Sept 2016	District WASH Engineers & NGOs
		Publish findings	October 2016	SALWACO
A.2	Prepare District WASH CCR Plans	Draft each plan	Oct-Dec 2016	NGOs
		Consult on plans	Jan-Feb 2017	District WASH Committees
		Edit Plans	Mar 2017	NGOs /TA
		Adopt Plans	Apr 2017	District Councils
A.3	Upgrade Water Points	Let individual contracts to NGOs	Continuous operation throughout the RWSSP	SALWACO
		Undertake site surveys		NGOs
		Carry out improvements		NGOs
A.4	Create New Water Points	Let individual contracts to NGOs	Continuous operation throughout the RWSSP	SALWACO
		Undertake site surveys		NGOs
		Carry out improvements		NGOs/Contractors
A.5	Install Water Harvesting Schemes	Identify demonstration areas / communities	By Oct 2015	TA /SALWACO
		Design projects	By Dec 2015	TA
		Implement projects	During 2016	SALWACO/ NGOs/Consultants
A.6	Create New Sanitation Infrastructure	Select sites	Continuous operation throughout the RWSSP	TA/SALWACO
		Design projects		TA/NGOs
		Implement projects		NGOs
B.1	Promote International Cooperation	Meetings of Partners and Government	Six month intervals	AfDB / Partners
B.2	Strengthen CC Secretariat	Formalise meetings / agendas / work programme / budgets	Quarterly meetings	Government of Sierra Leone
B.3	Train CCR Officers in MWR/MO	Make staff appointments/ provide training	By December 2016	AfDB / Government MDAs
B.4	RWSS Programme Document	Set up study	By March 2017	TA/ Government MDAs
B.5	WASH administration	Establish water source and water user committees in each district	By December 2016	District WASH Committees and Traditional Authorities
C.1	Prepare WASH Manual	Draft Document	By December 2016	SALWACO / TA
C.2	Train 28 Professionals	Arrange training programme and materials	By December 2016	TA/SALWACO
C.3	Train 90 Groups of Trainers	Arrange training programme and materials	By December 2016	TA/SALWACO
C.4	Train 1000 local committees	Arrange training programme and materials	Continuous operation throughout the RWSSP	TA/ SALWACO/NGOs
C.5	Arrange 20 Study Tours	Arrange schedules / select personnel	2017	SALWACO / NGOs

D.1	Develop GIS	Extend existing GIS of pilot catchments to cover all catchments	By December 2016	TA /Consultants
D.2	Gauge Stream Flows	Train specialist personnel / establish monitoring regime	Continuous operation throughout the RWSSP	SALWACO / NGOs
D.3	Install Rain Gauges	Train specialist personnel / establish monitoring regime	Continuous operation throughout the RWSSP	SALWACO / NGOs
D.4	Monitor Boreholes	Train specialist personnel / establish monitoring regime	Continuous operation throughout the RWSSP	SALWACO / NGOs
D.5	Monitor Coastal Retreat	Train specialist personnel / establish monitoring regime	Continuous operation throughout the RWSSP	SALWACO / NGOs
D.6	Pilot Solid Waste Management	Establish sites	December 2016	SALWACO / NGOs
		Design schemes	March 2017	
		Implement projects	December 2017	
D.7	Train water resource specialists	Develop training programme / manage training	December 2017	TA
E.1	Create Monitoring & Evaluation Framework	Apply methodology at Mid-term and Project completion	As required	Independent Reviewers
E.2	Project monitoring	Review progress at three monthly intervals	Continuous	District WASH Committees, SALWACO/ AfDB

## ANNEX H – BUDGET FOR MONITORING AND EVALUATION

Monitoring of weekly and monthly outputs will be the responsibility of M&E Staff within SALWACO, operating under existing project revenue resources and backed up by the supervision and oversight of the M&E technical assistance advisor.

Type of monitoring and evaluation activity	Responsible parties	Time frame	Budget (USD)
Quarterly Project Reports	National Project Coordinator leads the organization, in close consultation with SALWACO and AfDB.	Every 3 Months	10,000
Project Implementation Review (PIR)	AfDB LTO with inputs from the National Project Coordinator and AfDB Budget Holder. Submitted by the AfDB GEF Coordination Unit to the GEF Secretariat. Final report also submitted to the PSC and the GEF Operational Focal Point by the National Project Coordinator.	Annually	30,000
Design and implementation of monitoring and evaluation system	National Project Coordinator with support from the Chief Technical Adviser (CTA) and the AfDB Lead Technical Officer	Within the first six months after the project inception	10,000
Field-based impact monitoring	National Project Coordinator with support from other project partners (NGOs / District WASH Engineers)	Continually	50,000
Technical reports	National Project Coordinator, Consultants, AfDB	As appropriate	Component budgets
Mid- term evaluation	External Consultant, AfDB independent evaluation unit in consultation with the project team and other partners	At mid-point of project implementation	40,000
Final evaluation	External Consultant, AfDB independent evaluation unit in consultation with the project team and other partners	At the end of project implementation	50,000
Project completion Report (PCR)	Project Coordinator	At least one month before end of project	None
NPC, CTA and project admin assistance estimate total cost for all M&E activities			30,000
<b>TOTAL</b>			<b>220,000</b>

ANNEX I      TASKS AND BUDGETS FOR TECHNICAL ASSISTANCE TO RWSSP

<b>Specialist</b>	<b>Status</b>	<b>Task / Inputs</b>	<b>Total Days</b>	<b>Daily Rate</b>	<b>Amount</b>
<b>Climate Change</b> International Consultant	International Consultant	6 missions each of 4 weeks duration to train staff / review plans/ and monitor progress in CCR Implementation	168	500	84000
<b>WASH Policy Author</b>	National Consultant	To draft relevant guidance on Climate Change Adaptation for the National Water Resources Authority Two person/months	60	300	18000
<b>Hydrologist / Water Resources International Consultant</b>	International Consultant	Tasks as listed in Annex 1 Hydrologist Report - 22 months	440	500	220000
<b>Community Development</b>	National Consultant	Tasks listed in CD Report 2 year Contract	440	250	110000
<b>M&amp; E</b>	International Consultant	2 missions (Mid Term and Final Evaluation)	20	500	10000
<b>Total</b>					<b>442000</b>

ANNEX G TECHNICAL ASSISTANCE PLANNED DURING PROGRAMME DELIVERY

<b>Specialist</b>	<b>Status</b>	<b>Task / Inputs</b>	<b>No. of Days</b>	<b>Total Days</b>	<b>Daily Rate</b>	<b>Amount</b>
<b>Climate Change</b> International Consultant	International Consultant	6 missions each of 4 weeks duration to train staff / review plans/ and monitor progress in CCR Implementation	168	168	500	84000
<b>WASH Policy Author</b>	National Consultant	To draft relevant guidance on Climate Change Adaptation for the National Water Resources Authority Two person/months	60	60	300	18000
<b>Hydrologist / Water Resources International Consultant</b>	International Consultant	Tasks as listed in Annex 1 Hydrologist Report - 22 months	440	440	500	220000
<b>Community Development</b>	National Consultant	Tasks listed in CD Report 12 month Contract	220	220	300	66000
<b>M&amp; E</b>	International Consultant	2 missions (Mid Term and Final Evaluation)	20	20	500	10000
<b>Total</b>						<b>398000</b>