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MIDTERM PERFORMANCE EVALUATION

WEST AFRICA BIODIVERSITY AND CLIMATE CHANGE PROGRAM/

SIERRA LEONE COASTAL LANDSCAPE COMPLEX

October 2019

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Front cover photo:

Embankment at Momaya Village, Bonthe-Sherbro River Estuary
(Credit: R. Volk)

DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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~ The Evaluation Team

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ACRONYMS

AbC	Abidjan Convention
BCC	Behavior Change and Communication
C@R	Coasts at Risk
CCAP	Climate Change Adaptation Plan
CCNRMN	Coastal Chiefs Natural Resources Management Network
CCVA	Climate Change Vulnerability Assessment
CIESIN	Center for International Earth Science Information Network
CLA	Collaborating, Learning, and Adapting
CMP	Co-Management Plan
CSA	Climate-Smart Agriculture
DRR	Disaster Risk Reduction
ECOWAS	Economic Community of West African States
EMR	Ecosystem Mangrove Restoration
EPA	Environment Protection Agency
EWS	Early Warning System
FGD	Focus Group Discussion
GESI	Gender Equality and Social Inclusion
GoSL	Government of Sierra Leone
ICZM	Integrated Coastal Zone Management
IFSS	Improved Fish Smoking System
IKMS	Information and Knowledge Management System
ISP	Institution Strengthening Plan
KII	Key Informant Interview
LCPE	Land, Country Planning, and Environment
LGRD	Local Governance and Rural Development
M&E	Monitoring and Evaluation
MAFFS	Ministry of Agriculture, Forests, and Food Security
MDA	Ministries, Departments, Agencies
Met-Agency	Sierra Leone Meteorological Agency
MFMR	Ministry of Fisheries and Marine Resources
MRC	Mangrove Restoration Committee
MRU	Mano River Union
NAP	National Adaptation Plan
NPAA	National Protected Areas Authority
NRM	Natural Resources Management
RDCS	Regional Development Cooperation Strategy
SBC	Social and Behavioral Change
SLCLC	Sierra Leone Coastal Landscape Complex
TOC	Theory of Change
UNDP	United Nations Development Program
USAID	United States Agency for International Development
USAID/WA	United States Agency for International Development/West Africa
VA	Vulnerability Assessment
VSLA	Village Savings and Loan Association
WA BICC	West Africa Biodiversity and Climate Change Program
WARFP	West Africa Regional Fisheries Program

EXECUTIVE SUMMARY

PROJECT BACKGROUND

USAID's West Africa Biodiversity and Climate Change Program (WA BICC) is a five-year, \$48.9 million regional program initiated in 2015 with the goal to "address both direct and indirect drivers of natural resource degradation to improve livelihoods and natural ecosystems across the region". WA BICC activities include three components: (1) combatting wildlife trafficking, (2) improving coastal resilience, and (3) reducing deforestation, forest degradation, and biodiversity loss in mangrove and upland forests. The primary focus of Component 2 is to improve coastal resilience for some 2.2 million people living in the Sierra Leone Coastal Landscape Complex (SLCLC), and to pilot adaptation actions that can inform coastal resilience efforts in six coastal countries in West Africa. In a 2014 study of 139 coastal nations funded by USAID, Sierra Leone was found to be the most vulnerable coastal nation. This finding was corroborated by a detailed 2017 Sierra Leone Coastal Vulnerability Assessment conducted under the auspices of WA BICC.

The WA BICC implementation strategy to improve coastal resilience in the SLCLC is two-fold: (1) Build capacity at all levels to generate and use climate information in coastal planning, with support to National Adaptation Plan (NAP) processes; and (2) Pilot and scale-up site-based coastal adaptation strategies that are effective. A total of 26 coastal communities have been targeted for site-based adaptation strategies that include three core activities – mangrove restoration and conservation, coastal protection through embankment construction, and livelihood development. These communities present a learning opportunity on improving coastal resilience in the face of seemingly daunting challenges.

EVALUATION PURPOSE AND SCOPE

USAID/West Africa commissioned this formative, midterm performance evaluation to contribute to the understanding of effective development programming for coastal resilience and mangrove management and conservation. The evaluation is focused on Component 2 and the program's site-based activities at 26 communities in the SLCLC. These communities span the four major estuaries in the country: Scarcies River Estuary, Sierra Leone River Estuary, Yawri Bay Estuary, and Bonthe-Sherbro River Estuary. The evaluation is intended to provide indications of overall progress, validity of activity design, and the likelihood that program objectives can be achieved and sustained. It is also intended to identify key lessons learned and recommendations that can inform adaptive management of the remaining WA BICC activities and future programming.

EVALUATION METHODOLOGY

The evaluation was designed to collect data and information from a broad set of stakeholders at community, national, and regional levels. Two types of data were collected: primary data collected through interviews, focus group discussions (FGD), and direct observation; and secondary data compiled from existing documents. The evaluation team visited 13 of the 26 coastal communities. Village selection was generated by purposive sampling based on the type and status of activities at each site. The selection of individuals for participation in FGDs and interviews was made to ensure inclusivity regarding age and sex. A total of 15 males and 15 females, including youth, were invited to participate in FGDs per community. Interviews with community members and key informants in Freetown, together with an online survey emailed to all regional and national stakeholders, completed the data collection. Overall, 391 people participated in FGDs (including 198 women and 147 youth under the age of 30); 26 in Key Informant interviews; and five out of 19 people responded to the online survey questionnaire.

SUMMARY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Objective 1: Progress toward Meeting Program Objectives

I.1 To what extent are communities adopting the core WA BICC activities, and what are their perceived achievements to date?

The evaluation team found that for all three core activities, communities are generally very supportive and pleased with the support provided by WA BICC, but with room for improvement. There is variability in the quality, effectiveness and suitability of activities. The program strengthened or created more than 75 Village Savings and Loan Associations (VSLA) and this activity appears to be the most widely successful. Mangrove restoration had mixed results, with several communities reporting first-time or multiple failures at nursery and restoration sites due to various factors. Nevertheless, these activities together with the two embankments that were constructed provide useful lessons learned about techniques and processes that will greatly benefit future programming.

I.2 To what extent is WA BICC succeeding in building the capacity of local communities to participate and take ownership of activities?

The program has invested significantly in capacity-building for community members, including training on various aspects of VSLA, techniques of mangrove restoration, and embankment construction. Trainees report that they are satisfied and appreciative of the new knowledge and skills gained. Several communities claim improved community cohesion as a result of the activities, although a handful of individuals expressed frustration that training was not implemented in their communities to allow broader participation.

I.3 To what extent is WA BICC succeeding in building the capacity of government authorities and other organizations to effectively support, manage, monitor and sustain the activities?

The program conducted or co-sponsored several trainings for representatives of national and regional organizations. Trainees rate the organization, content, and delivery of the various trainings received very high. Training was provided on topics such as climate information services, vulnerability assessment, organizational capacity, and carbon content analysis of forests and mangroves. All trainees reported that WA BICC staff has strong expertise and is well organized and known for bringing in top-notch consultants and experts. The program is well appreciated for its efforts to assist at least five countries to strengthen their National Adaptation Plans (NAP). Among the important contributions of WA BICC at the regional level is support that led to the recent adoption of Abidjan Convention protocols on ICZM and Sustainable Mangrove Management, to which Sierra Leone is a signatory.

I.4 To what extent are WA BICC efforts leading to the development and implementation of mangrove management plans at the local level?

The process for developing mangrove management plans is at an early stage. Several ministries, departments, or agencies (MDAs) have jurisdictional stake in the management of mangrove forests, and the program is taking the necessary steps to help consolidate and coordinate the various strategies, policies, plans, and legislation related to the coastal zone. A newly drafted Climate Change Adaptation Plan (CCAP) will link to the existing policy framework, and a Co-Management Plan (CMP), that will include requirements for mangrove management and conservation, other protected areas, and resource use activities, is presently being discussed as a next step.

I.5 How effective is WA BICC in promoting diversification and equity in coastal resilience activities?

Women and youth are well represented in almost all program activities. Women and youth express that they have been given every opportunity to participate fully and equally in program activities. Women are

especially strong and in leadership positions in the various VSLA groups, but they are also quite involved in mangrove restoration activities. Women, almost without exception, stated strong benefit and empowerment from VSLA loans. They now have opportunity to save money; many of them for the first time. The youth who participated in FGDs were generally outspoken and often more progressive in thinking about longer-term needs and solutions.

Objective 2: Validity of Activity Design, Approaches, and Assumptions

2.1 How valid are the Theory of Change (TOC), assumptions, and approaches that underlie WA BICC efforts as perceived by stakeholders?

The program's "three-tiered approach" of implementing activities simultaneously at the regional, national, and local levels is a self-reinforcing approach that should pay dividends in the longer-term towards maintaining political will and investment-focus on coastal resilience. The approach involved completion of a comprehensive and science-based climate change vulnerability assessment (CCVA), followed by options analysis and consensus-based prioritization of intervention activities. The evaluation team found that the Program's theory-of-change should be updated based on program experience as part of the program's adaptive management approach. For example, two shortcomings of note include the observation that there are no specific outputs/outcomes with respect to: (1) support for alternative or supplemental livelihoods; and (2) reduction in demand for and use of mangrove wood.

2.2 How have site selection criteria and contextual factors served to either support or detract from the successful implementation of WA BICC activities?

The program consulted with community stakeholders to select sites for mangrove restoration, based on multiple factors. The evaluation team learned that site selection was a deliberate, consensus-based process at first, but later became more *ad hoc* as many of the initial sites failed and the Mangrove Restoration Committees (MRCs) felt pressured to begin restoration efforts elsewhere to show success. As a result, some mangroves were planted in areas with acceptable soil quality but with limited tidal influence. In many cases, mangroves were planted in sites exposed to extensive herbivory by domestic animals. Several other sites proved to be not acceptable for reasons such as insecure land tenure. These contextual factors negatively affected the success of many of the restoration activities.

In addition, the 26 target communities under WA BICC Component 2 have considerable travel time and accessibility constraints that have made it difficult for program staff to attend to the full suite and frequency of technical assistance envisioned by the program. The selection of fewer target communities to participate in field work would allow for more frequent visits and the necessary time for technical staff to effect a deeper degree of social and behavioral change that is fundamental to improved coastal resilience.

2.3 How well does WA BICC address the particular drivers of mangrove loss and degradation, including the biophysical, socio-cultural, and economic factors?

Despite the logical approach and comprehensive analysis that was undertaken, the evaluation team finds that, from a big picture perspective, the selected program interventions and targeted results have shortcomings that should be lessons learned for future programming. For example, the program paid insufficient attention to the main drivers of mangrove loss and degradation, and instead focused the majority of efforts on mangrove restoration. The evaluation team finds that the restoration results are not significant at scale, especially considering that the demand for mangrove wood has not been curtailed. In addition, the evaluation team finds that the program could have broadened its livelihoods scope to introduce a range of alternative or supplemental livelihoods for which the program could provide training or other support. The focus on VSLA has been positively received and is clearly an important first-step, but efforts to engage the private sector and to create supply and demand for improved technologies (e.g., improved fish-smoking ovens, cook stoves, oyster culturing, etc.) could have benefits for both people and

nature towards improved resilience. WA BICC indicates that livelihood activities have been planned, but had not yet been implemented at the time of evaluation.

2.4 How well are WA BICC activities managed and coordinated to achieve objectives?

Coastal challenges are significantly unique and demand high-level process and participation among key stakeholders. The program has made a positive contribution in the formation of the Coastal Chiefdoms Natural Resources Management Network (CCNRMN). The CCNRMN serves to enhance communication and coordination among national authorities, Paramount Chiefs, Section and Town Chiefs, Regional Councils, local elected officials, and representatives of various community-level user groups and associations. Network members use WhatsApp to communicate news of any incident, forecast, or other event. Now that it is established, however, it remains to be seen whether it will have the necessary political will, resources, and accountability needed to make it sustainable.

Objective 3: Likelihood of Activity Goals to be Achieved and Sustained

3.1 What perceptions do stakeholders have regarding the prospect for activities to achieve impact at sufficient scale to achieve intended results?

The evaluation team was unable to assess stakeholder's perception on whether the program will achieve impact at scale. Community stakeholders could not respond to this question, and there is not yet enough information consolidated and macro-analysis completed to allow national-level stakeholders to reach an informed opinion. But a cursory analysis of mangrove loss/gain helps to understand the question of impact at scale. The total area of mangrove forest in Sierra Leone stands at about 105,000 ha. The CCVA found that about 1 percent of this area, or about 1,000 ha is lost each year. The program's mangrove restoration strategy identified about 117 ha of area within the SLCLC suitable for restoration, or about 1 percent of the total area that is lost each year. Finally, the program reports to have achieved about 10 ha of mangrove restoration thus far, or about 0.01 percent of total area that is lost each year. This is the "big picture" with respect to mangrove loss/gain.

3.2 What activities and outcomes are likely to be sustained and why?

At the community-level, the evaluation team finds evidence to suggest that most, if not all, of the VSLA groups will continue beyond completion of WA BICC. There appears to be enough intrinsic operational momentum, strong group dynamics, and self-interest to keep these groups going. Of the many mangrove restoration efforts, it appears that rice-mangrove integration (RMI) has the most potential for scale-up and to be sustained. Farmers who have tried RMI generally find value in the practice, although many are not yet entirely convinced that there is an overall positive cost/benefit ratio. At the national level, the enabling conditions for mangrove conservation and management will take an important step forward if WA BICC and National Protected Areas Authority (NPAA) are together successful in completing and gaining adoption for the proposed CMP.

Recommendations for the Short-Term

The evaluation team recommends the program give high priority to assisting NPAA to complete the development and adoption of the CMP. The program has helped to create this important window of opportunity and the Plan's completion would be a major achievement towards a more unified governance framework for the coastal environment, including the management and conservation of mangrove forests. In order to free-up staff time and resources, the evaluation team recommends that the program hand-off the task of supporting EPA on completion of the CCAP. UNDP's new coastal resilience program is well positioned to continue supporting that effort.

Other recommendations for the remainder of the program relate to: introducing sea-level rise into the policy and management planning dialogue; undertaking an economic analysis of the mangrove “sector”, including work with the mangrove wood cutters to gain their collaboration on sustainable wood harvesting practices; ideas to re-energize and sustain the CCNRMN; VSLA refresher training; and a programmatic assessment by the WA BICC management team to reach agreement with target communities on remaining activities.

Recommendations for Future Programming

Related to future programming for improved coastal resilience, the evaluation team recommends that mangrove restoration should not be the major focus in Sierra Leone. There are higher priorities and precursors needed to improve the preparedness, coping and adaptive capacity of coastal communities, and the governance framework needed to support improved resilience. Attention to the human factors that play a role in resilience – those related to the socioeconomics of mangrove use, diversified livelihoods, land use planning and zoning, building codes, early warning systems, land tenure, political will, and governance – will pay larger dividends for health, safety, and welfare in the long-term. The afore-mentioned Abidjan Convention protocols on Mangrove Management and ICZM should govern future program design and systems approach. Furthermore, ensuring that the right biophysical and land use factors are in place will allow for natural regeneration of mangrove forests with more success and at less expense.

That said, mangrove management and conservation should continue to be a major focus for future programming. But it should be done with stronger linkages to the larger conceptual framework and integrated approach supported by WABICC and its partners that begin to deal with all the components of vulnerability and risk reduction. Two essential components for coastal Sierra Leone are alternative livelihoods and fisheries management. Fisheries is by far the most important source of livelihood and food security for these communities, but all indications point to a current trend of over-exploitation. Improving coastal resilience for Sierra Leone coastal communities must logically include attention paid to the status and management of fish stocks. BCC efforts in this regard are important, but should not be a substitute for actual governance and fisheries reform efforts.

Alternative or supplemental livelihoods will require private sector engagement, and the evaluation team recommends that future programming include the convening of a ‘coastal enterprise incubation workshop’ to discuss private sector ideas and opportunities for conservation enterprise in coastal areas. The appropriate Ministry could be asked to host the workshop, and discussions primed with relevant information, analysis, and case-studies from elsewhere. The use of a revolving fund should be considered to stimulate private sector engagement. Linking private sector interests with the VSLA groups may allow for demand and quick uptake of new products and technologies at competitive prices.

Finally, future programming should give careful consideration to the appropriate balance between the number of target communities receiving field-level technical assistance, and the program resources (human and financial) and logistical challenges that are strongly linked to performance.

I. INTRODUCTION AND BACKGROUND

This report provides details of the findings, conclusions, and recommendations compiled as part of the midterm performance evaluation of Component 2 of the West Africa Biodiversity and Climate Change (WA BICC) Program, which includes activities related to coastal resilience in the Sierra Leone Coastal Landscape Complex (SLCLC). The evaluation was designed and conducted by a team of three independent evaluators under agreement with the USAID/West Africa Analytical Support Services and Evaluations for Sustainable Systems (ASSESS) Project. The WA BICC Program and this external evaluation are funded by USAID/West Africa (USAID/WA) located in Accra, Ghana.

The report provides indications of progress, validity of activity design and approaches used, and the likelihood that WA BICC activity objectives can be achieved and sustained. In addition, the report contributes to the evidence base on effective development programming for mangrove restoration and conservation, and includes lessons learned and recommendations for adaptive management of the remaining activities in the SLCLC and for future programming.

GLOBAL AND REGIONAL BACKGROUND

Nearly 40 percent of the world's population lives within 100km of the coast.¹ It is estimated that some 10 million people experience coastal flooding each year due to severe weather and storm surge, while projections taking into account sea level rise and increasing population density suggest 50 million people per year will be at risk for flooding by 2080.²

The coastal countries of West Africa face a number of environmental and socio-economic challenges and are among the most vulnerable to climate change. The region suffers some of the highest rates of coastal erosion and flooding. Its coastal communities are highly dependent on natural resources for food, materials, and livelihoods. Adaptive capacity is rated low in most countries due to a combination of factors, including high rates of poverty, low education levels, weak governance, and absent or only minimal access to key services, infrastructure, and information.

A recent study indicates that roughly one-third of the region's population resides in coastal areas, which in turn are responsible for 56 percent of GDP.³ The region's coastal zone enjoys a wealth of natural resources, including mangrove forests, fisheries, oil and gas reserves, and high tourism potential. However, resource over-exploitation and environmental degradation are accelerating, and of major concern is the loss of land and declining human health, safety, and welfare associated with the challenges of coastal erosion, pollution, and flooding. The same study found that, for the four countries of Benin, Cote d'Ivoire, Senegal, and Togo in 2017 alone, these challenges cost about \$3.8 billion, or 5.3 percent of the four countries' GDP.⁴

Mangrove forests manifest as the predominant tropical and semitropical coastal ecosystem where rivers flow to the sea. The brackish water that results from the mixing of fresh and saline water, with its constant

¹ CIESIN, 2006

² Adger, Hughes, Folke, Carpenter & Rockstroem, 2005

³ Croitoru, Miranda & Sarraf, 2019

⁴ Ibid

charge of nutrients and sediments, is the defining feature of estuaries. The mangrove-fringed estuary is one of the most productive ecosystems on the planet, and the source of a continual stream of benefits to the human communities that settle along its shore. There are more than 50 true species of mangrove worldwide. Five species in three families are found in West Africa, including the red mangrove (*Rhizophora racemosa*, *R. mangle*, and *R. harrisonii*), the black mangrove (*Avicennia germinans*), and the white mangrove (*Laguncularia racemosa*).

The mangrove's thick tangle of roots and dense thicket support a plethora of ecosystem services upon which both human communities and estuarine ecosystems depend. Figure 1 offers a quick look at some of the many values and uses of mangroves.

Provisioning	Regulating and Supporting	Cultural
Timber and construction materials	Climate regulation	Ecotourism
Fisheries	Coastal protection	Heritage and culture
Biodiversity	Water quality maintenance	Spiritual enrichment
Medicine	Nutrient cycling	Religious value and cultural ceremony
Food	Water cycling	Recreation
Fuelwood	Soil stabilisation and erosion control	Aesthetics
Fibre	Provision of nursery habitats	Education
Tannins	Support to coral reefs, seagrass beds, mud flats and sand flats	Scientific research
Fodder		

Figure 1: Ecosystem services provided by mangroves (UNEP, 2014)

COASTAL SIERRA LEONE

In a 2014 assessment of 139 coastal nations funded by USAID, the Coasts at Risk (C@R) Index scored Sierra Leone as the most at-risk nation in terms of 'susceptibility' and 'adaptive capacity', and the number one coastal nation in terms of 'overall vulnerability'.⁵ The factors underpinning the analysis are summarized in Figure 2 below.

Results from the 2017 Sierra Leone Coastal Vulnerability Assessment, conducted under the auspices of the WA BICC Program, corroborate the extreme vulnerability facing coastal communities in the country. The assessment recorded high rates of poverty; low education levels; extremely limited access to water supply and sanitation; severe food insecurity; constrained access to schools, markets, health centers, and information; and livelihood strategies dominated by fishing, with additional contributions from small-scale agriculture, salt-making, and sand-mining.⁶

⁵ M.W. Beck (Ed.), 2014

⁶ Trzaska et al., 2017

EXPOSURE	SUSCEPTIBILITY	COPING CAPACITY	ADAPTIVE CAPACITY
POPULATION EXPOSED TO	PUBLIC INFRASTRUCTURE	GOVERNMENT AND AUTHORITIES	EDUCATION AND RESEARCH
A. Cyclones	A. Percentage of population without access to improved sanitation	A. Corruption perception index	A. Adult literacy rate
B. Floods	B. Percentage of population without access to improved water source	B. Good governance [Failed States Index]	B. Combined gross school enrollment
C. Sea Level Rise		C. Fish management effectiveness index	GENDER EQUITY
D. Storm Surges	NUTRITION	MEDICAL SERVICES	C. Gender parity in education
E. Tsunamis	C. Percentage of population undernourished	D. Number of physicians per 10,000 inhabitants	D. Percentage of female representatives in the National Parliament
	D. Percentage of animal protein from fish	E. Number of hospital beds per 10,000 inhabitants	ENVIRONMENTAL STATUS / ECOSYSTEM PROTECTION
	POVERTY AND DEPENDENCIES	ECONOMIC COVERAGE	E. Water resources [taken from EPI]
	E. Dependency ratio [share of under 15- and over 65-year-olds in relation to the working population]	F. Insurances [life insurances excluded]	F. Biodiversity and habitat protection [EPI]
	F. Extreme poverty population living with USD 1.25 per day or less [purchasing power parity]	G. Livelihood diversity index	G. Forest management [EPI]
	ECONOMIC CAPACITY AND INCOME		H. Agricultural management [EPI]
	G. Gini-Index		I. Fish stock status
	H. Marine economic revenue (OHI ¹) / GDP per country		INVESTMENT
	NATURAL CAPITAL		J. Public health expenditure
	I. Fish catch		K. Life expectancy at birth
	J. Percentage of population that may receive risk reduction from reefs and mangroves [for tropical analyses only]		L. Private health expenditure

¹OHI = Ocean Health Index
²EPI = Environmental Performance Index 2012

Figure 2: Indicators and components of the Coasts at Risk Index (from M.W. Beck, Ed., 2014)

These socio-economic factors, together with climate change and increasing rates and scale of environmental degradation, place the continued viability and resilience of coastal communities in jeopardy. A study of change in mangrove forest cover along the Sierra Leone coast indicates a loss in total mangrove area of 25 percent between 1990 and 2016, or about one percent/year.⁷ Despite the mangrove loss and degradation, remaining mangroves in the Scarcies River Estuary are reported in good health, with high species diversity, mature forests, and high potential for natural regeneration if human pressures on the forests can be reduced or more well-managed. Health indicators for mangrove ecosystems found in the other three estuaries (Figure 3) are more variable, but all exhibit signs of good potential for natural regeneration.

Given heightened concerns for coastal erosion and flooding, plus the loss of mangrove forests and declining fisheries throughout West Africa, key regional institutions together with national governments are paying increasing attention to the challenges of mangrove forest management, coastal zone management, fisheries management, and overall resilience for coastal communities. Important regional frameworks and protocols are an ongoing collaborative effort across nations, with two draft protocols – on Integrated Coastal Zone Management (ICZM) and Mangrove Conservation – recently adopted by Ministers from state parties to

⁷ Mondal, Trzaska & de Sherbinin, 2017

the Abidjan Convention.⁸ In 2010, the Government of Sierra Leone (GoSL) designated its four major estuaries as Marine Protected Areas, with one of these (the Sierra Leone River Estuary) awarded Ramsar Site status in 1999 as a Wetland of International Importance.

It is hard to overstate the importance of coastal resources, including fish stocks and mangroves, to the people of Sierra Leone. The coast is home to approximately 2.2 million people for which the median age is 18.5 years. Literacy and employment levels are very low, while dependence on natural resources is very high. More than 40,000 artisanal fishers and their families operate over 12,000 fishing boats. An additional 500,000 jobs – including those related to processing, transportation, marketing, and boat-building – are dependent on the fisheries sector. Mangrove wood is highly utilized as fuelwood, for fish-smoking, for salt-making, and as timber for construction.

WA BICC PROGRAM

WA BICC is a five-year, \$48.9 million program initiated in 2015 with the goal to “address both direct and indirect drivers of natural resource degradation to improve livelihoods and natural ecosystems across the region”. The program works with partners at the community, national, and regional levels “to strengthen policies and systems that will improve natural resources management and the health and resilience of selected coastal and upland forest ecosystems.”⁹ WA BICC is implemented by Tetra Tech ARD as the lead implementing partner in the SLCLC.

WA BICC activities include three core components: (1) combatting wildlife trafficking, (2) improving coastal resilience, and (3) reducing deforestation, forest degradation, and biodiversity loss in mangrove and upland forests. These components are implemented in an integrated manner and are designed to address crosscutting issues.

The three core components of WA BICC include the following activities:

1. Combat wildlife trafficking through the revision and operationalization of national and regional policies, laws and regulations. Strengthen national and regional networks and institutions by building their capacity to enforce trafficking laws. Develop National Action Plans and community-led behavioral change campaigns to shrink the supply chains of trafficked wildlife.
2. Improve coastal resilience in West Africa through integrated planning and strengthening the capacity of local, national, and regional frameworks. Build capacity at all levels to generate and use climate information in coastal planning, support National Adaptation Planning processes, and pilot and scale-up coastal adaptation strategies that are effective.
3. Reduce deforestation, degradation, and biodiversity loss in key forests through technical and knowledge management support. Improve capacity for economic planning and development of Low Emissions Development Strategies, REDD+, and transboundary conservation strategies, while engaging the private sector and supporting frameworks to integrate best practices for the sustainable management of natural resources.¹⁰

⁸ <http://www.prcmarine.org/en/abidjan-convention-three-additional-draft-protocols-adopted>

⁹ USAID, 2015

¹⁰ USAID, 2015

This midterm performance evaluation examines only WA BICC activities in the SLCLC, representing Component 2 of the overall program. While the overarching objective of Component 2 is “to improve coastal resilience in West Africa through integrated planning and strengthening capacity local, national, and regional frameworks”, the strategy to achieve this objective is two-fold: (1) Build capacity at all levels to generate and use climate information in coastal planning, with support to National Adaptation Plan (NAP) processes; and (2) Pilot and scale-up site-based coastal adaptation strategies that are effective.

WA BICC’s site-based activities target 26 communities and span the four major estuaries in the country: Scarcies River Estuary, Sierra Leone River Estuary, Yawri Bay Estuary, and Bonthe-Sherbro River Estuary (Figure 3). The selection of specific site-based activities was based primarily on identified vulnerabilities and the needs and priorities of each community. Selection was made following an extensive process of climate vulnerability assessment, options analysis, and consultations with ministers, local leaders, and community stakeholders. Generally speaking, communities are engaged in a combination of activities related to mangrove restoration and conservation, alternative livelihoods, and embankment protection, as briefly described below.

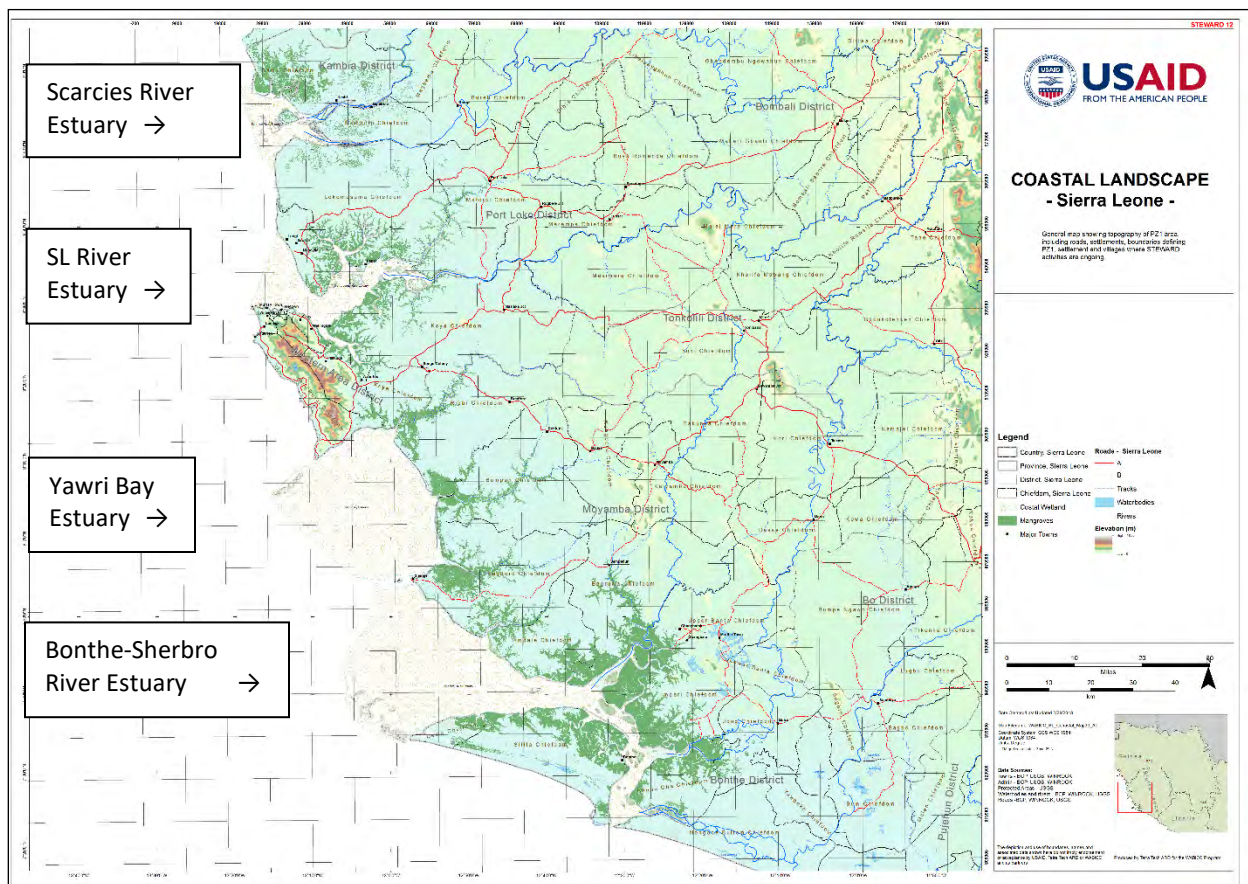


Figure 3: Map of the Sierra Leone Coastal Landscape Complex

Mangrove restoration activities include: community education and engagement; identifying and training Community Animators (CA) and community facilitators; establishment of Mangrove Restoration Committees (MRC); establishment of mangrove nurseries; transplanting mangroves to restoration sites using nursery-grown propagules, wildlings, or direct seeding (direct planting); and monitoring and control which includes mangrove mapping, mangrove health surveys, and biophysical monitoring conducted by the CAs and WA BICC staff. The program also established the Coastal Chiefs Natural Resources Management

Network (CCNRMN), which is intended to serve a communication and coordination role for stakeholders at all levels across the entire SLCLC.

Mangrove conservation activities are implemented both in areas surrounding restoration sites, through buffer zones, and in communities where there are no restoration activities and the mangrove forest remains relatively intact (i.e., areas where mangrove degradation is estimated to be less than 60 percent). Conservation activities include sensitization efforts to raise awareness of mangroves and conservation techniques, as well as the creation of village-level management groups, management plans, and by-laws for the conservation sites.

Livelihood activities have focused on the creation or strengthening of existing village savings and loan associations (VSLA), which allow members to make savings and receive loans in support of economic activities or other needs. WA BICC provided a 'security box', training, and assistance with the development of bylaws and registration for those groups involved. The program provided payments for labor involved in mangrove planting which in many cases was used by individuals as initial contribution for their membership in the VSLA. Assistance for other livelihood activities was to be explored, including the establishment of improved fish-smoking ovens and climate-smart agriculture.

Embankment activities were undertaken in two communities threatened by erosion and flooding. The program helped with the design and construction of physical embankments as protection for the seaward approach to these communities. A secondary objective was to pilot a low-cost design that can be built with locally available materials, and thus be potentially replicable to other communities.

Theory of Change

WA BICC's overall approach is regional in scope and focuses on "strengthening the feedback loop between regional, national, and local levels so that better practices filter down from the regional level while better practices developed at local and national levels are pulled up by regional institutions and are subsequently disseminated through that same feedback loop."¹¹

For Component 2, the program's Theory of Change (TOC) identifies a two-prong strategy leading to the targeted result of "coastal communities and ecosystems with increased resilience to climate change" (Figure 4). The first of these (2A: Promote Effective Interventions), aims to design and implement effective site-based learning activities that can be replicated and scaled. As previously mentioned, these "core activities" include mangrove restoration and conservation, alternative livelihoods, and embankment protection. The second strategy (2B: Improve Policy and Enabling Environment) aims to incorporate the best practices and lessons learned from the site-based activities and, together with climate change analysis, inform NAP processes throughout the region with inclusion of specific objectives for improved resilience of coastal communities and ecosystems. The site-based activities are also intended to inform Abidjan Convention protocols on Mangrove Management and ICZM.

The core regional partners of WA BICC include: the Abidjan Convention Secretariat (AbC), Mano River Union (MRU), and the Economic Community of West African States (ECOWAS). Key national level stakeholders from the Government of Sierra Leone (GoSL) include: the Environment Protection Agency (EPA), the Ministry of Fisheries and Marine Resources (MFMR), the Meteorological Agency (Met-Agency),

¹¹ Tetra Tech. "West Africa Biodiversity and Climate Change (WA-BICC) First Annual Work Plan (October 2015-September 2016)." 2015.

the Ministry of Agriculture, Forests and Food Security (MAFFS), and the National Protected Areas Authority (NPAA).

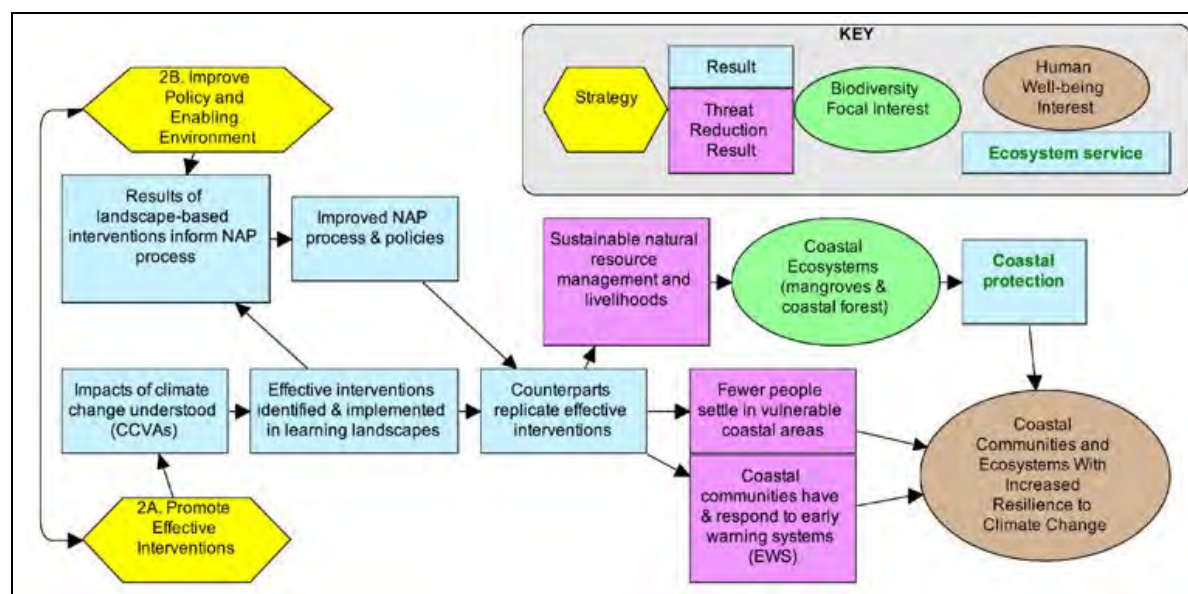


Figure 4: Component 2 Theory of Change

The WA BICC TOC is supported by three ancillary objectives: (1) Building capacity for strong institutions capable of transparent and collaborative governance of shared resources; (2) Increasing knowledge to improve analytics for evidence-based decision making; and (3) Harnessing and enhancing incentives for behavior change.

2. EVALUATION PURPOSE, QUESTIONS AND METHODS

2.1 EVALUATION PURPOSE AND SCOPE

USAID/WA commissioned this formative, midterm performance evaluation of Component 2 to contribute to the understanding of effective development programming for coastal resilience and mangrove management and conservation. The evaluation is intended to provide indications of overall progress, validity of activity design, and the likelihood that program objectives can be achieved and sustained. In addition, the evaluation is intended to identify key lessons learned and best practices, together with recommendations that can inform adaptive management of current and future WA BICC activities and future programming related to improving coastal resilience.

The specific objectives of the evaluation are as follows:

1. To evaluate progress toward meeting activity objectives
2. To evaluate the continued validity of activity design, approaches, and assumptions
3. To evaluate the likelihood of activity goals to be achieved and sustained
4. To identify lessons learned and recommend actions for improving performance

2.2 EVALUATION QUESTIONS

The evaluation focused on 12 questions relating to the objectives above (Figure 5). Annex 2 provides a complete list of the evaluation questions and sub-questions that were examined.

	To evaluate progress toward meeting activity objectives
1.1	To what extent are communities adopting the core WA BICC activities, and what are their perceived achievements to date?
1.2	To what extent is WA BICC succeeding in building the capacity of local communities to participate and take ownership of activities?
1.3	To what extent is WA BICC succeeding in building the capacity of government authorities and other organizations to effectively support, manage, monitor and sustain the activities?
1.4	To what extent are WA BICC efforts leading to the development and implementation of mangrove management plans at the local level?
1.5	How effective is WA BICC in promoting diversification and equity in coastal resilience activities?
	To evaluate the continued validity of activity design, approaches, and assumptions
2.1	How valid are the Theory of Change, assumptions, and approaches that underlie WA BICC efforts as perceived by key stakeholders?
2.2	How have site selection criteria and contextual factors served to either support or detract from the successful implementation of WA BICC activities?
2.3	How well does WA BICC address the particular drivers of mangrove loss and degradation?
2.4	How well are WA BICC activities managed and coordinated to achieve objectives?
	To evaluate the likelihood of activity goals to be achieved and sustained
3.1	What perceptions do stakeholders have regarding the prospect for activities to achieve impact at sufficient scale to achieve intended results?
3.2	What activities and outcomes are likely to be sustained and why?
	To identify lessons learned and recommend actions for improving performance
4.1	What are the key lessons learned and best practices that should inform the continuation and sustainability of mangrove restoration and livelihood activities in the SLCLC?

Figure 5: Evaluation Questions

2.3 METHODOLOGY

The evaluation was designed to collect data and information from a broad range of stakeholders and beneficiaries while ensuring independence of the evaluation process, as well as accuracy and completeness of the subsequent findings, conclusions, and recommendations. The team collected and analyzed several types of data, including data from individual interviews and consultations; focus group discussions (FGDs); an online survey questionnaire; program documents and relevant government publications; and direct observation. Two types of data were collected: primary data (both qualitative and quantitative) collected through interviews, surveys, FGDs, and direct observation (including photographs); and secondary data (both qualitative and quantitative) compiled from existing documents.

To collect qualitative data, the team conducted meetings, consultations, and interviews at the national and local levels, and FGDs at the community level. To conduct interviews and FGDs, the team used structured but flexible interview and discussion guides which were designed to ensure consistency across all participants involved (Annex 5). Interviews and FGDs were conducted in local dialects (as needed) utilizing

four of the program's community animators (CA) as translators. The evaluation team, including the four translators, received detailed training on the evaluation methodology prior to conducting a trial run in one community. Every effort was made to ensure that translations were accurate, unbiased, and did not influence the respondents' answers. The translators received training on the ethics and importance of reporting back the exact words from each participant. During the FGDs and interviews, evaluation team members took copious hand-written notes and later prepared typed summaries for each interview and FGD (Annex 9).

One interview guide targeted local stakeholders and beneficiaries, as well as non-participants (community members who did not participate in program activities). Another interview guide targeted the stakeholders responsible for sustaining activity achievements (e.g., government officials, and regional authorities).

Quantitative data was collected through an extensive desk review of program documents (e.g., work-plans, performance reports, Monitoring and Evaluation Plan (MEP), etc.), including other documents provided by USAID/WA and WA BICC. An online survey questionnaire was sent to key stakeholders from the program's national and regional institutional partners.

Following data collection, the team categorized and coded the qualitative responses from the questionnaires, interviews, and FGDs. Raw data was compiled and tabulated on a spreadsheet for content analysis and to facilitate comparison and definition of response patterns between the various respondent classes.

To assess project performance, the team reviewed the activity-level theory of change and the MEP and its targets, and triangulated the reported achievements with the team's field observations, interviews, FGDs, and questionnaires. This allowed the team to better assess both progress to-date and the potential for future project performance.

In-country data collection was scheduled to be completed before onset of the rainy season; it was carried out during the period April 1-19, 2019. Therefore, data collection took place approximately 30 months after the start of implementation of core activities in the targeted communities.

SAMPLING METHOD

With respect to **village selection**, the evaluation team generated a purposive sample of target communities based on ease or difficulty of access and the range of activities and implementation approaches in place across the 26 villages. Given the remoteness of many of the 26 communities, and given the need for the evaluation team to make the most efficient use of its time during data collection, a purposive sampling approach was seen to be the most appropriate, and one fully representative of the 26 target communities. To inform the village selection process, the team requested from WA BICC staff a simple matrix of village details including the following information:

Village name, province, district, chiefdom, name and contact information for village chief, coastal landscape (e.g. Scarcies River Estuary, Yawri Bay, etc.); approximate level of degradation (<30%; 31-60%; >61%); list of each of the SLCLC implementation activities planned or underway at the site; basic activity completion status (e.g., in planning, in process, or completed); the month of start-up for each activity underway or completed; level of village accessibility; travel time to reach village; and any concerns with accessing the village in the proposed timeframe (March/April).

The evaluation team used the information received to create a purposive sample of 13 villages for qualitative data collection. The purposive sample strived to include (minimally) WA BICC core activities as follows:

- Mangrove restoration activities under implementation (at least six villages);
- Livelihoods activities under implementation (at least 10 villages);
- Embankment activities under implementation (at least one village).

Although desirable to include selection criteria related to village context (e.g., degree of mangrove degradation; dependence on mangrove wood; distance/ease of access to market; etc.), such information was not available of sufficient quality to be useful for sampling purposes. However, additional selection criteria were utilized and included the following:

- A proportion of remote villages similar to the proportion of remote villages as a whole;
- Villages under a similar stage of implementation progress (to ensure that the qualitative sample is not dominated by villages that are severely behind in implementation); and
- Inclusion of at least one village that WA BICC has designated as a “priority site” for mangrove restoration activities.

With respect to **individual selection**, the evaluation team determined that, due to the lack of information available about the village-resident individuals involved in WA BICC activities, it was not possible to employ often-used sampling strategies. It was not feasible, for example, to employ a homogenous sampling strategy whereby individuals who have similar backgrounds and have experienced the activities in a similar way are identified as one stratum for sampling. Such information was not available. The evaluation team therefore did not attempt to pre-determine which individuals to invite and participate in the FGDs or interviews.

Instead, the evaluation team presented a list of ‘preferred selection criteria for individual participants’ to the four CAs, and requested that they consult with the Village Facilitator for each target village in order to prepare a list of 15 male and 15 female individuals to invite that collectively meets the selection criteria. The evaluation team identified the following selection criteria for this purpose:

- At least six individuals who are actively involved as committee members in each of the core activities for that village (e.g., restoration, livelihoods, embankment);
- At least six individuals who are committee members but who have been the least actively involved for whatever reason;
- At least three youth (male or female) who have been involved in core activities;
- At least six individuals who are in leadership positions, either as Chief, Town Chief, Section Chief, or Chair of the various village groups involved in core activities.

A total of 13 villages were visited by the evaluation team, and two FGDs held in each village; one FGD involving only women and female youth, and the other FGD involving only men and male youth. ‘Youth’ for this evaluation was defined as being under 30 years of age (i.e., 29 and below), in keeping with the USAID definition for youth. A total of 391 people participated in FGDs (Annex 7). A total of 26 individuals were interviewed, and 5 out of 19 people responded to the online survey questionnaire.

2.4 LIMITATIONS

It is important to acknowledge some potential limitations of the methodology. First, although the collection of baseline data was originally envisioned for the program, that did not happen and the proposed impact evaluation was not possible which could more rigorously measure socioeconomic and behavioral outcomes such as consumption and/or cutting of mangroves, livelihood activities, and household incomes.

The qualitative methods of this evaluation provide valuable insights related to these outcomes, but the evaluation team was not able to rigorously quantify the changes in the outcomes caused by WA BICC activities in the SLCLC.

In addition, recall and response bias are potential limitations for any qualitative data collection effort. To mitigate response bias, the evaluation team rigorously tested the facilitation and interview guides and protocols to ensure that the purpose of the evaluation question is clear, there are no leading questions, respondents are not primed with information that could skew their responses and respondents feel comfortable speaking truthfully. Recall bias may lead to exaggerated negative or positive perceptions of past experiences, as people tend to remember only key aspects or feelings over time. Follow-up interviews, well-crafted survey instruments, appropriate follow-up questions and the use of secondary data helped the evaluation team mitigate some of the challenges of recall bias.

Additional possible limitations to the data collection methods include, but are not limited to:

- Lack of data, including baseline data
- Potential selection bias as a result of purposive sampling
- Possible loss of meaning and data richness because of the use of translators
- Silent participants in focus group discussions and/or peer influence
- Availability of key respondents during in-country data collection
- Respondents' and evaluators' individual biases
- Potential error in generalizing findings to other sites not directly visited.

The evaluation team mitigated the above limitations through:

- Triangulation and validation of information across different data sources
- Rigorous training and testing of data collection instruments and translations thereof
- Careful design of data collection instruments to avoid leading questions or other bias
- Ensuring that all FGD participants have opportunity to speak
- Confirming with ample time in advance the date and time of village visits and KIs.

3. FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Despite the many challenges facing coastal communities in Sierra Leone – including social, economic, environmental, governance, data & information, transportation and market access – WA BICC has contributed significantly to an improved governance framework and a learning agenda that can be built upon by the GoSL, regional institutions, donors and other partners working to improve coastal resilience in West Africa. Erosion and flooding along the West Africa coastline are significant and ongoing concerns, and will continue to demand attention as the interactive effects of climate change and population pressures on natural resources create growing vulnerability to health, safety, and welfare for tens of million people.

Sierra Leone is a highly appropriate focus for USAID assistance on coastal resilience. According to the Coasts at Risk report, Sierra Leone is ranked as the most at-risk nation in terms of 'susceptibility' and 'adaptive capacity', and number one in terms of 'overall vulnerability'.¹² In addition to climate impacts, the continuing and increasing

¹² M.W. Beck (Ed.), 2014

demand for mangrove wood for fish-smoking, fuelwood, salt-making, construction material, and clearing for agriculture drives mangrove forest loss at the rate of 1 percent per year.

Among the important contributions of WA BICC at the regional level is support that led to the recent adoption of Abidjan Convention protocols on ICZM and Sustainable Mangrove Management, to which Sierra Leone is a signatory. In addition, WA BICC provided support to five countries in developing their National Adaptation Plans (NAP), including needs assessments to identify funding and capacity-building requirements related especially to the incorporation of climate change and coastal sector considerations. In Sierra Leone, the program is presently working with the National Protected Areas Authority (NPAA) on a Co-Management Plan (CMP) that will include mangrove management requirements, and with the Environment Protection Agency (EPA) on a Climate Change Adaptation Plan (CCAP) that will, among other objectives, take steps to harmonize a plethora of strategies, policies, and plans into a unifying governance framework. There are currently some 17 policy level instruments that are relevant to the management of the coastal and marine environment in Sierra Leone.

One of the significant contributions of WA BICC at the community level has been the completion of a comprehensive climate change vulnerability assessment (CCVA) of coastal Sierra Leone. The assessment is valuable for not only coastal residents and the authorities in Sierra Leone, but offers an excellent model for other states in the region to replicate. It appropriately examines vulnerabilities due to both environmental degradation and natural hazards, as well as those due to weak socio-economic status. WA BICC is working on a simplified version – a rapid CCVA – that can be applied widely within the region and with fewer resources and needed expertise.

Given that improved resilience for coastal communities is the overall objective, it would be useful to discuss a broader range of activities and outcomes. The continuum of strategies to deal with coastal hazard risk -- avoid, protect, accommodate, retreat -- should be part of any dialogue on coastal resilience. Likewise, there is a range of preparedness needs to be considered -- from pre-disaster, disaster, to post-disaster. The evaluation team realizes that any program like WA BICC must be strategic about the issues upon which it will focus. Nevertheless, these concepts are important and deserve to be included in a discussion of lessons learned and recommendations for future programming.

The challenges of the coast are unique and demanding of a high-level of participation and process among key stakeholders. Future programming should broadly address the many challenges of coastal resilience, utilize systems-thinking, be outcome oriented, and pay close attention to collaboration, learning and adaptation (CLA), or its close counterpart – ACM.

Adaptive co-management (ACM) which aims to establish both vertical and horizontal relationships to facilitate participation and learning, requires multiple iterations over time and thus sufficient financial and human resources to achieve full benefit. CLA is an important, stated principle of the WA BICC approach, but further reflection is warranted concerning some of the community-level activities that have failed to meet expectations, leaving behind frustrations that need to be addressed.

In the following sections, the key findings, conclusions, and recommendations from the evaluation are presented for each of the 12 evaluation questions. Section 3.5 consolidates the key recommendations as they relate potentially to the remainder of WA BICC efforts in the SLCLC, and to future programming more broadly.

3.1 PROGRESS TOWARDS MEETING PROGRAM OBJECTIVES

1.1 To what extent are communities adopting the core WA BICC activities, and what are their perceived achievements to date? What evidence is there for community self-initiative, investment and engagement? What do individuals say about the achievements of the WA BICC activities?

Findings

The evaluation team found that for all three core activities, communities are generally very supportive and pleased with the assistance provided by WA BICC, but with room for improvement.

Regarding livelihood support, most communities found the VSLA activity to have produced the most benefit on a personal and household basis. The program helped to establish or strengthen more than 75 VSLA groups with training and provision of security boxes. A VSLA survey conducted by the program in 2018 indicates total membership of these groups at 2,597, of which 68 percent are female and 32 percent male.

VSLA activities were chosen as early focus for the opportunity offered to help strengthen existing groups within the communities that could be quickly mobilized. It was considered important not to prescribe activities, but rather strengthen existing groups and build trust and support of participants in the early stages of the program.



Figure 6: VSLA Security Box

Women are especially pleased with the VSLA activity for the opportunity it provides for household savings and empowerment. Loans made support a wide range of economic activities, including fish mongering, petty trading, and food sales. Other needs, such as school fees, household goods, and medicines are also supported by the loans. Loans are generally in the range of USD 5-10, and must be repaid with interest of 10-20 percent. The 2018 survey found that 55 percent of the VSLAs assessed (n=51) reported “very good” recovery rates; 35 percent reported “good” recovery rates; and 10 percent reported “average” recovery rates. Not all VSLAs are yet making loans as they continue to build capital in their security box.

The evaluation team found some unintended and negative consequences of the now available loan money, including the purchase of illegal (small-mesh) fishing nets and the purchase of cigarettes for re-sale.

The program provided training in the various aspects related to organizing the VSLA, including financial management, recordkeeping, and loan making. VSLAs are encouraged to officially register with their Regional Council and some 60 percent have now done so. Most, if not all, have bylaws governing their groups which define dues structures and penalties for various infractions. Participants, both male and female, are eager to receive additional training. But the evaluation team found that a majority of communities expressed frustration that VSLA training was not implemented within their community. Rather, in most cases a couple of men and women were selected to attend training away from the community, together with invitees from other communities, at the district or regional level. That said, the opportunity to interact with and share best practices across multiple communities is a benefit from the sub-regional approach to training.

The evaluation team heard frustration related to the general approach of community level trainings. The approach has been to send an invitation for an upcoming training to the WA BICC chairperson of a community (a volunteer selected by the community), and the chairperson decides who will attend. The evaluation team heard repeated complaints of favoritism in the selection process. Yet, several other communities expressed

improved community cohesion as a result of the VSLA, so the complaints were not universal. The evaluation team found that members of several VSLA groups could not explain whether there is a mechanism in place to allow new members to join without first matching the cumulative contribution that existing members have made. There were also two instances where VSLA members thought that the purpose of the VSLA group was to save money as a group and then to divide the proceeds equally with everyone in the group.

Regarding mangrove restoration and related activities, the evaluation team found that this activity had the widest range of positive and negative effects. The program provided training on Ecosystem Mangrove Restoration (EMR) to over 400 community members while helping to establish 24 community nurseries. WA BICC reports that 10 ha of mangrove forest have been restored. The evaluation team found evidence of transplantation success in sites that are tidally-influenced and well-guarded from animal intrusion. But many communities have become frustrated through repeated failures of their mangrove nurseries and transplantation sites. The scheduling of nursery establishment during the dry season, improper site selection, and the problem of animals eating young propagules are the primary reasons for failure. See Figures 8-12 for a summary of the analysis of mangrove restoration efforts at 13 communities visited. A common observation reported by members of the MRCs is that the roots of young mangroves (whether nursery-grown propagules or wildlings) are delicate and easily damaged during transplantation. The evaluation team noted that site selection in several locations was strongly influenced by community preference.

WA BICC provided various forms of support for the restoration work, including tools, training, and cash incentives. However, frustrations exist in many communities related to what was reported as inadequate cash for labor and/or food for the volunteers doing the work. It was reported in some cases that WA BICC staff took longer than promised in returning to the community to inspect a nursery or restoration site and provide the cash incentive that was promised; these communities got frustrated and gave up on their restoration work. In other cases, frustration mounted from repeated attempts and failures at transplanting mangroves in areas that are not biophysically suitable or exposed to animal herbivory (despite agreement that the community would be responsible for fencing to keep animals out). The evaluation team found evidence and widespread agreement that direct seeding (direct planting) is a much more successful transplanting technique than is the use of transplanted nursery-grown propagules or transplanted wildlings. Direct seeding is the process of planting a new mangrove tree by taking a seedling from a mature tree, or picking up seedlings that have only recently fallen from the tree, and, after soaking the seed, planting it in a new location. There was no transplanting in any of the communities in BSRE, whereas transplanting took place in two-thirds of communities in YBRE and SLRE. Transplanting of mangrove species occurred in 25% of communities in the Scarcies. It is noted that WA BICC concluded its assistance on mangrove nursery establishment at the end of year 2.



Figure 7: Community mangrove nursery

Communities have been told by WA BICC staff that they should approach mangrove restoration “as a business”, but community members were not able to explain how they could generate revenue from restoration work¹³.

¹³ See Annex 11 for WA BICC’s response

Summary of the analysis of mangrove restoration efforts at 13 communities visited

For the following 5 figures (Figures 8-12), the total number of communities is 13 (n=13). The 13 communities are distributed as follows: three each in Yawri Bay River Estuary (YBRE), Sierra Leone River Estuary (SLRE) and Bonthe Sherbro River Estuary (BSRE), and four in Scarcies River Estuary (SRE).

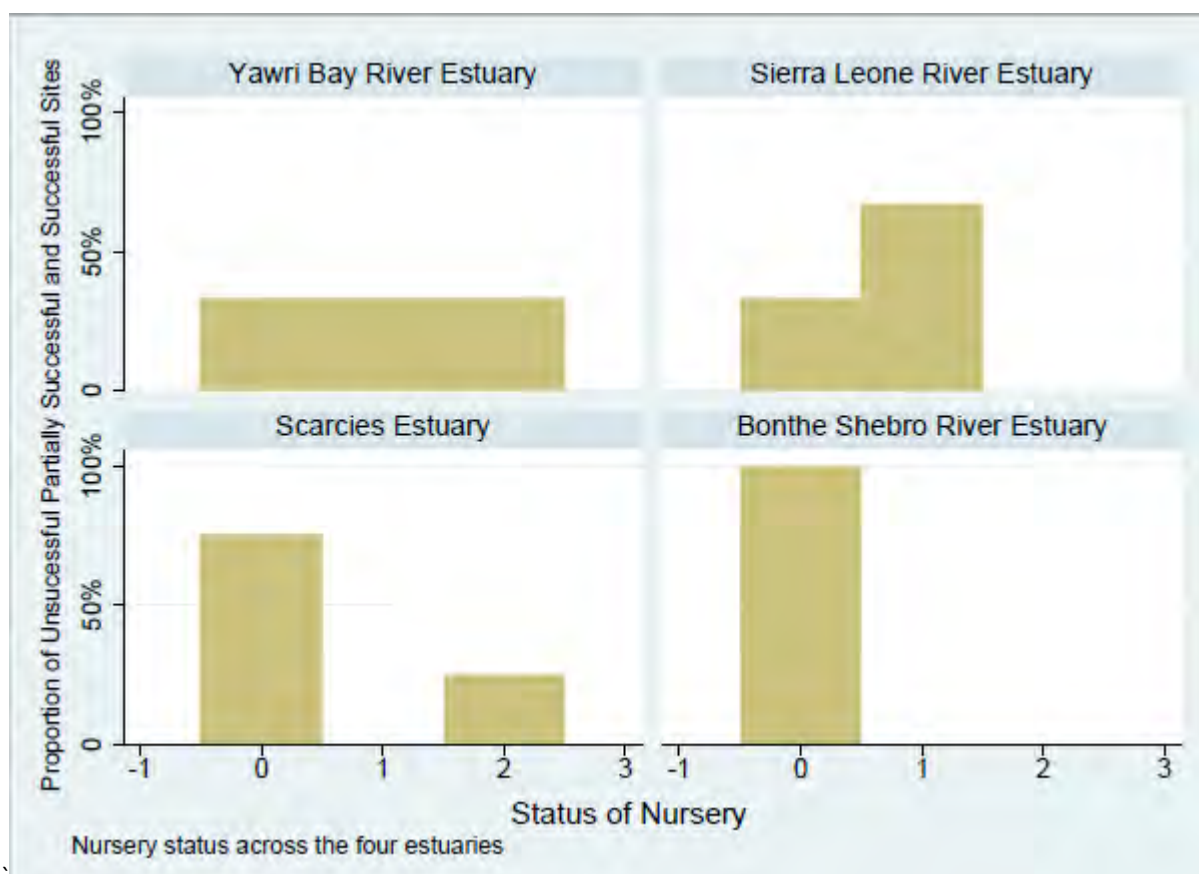


Figure 8: Status of mangrove nurseries

Key: Proportion of unsuccessful (0), partially successful (1) and successful (2) mangrove nurseries

At each target community, the evaluation team visited each restoration site and discussed site histories with MRC members. A fully successful site is a community that has all restoration sites still healthy and protected from outside influence (e.g., animal herbivory). A partially successful site is a community that has one or more restoration sites where mangrove seedlings have died or been extensively damaged through herbivory. An unsuccessful site is a community that has no restoration sites that were observed to be healthy and protected at the time of the evaluation.

No community in the Sierra Leone River Estuary (SLRE) and Bonthe-Sherbro River Estuary (BSRE) had a fully successful mangrove restoration site. The proportion of unsuccessful, partially successful and fully successful mangrove restoration sites in the Yawri Bay River Estuary (YBRE) is uniformly distributed (33.3% each). In the SLRE, 33.3% and 66.6% of mangrove restoration sites were unsuccessful and partially successful, respectively. In Scarcies, 75% of mangrove restoration sites were unsuccessful and 25% were fully successful.

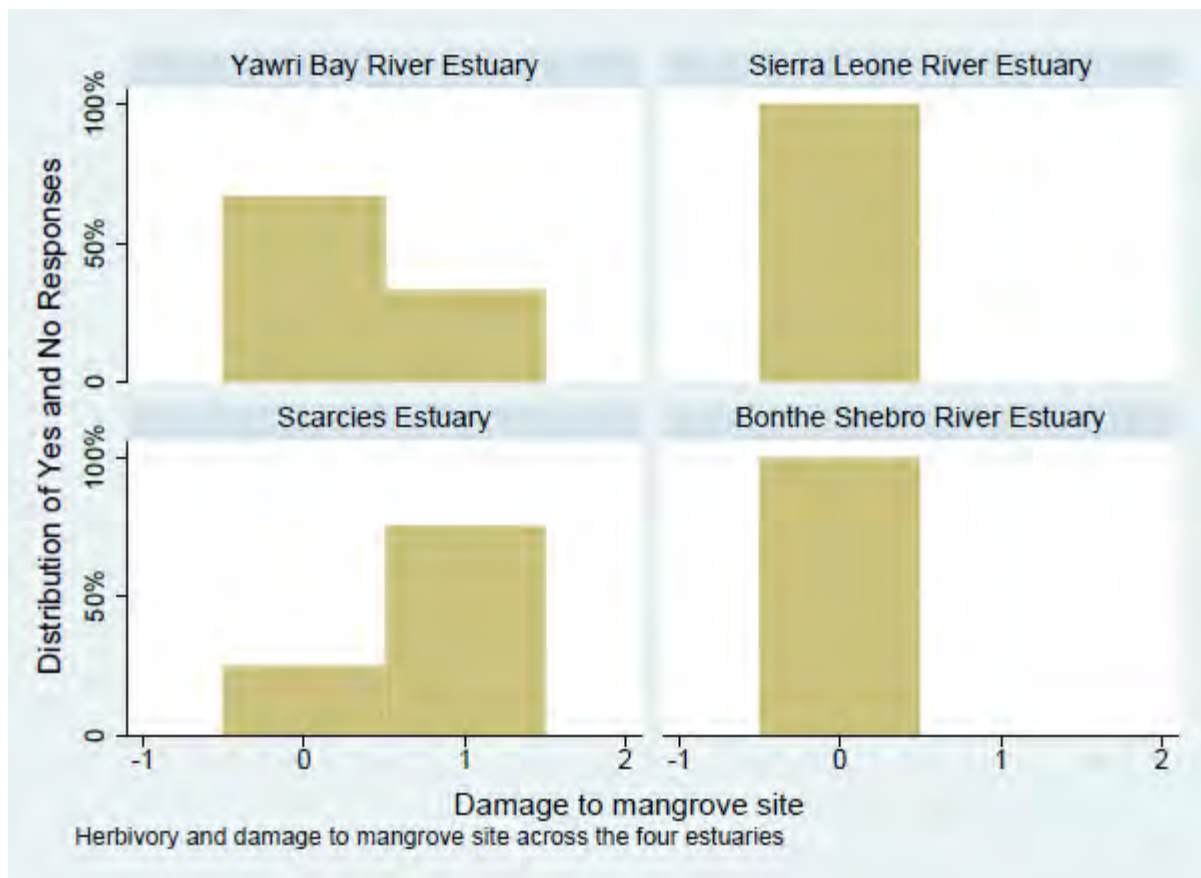


Figure 9: Herbivory Damage to mangrove restoration sites

0 = No
1 = Yes

Herbivory damage to mangrove restoration sites in communities in the Scarcies was highest (75%) followed by the Yawri Bay River Estuary (33.3%). None of the mangrove restoration sites in communities in the SLRE and BSRE was damaged by herbivory.

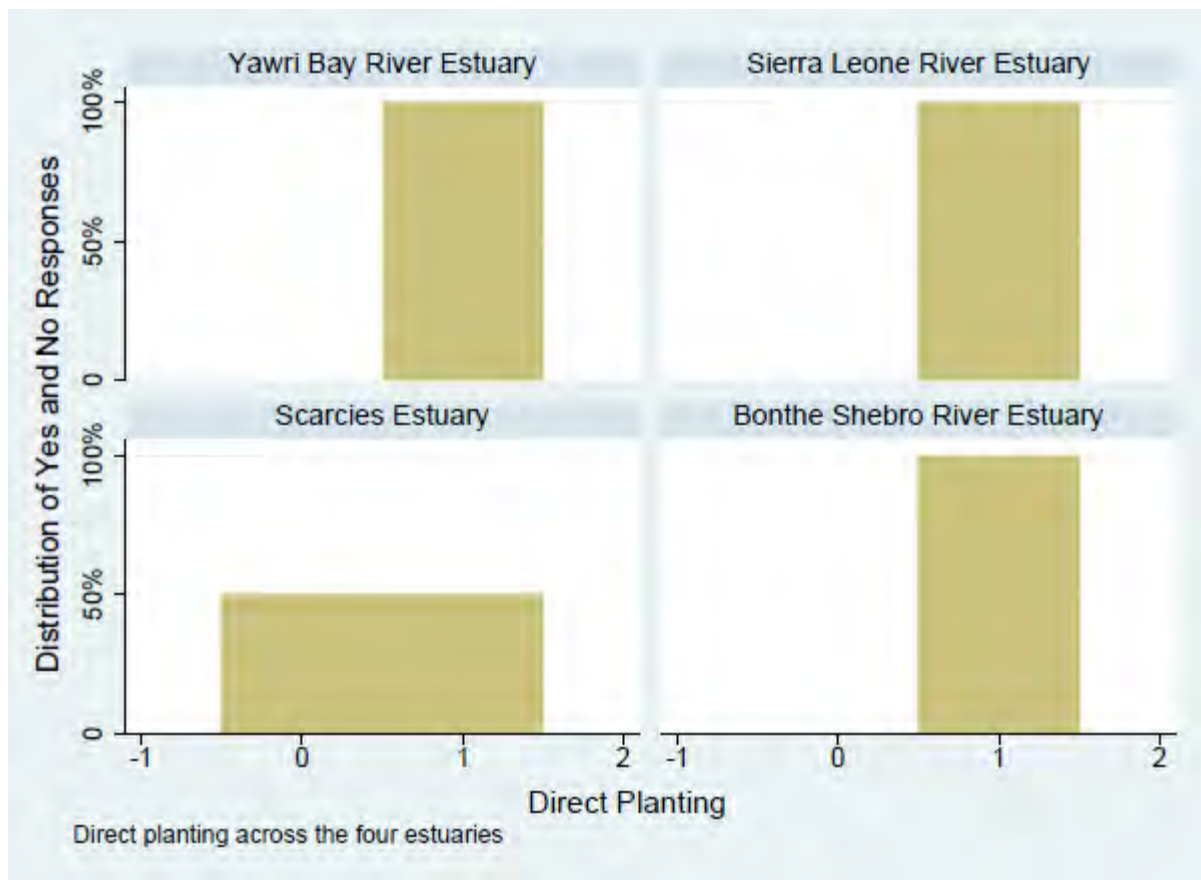


Figure 10: Direct planting (Direct seeding) at restoration sites

0 = No
1 = Yes

Direct planting of mangrove species occurred in all communities in the YBRE, SLRE and BSRE. Direct planting of mangrove species occurred in fifty percent of the communities in Scarcies whereas there was no direct planting in the remaining half.

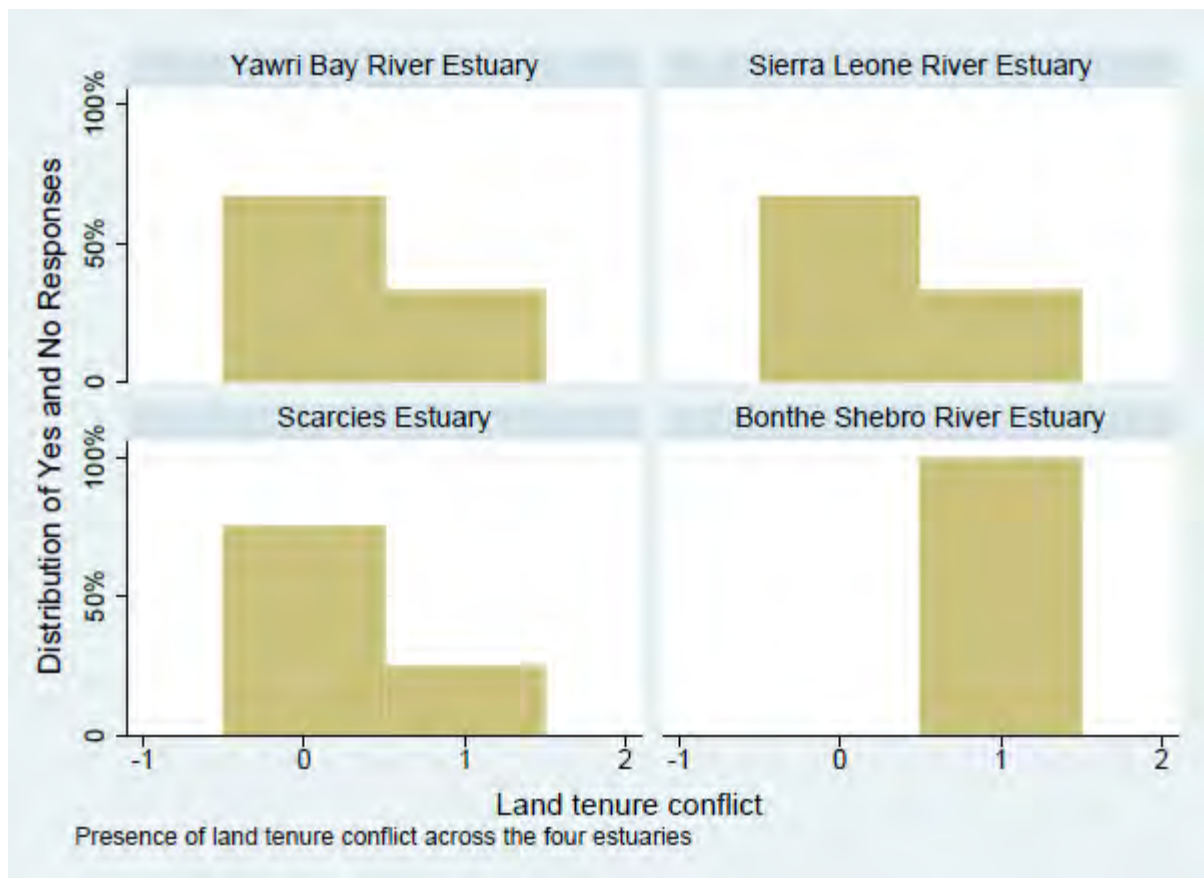


Figure 11: Land tenure conflict at restoration sites

0 = No
1 = Yes

There was evidence of land tenure conflict in all communities in BSRE. One-third of communities in YBRE and SLRE experienced land tenure conflict whereas one-fourth of communities in Scarcies experienced the same.

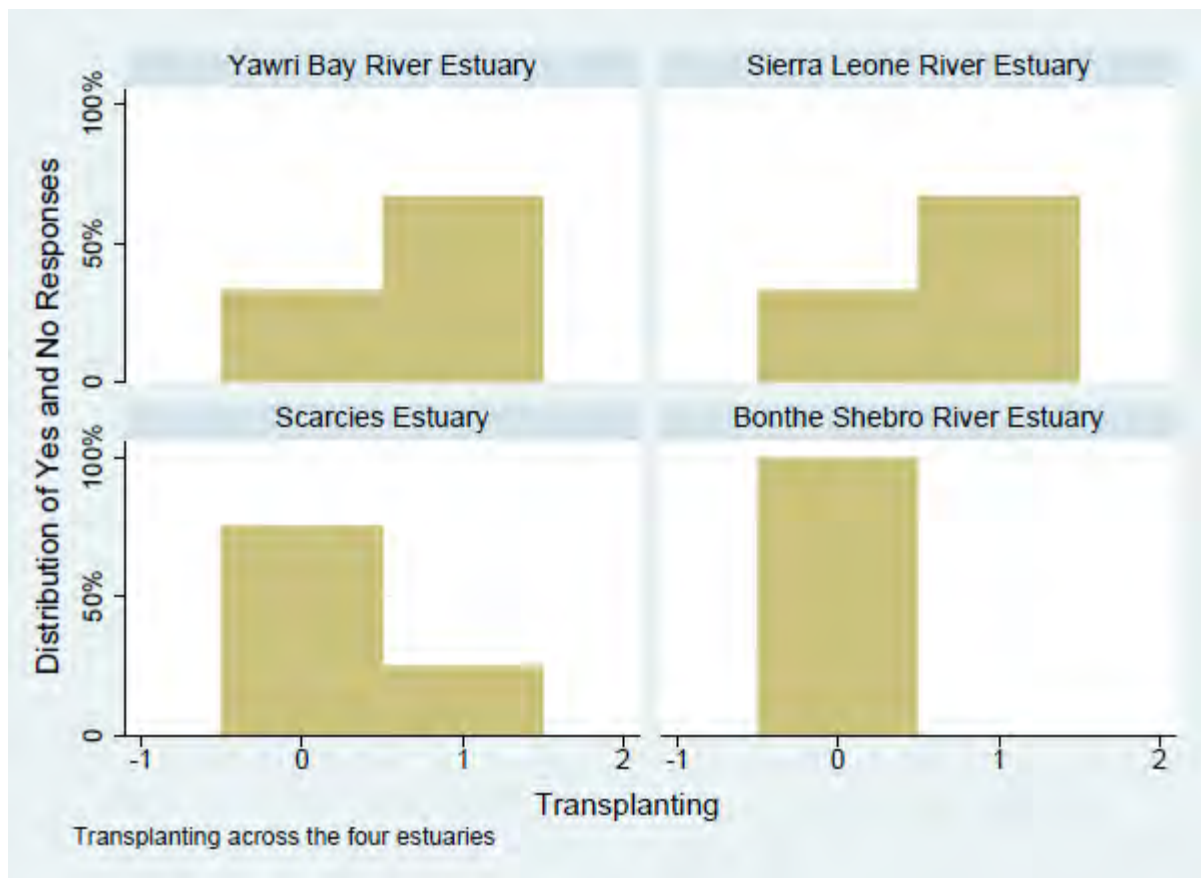


Figure 12: Transplanting at restoration sites (includes both nursery propagules and wildlings)

0 = No
1 = Yes

There was no transplanting in any of the communities in BSRE, whereas transplanting took place in two-thirds of communities in YBRE and SLRE. Transplanting of mangrove species occurred in 25% of communities in the Scarcies.

Regarding the embankment activities, the evaluation team found that the two communities that received WA BICC support are both generally pleased with the tools, materials, and training received. The embankments, if successful, will benefit some 5,250 people in the two communities. The Momaya community is especially happy with the new protection against flooding, while observing that sand bags used to reinforce the embankment are



Figure 13: Momaya embankment at low tide

falling apart from exposure to the sun. The community has agreed to be responsible for bag replacement. The Kortimoh community indicates that the embankment is not yet complete, does not have enough shell and sand bags for reinforcement, and some members of the community fear that it will not last for long. The evaluation team later learned that materials delivered by WA BICC may have been stolen after reaching the community. The embankment committee acknowledges that repair will be an ongoing process and they are prepared to do so, but they indicate they are prepared to do the work and believe the embankment to be critical for the protection of their community. One other community (the Hangin Site community) has taken self-initiative to construct an embankment based on program-sponsored training they received at Momaya.

Conclusions

There is wide variability in the quality, effectiveness and suitability of activities. The evaluation team concludes that the use of cash incentive to entice communities to come together to do work that will benefit the community has caused friction. It is understood that this is common practice in Sierra Leone, and there may in fact be some positive aspects of using cash incentive (e.g., building trust with program staff). Nevertheless, the conflict that it precipitates is tangible, and deserving of thoughtful and concerted efforts to help overcome.

The program's livelihood activity focus on VSLA could have been broadened to introduce a range of alternative or supplemental livelihoods for which the program could provide training, support, or simply encouragement. The concept of a "conservation enterprise" that would serve to bolster income while reducing natural resource degradation is not evident in program activity, but should be seen as an important component of coastal resilience efforts.

Involvement of local and national actors is critical to community ownership of WA BICC led initiatives, processes and outcomes as well as long term sustainability of conservation activities. WA BICC has made significant effort to achieve inclusion and local ownership. To further cement this inclusion, it will be important to ensure that women and youth are proportionately involved in decision-making positions. Although the evaluation team was unable to assess the number of women in decision-making positions in the VLSA groups, it was noted that there are high numbers of women involved in the VSLA activity.

The frustrations expressed by MRCs and their volunteers over not receiving promised incentive funding or equipment is symptomatic of a lack of true 'ownership' by the communities of the importance of doing the restoration work in the first place; incentive funds should not be the primary reason that volunteers participate. Restoration sites must have a clearly stated objective that is of interest to the community; the community must

be fully invested in the restoration work for the non-monetary benefits that will be received in the medium and longer-term. And despite the nice sound of it, the idea of the “business case” for mangrove restoration work is not supportable in current practice or understood by community members¹⁴. While it is possible to make a business case for sustainable mangrove restoration work, there are several important prerequisites that must be in place for success. [See recommendation 2 under 2.3.]

Embankments that use low-cost and locally available materials can play an important role in coastal resilience. Design considerations remain paramount, and replication and scale-up will require site-specific engineering consultation in virtually every location. The Hangin Site is highly exposed to strong wave energy and currents, and may not be suitable for the same embankment design in use elsewhere.

Recommendations

1. The program should provide refresher training on all aspects of VSLA; trainings should be conducted in each village, if possible, and allow for interested new members to attend; a model bylaw should be presented to VSLA committees that allows for and encourages the addition of new members; such expansion will ultimately benefit both the VSLA and the entire community. Standard practice elsewhere is for the VSLA group to go through a “cycle”, at the completion of which members receive a “share-out”. Each member receives a share-out based on the number of shares s/he owns and the value of a single share. After all money in the security box has been shared with members, the group may elect to start a new cycle and invite new members to join. A new share price is agreed upon and all members, including new members, must contribute the same amount to establish seed capital for the next cycle. If demand exceeds 20 new members, then establishment of additional VSLA groups in the same location should be considered to avoid unmanageably large group sizes.
2. The program should conduct a programmatic review/assessment by a senior level technical and management team; the team should visit each of the 26 target communities for the purpose of listening to community frustrations and reaching agreement with each community on what the program will provide and what is expected of each community for the remainder of the program.
3. Mangrove restoration work should continue in only those sites where there is a clear objective established and for which the community is fully engaged and self-interested in completing the restoration work; the use of cash incentive funds should be reconsidered for the potential the practice has to instill mistrust and conflict, and the potential it has to undermine real community support for and ownership of the restoration work.
4. No additional work should be undertaken on mangrove nurseries; only direct seeding (direct planting) of mangroves during the rainy season (June/July/August) should be undertaken; make every effort to ensure that all restoration work for the remainder of the program is successful; this will require close technical oversight and collaborative decisions with the community about when, where, and how to plant¹⁵.
5. The program should discontinue the practice of telling communities that they should approach mangrove restoration “as a business”. Making the business case for mangrove restoration will require some form of individual or community tenure over the resource (see related recommendation in section 3.5 below).
6. Monitor closely the 2 embankments to evaluate the degree of physical protection provided to the community; have the engineer responsible for design re-visit the communities and evaluate if any modifications are needed; ensure that other communities interested in an embankment know that consultation with a licensed coastal engineer should be a necessary prerequisite to construction.

¹⁴ See Annex II for WABICC’s response

¹⁵ See Annex II for WABICC’s response

1.2 To what extent is WA BICC succeeding in building the capacity of local communities to participate and take ownership of activities? How do beneficiaries rate themselves on improved knowledge, skills, and attitudes as a result of WA BICC activities? How does WA BICC identify and target capacity-building needs for local communities?

Findings

WABICC has significantly invested in training community members on VSLA, the value of mangroves, and techniques for mangrove restoration and embankments. The evaluation team heard repeatedly that the trainings have resulted in new knowledge and skills gained. Those involved in the trainings expressed appreciation and were pleased of the content and process for training. However, members in several communities reported that knowledge and skills transfer back to the community for those who did not participate in training either did not happen or, if so, occurred only in *ad hoc* manner. This concern was expressed in several communities, and by both men and women. It is unclear if some individuals were trained multiple times or whether each individual was restricted to attend one training; it is therefore difficult to isolate the effect of single training on behavior change from the effect of multiple trainings. The evaluation team heard positive comments at communities where A/V equipment was brought in and videos shown regarding the importance of mangrove conservation and management.

The request for additional training was universal, and most additional training needs were expressed around the themes of skills development related to new livelihood opportunities and business planning and management. There is also strong latent interest and desire for training related to improved fish smoking ovens. Regarding attitudes, every community expressed new attitudes related to the importance of mangroves, and the evaluation team was told in virtually every community that mangrove cutting is now illegal.

An assessment of attitudinal change is complicated by the widespread practice, in fact the expected norm, of providing cash incentive every time community members come together for a program activity. Trainings, mangrove nursery or restoration work, embankment work – all of these generate expectations of cash for time or labor. The evaluation team found that some mangrove restoration committees (MRC) have been established because they have heard that restoration work is the only way to receive incentive funds from the program (VSLA activities do not receive incentive).

- 191 community members were trained on "Community land and resource use mapping and planning" (135 men and 56 women)
- 414 people were trained on "mangrove seeds and propagule identification and establishment of nurseries for mangrove restoration" (277 men and 137 women)
- 59 local leaders and members of the Traditional Chiefs Network were trained on the sustainable management of coastal resources (48 men and 11 women)
- Six community-level workshops were implemented where more than 308 participants attended

Conclusions

It is clear that the program has designed and implemented valuable training and other capacity-building for stakeholders at all levels – regional, national, and local. In particular, there appears to have been strong growth in knowledge related to the values and benefits from healthy mangrove ecosystems and the importance of the unique challenges of coastal community resilience. For those attending, the trainings have been universally well received and appreciated, with high marks given to program staff for the overall organization, logistics, and content of the trainings. However, the evaluation team finds it challenging to say, unequivocally, that attitudes towards mangrove restoration are vastly improved as a result of the program thus far based on the evaluation findings. More study of attitudinal change is warranted. The initiation and management of enterprises by

communities is critical to making them independent, resourceful, and building their capacity and entrepreneurial skills beyond life of project. However, the understanding of the importance of mangroves has improved.

Recommendations

1. The program should consider, in concert with the appropriate ministry, the convening of a “coastal enterprise incubation workshop” focused on identifying and incentivizing private sector opportunities in rural coastal villages.
2. Building partnerships and identifying private sector opportunities should be undertaken in concert with strengthening the governance and policy framework to ensure there is regulatory, financial, technical, and political support and appropriate incentives for private sector engagement.
3. The program should consider ways to utilize VSLAs in the adoption and expansion of appropriate technologies. For example, the VSLAs could potentially serve as a conduit to provide subsidized improved cook stoves and/or fish smoking ovens to their members.

1.3 To what extent is WA BICC succeeding in building the capacity of government authorities and other organizations to effectively support, manage, monitor and sustain the activities? What additional capacity-building needs do the authorities/organizations say they need?

Findings

While the evaluation team was not able to speak directly with all of the regional and national stakeholder organizations, the evaluation team did receive generally positive feedback from those spoken with about their involvement in regional workshops and meetings. Training was provided to both regional and national institutions on such topics as climate information services, vulnerability assessment, organizational capacity, and carbon content analysis of forests and mangroves. Two regional workshops, in Lomé and Accra, and one national workshop in Port Loko, Sierra Leone received commendations from the GoSL ministries who attended and with whom the evaluation team spoke. The same ministries said that WA BICC is well organized and known for bringing in top-notch consultants and experts which is much appreciated.

Two ministries indicated that WA BICC had initially undertaken efforts to assess organizational capacity, but then did not receive follow-up on identified needs or conclusions. These ministries reported that no specific institutional strengthening related to the organizational capacity needs assessment was provided to them. (Note: The evaluation team later learned from USAID that WA BICC did not do OCAs with national ministries, so it is unclear why the ministries raised the issue.)

Conclusions

Training and institutional strengthening for both regional and national institutions is central to the overall success and sustainability of WA BICC. The CCNRMN is an important platform for shared learning on mangrove conservation and restoration within and across intervention communities, and an important communication platform relating to weather or emergency events. Science-policy dialogue will likely be enhanced when policymakers and practitioners are trained together. Organizational capacity assessment is important and should be institutionalized as a process to be updated at regular intervals; but follow-up with findings and efforts to fill key gaps is equally important.

Recommendations

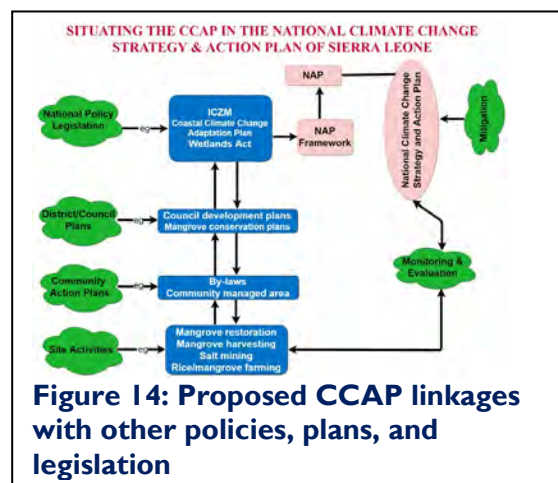
1. Pre/post assessment of trainee knowledge and skills is needed to ascertain impact of training success. Follow-up assessment and other efforts to track the usefulness and influence of practitioner training on trainees and their institutions would be desirable.
2. The program should re-assess its findings from the organizational capacity assessments conducted for key institutional partners and consider how best to close the feedback and information gap that exists.

1.4 To what extent are WA BICC efforts leading to the development and implementation of mangrove management plans at the local level? Is the process and timeline to develop mangrove management plans understood and supported by key stakeholders? Do the management plans have support, or are key stakeholders expressing any concerns?

Findings

The evaluation team found that the process and timeline for developing MMPs is at a nascent stage, and is thus not yet well understood by all MDAs or at the community-level. Several GoSL institutions have jurisdictional stake in the management of mangrove forests, including MAFFS, NPAA, EPA, MFMR, Land and Country Planning, Local Governance and Rural Development, and of course the MRCs and CCNRMN. Consequently, an important step will be to help consolidate and coordinate the various strategies, policies, plans, and legislation related to the coastal zone, and to clarify how the newly drafted Climate Change Adaptation Plan (CCAP) will link to the existing policy framework. The program has begun this effort as part of the CCAP process, and presented a proposed framework to elucidate the linkages at the CCAP Validation Workshop. This is an ongoing discussion among the key stakeholders and will be a component of the finalized CCAP. The proposed framework is presented below for reference (Figure 14).

Given the necessary time and opportunity, the program wishes to assist NPAA with the development of a Co-Management Plan (CMP) for the coastal zone. The CMP will include a chapter on mangrove management, and with specific focus on the Bonthe-Sherbro River Estuary. The chapter will elucidate the key principles, practices, and requirements of an approved MMP, which will conceivably serve as a model for coastal communities to use to develop and adopt community-based MMPs for their own areas and under their own bylaws. Other chapters in the CMP will deal with the range of challenges facing coastal resources and for which community co-management is seen as the best way forward. The evaluation team is told that this will be a highly consultative process, culminating in a request for approval of the CMP (including operational funding) by Parliament and the President. NPAA stresses the essential support that they hope WA BICC will provide, in terms of both technical assistance for drafting the Plan and budgetary support for the consultation process.



Conclusions

Implementation and enforcement capacities differ across MDAs and local communities, and there is need to constantly monitor the effectiveness of rules and bylaws. Public education and awareness is critical, but it is well documented that high levels of awareness do not necessarily translate into behavioral change. Finding the right balance between compliance (stewardship) and enforcement (monitoring and control) will be an ongoing challenge that is best addressed early and often. The governance framework for coastal resources management and coastal resilience is fragmented and will require concerted efforts and resources to convene key national

MDAs to harmonize the various strategies, policies, laws, and plans. WA BICC is making a significant contribution towards this objective with its support for the CMP and CCAP processes.

Recommendations

1. The program should place high priority in assisting NPAA to complete the Co-Management Plan with its chapter on mangrove management. It will be critical for the CMP to include a request for line-item budgetary support. This represents a critical window of opportunity that has the potential to be a key piece in the governance framework for coastal Sierra Leone.
2. The program should initiate dialogue with the MDAs regarding how best to introduce tenure rights and livelihood opportunities for mangrove management. Lessons learned from elsewhere in West Africa indicate that groups of local specific resource users (e.g., women shellfish harvesters, tourism operators, and others, and not just the community in general) who are benefitting directly from mangroves for their livelihoods are the ones who will be the best champions and the most cost effective implementers of mangrove management and conservation. Mangrove Management Plans that give these groups use rights and management responsibilities for some of the resources in the mangroves, can drive conservation and sustainable management of the whole system. Early demonstration of success in this fashion can be adapted and integrated into larger more comprehensive ICZM plans later as those follow a longer and more bureaucratic process. In addition, they will provide real and practical learning to inform those broader plans.
3. The program should consider handing-off its role in the CCAP process to UNDP which is well positioned to take the lead on this. WA BICC should re-focus its attention and energies on other issues needing closure, including the NPAA-led CMP development and adoption process.
4. The program should place continuing and increasing emphasis on behavioral change and communications, and include a learning agenda to identify what behavioral changes are taking place and to address factors that inhibit transition from awareness to behavioral change.
5. The program should continue to improve the link between on-the-ground implementation and informed policy decision-making by making full use of research and documentation of information being generated by local level stakeholders.
6. The program should consider partnership with the Imam community to enlist their leadership role in environmental challenges. For instance, WABICC should encourage other development partners to invest in the issue of solid waste management and marine debris, which is outside the scope of WABICC. This would be an excellent start, as this is a challenge that must be tackled and one that would benefit from a public campaign effort. Solid waste management and marine debris are issues that should be included in emerging coastal bylaws.

I.5 How effective is WA BICC in promoting diversification and equity in coastal resilience activities? To what degree has WA BICC achieved female and youth participation and inclusiveness across activities? Do participating women feel they are gaining concrete benefits from the project? What benefits are they excited about?

Findings

The evaluation team found throughout strong evidence that women and youth are involved in activities and that WA BICC has been effective at – and is appreciated for – encouraging their participation. Women and youth express that they have been given every opportunity to participate fully and equally in program activities. Women are especially strong and in leadership positions in the various VSLA groups (which include both women and men), but they are also quite involved in mangrove restoration activities and on Mangrove Restoration Committees. Women, almost without exception, stated strong benefit and empowerment from VSLA loans. Women now have opportunity to save money; many of them for the first time.

While youth involvement did not appear to be a strong feature in all communities, many communities were in fact well represented by youth. The youth who did participate in FGDs were generally outspoken and often more progressive in thinking about longer-term needs and solutions. It is possible that youth were inadvertently not properly represented in all communities for the FGDs during the evaluation. WA BICC completed a Gender Equity and Social Inclusion (GESI) Plan early in the program to help guide inclusion activities for women and youth.

Conclusions

The vocabulary used by program participants during the FGDs and KIs confirmed to the evaluation team that WA BICC staff have been successful in promoting diversity and equitable participation. Stakeholders appear also to have gained good understanding of the issues related to resilience and climate change in these coastal environments. Young people and women are well represented in most activities, and are benefiting in various forms, mostly from the VSLA activities.

Recommendations

1. The program should consider facilitating networking of women active in the natural resources sector and in coastal regions to improve the program's visibility of women in this sector and establish a platform for the exchange of best practices in gender mainstreaming in NRM. TRY Oyster Women's Association in The Gambia has been in communication with the Tacugama Chimpanzee Reserve in Sierra Leone for the purpose of training the latter group on the association's oyster co-management activities in the Tanbi Wetlands National Park. The University of Rhode Island/Coastal Resources Center is working in the region and has already linked women's oyster communities in The Gambia, Senegal, Ghana, and Benin, as well as universities in each country that support relevant research and outreach for these groups. The program could bring a wealth of experience to Sierra Leone with linkages to the URI efforts, and help to develop a Women's Shellfish Community of Practice in West Africa as a legacy achievement.
2. The program should consider ways to scale-up or replicate activities and strategies that have demonstrated equality of participation and benefits, plus sustainable progress towards agency, voice, and human rights for women.
3. The program should explore and expand the scope of innovative co-curricular activities, especially those that will stimulate further youth involvement and leadership. Such activities might include nature clubs, outdoor education, street theatre, eco-farming, and eco-business to provide students with opportunities to obtain first-hand mangrove conservation knowledge, experience, and skills in school as well as out of school.

3.2 VALIDITY OF DESIGN, APPROACHES, AND ASSUMPTIONS

2.1 How valid are the Theory of Change (TOC), assumptions, and approaches that underlie WA BICC efforts as perceived by stakeholders? How well do stakeholders understand the overall purpose, TOC, and assumptions that underlie WA BICC activities?

Findings

The evaluation team found that most of the key stakeholders had a good idea of the overall purpose of WA BICC, and indicated that the project has succeeded in explaining the core elements of the project to key stakeholders. In this context, some of the key words that some community members mentioned to demonstrate their understanding of WA BICC include mangrove restoration, carbon storage, biodiversity conservation, climate adaptation, flood prevention, coastal resilience, etc. (Figure 10).

WABICC's initial approach was logical and well appreciated by stakeholders. A comprehensive and science-based climate change vulnerability assessment (CCVA) was first completed. Next, a list of options was prepared which identified potential community-level interventions to reduce vulnerability. The list of potential options was presented to national ministers, refined, and taken to the coastal communities for further consultation. The three major categories of interventions agreed upon with the communities, included mangrove restoration, disaster risk reduction, and livelihoods.

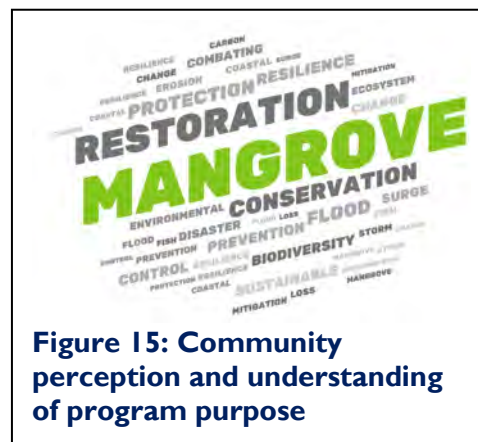


Figure 15: Community perception and understanding of program purpose

The evaluation team finds it difficult to say whether or not community stakeholders understand the project TOC, although a small subset clearly expressed the need for policy harmonization and clarity on the confusion that results from overlapping authorities for mangrove conservation and management. That said, the evaluation team finds that the TOC has not effectively driven program design and implementation; it is simplistic and fails to include feedback relationships and assumptions about the unintended consequences that have arisen during implementation.

For example, proceeding with mangrove restoration of a degraded area assumes that land tenure issues and permission by landowners has been worked out before activity begins. The evaluation team came across several places where such issues were not resolved or permission to plant was later revoked. Another example is that the planting of seedlings or propagules is an output that assumes that the plants will survive to deliver ecosystem and risk reduction services. Restored areas of mangroves as an outcome, assumes that a sufficient number of plants survive and are not removed by people, eaten by animals, or damaged by the elements.

Other shortcomings of the strategic approach that were noted include: (1) the development or support for alternative or supplementary livelihoods is not a specific output/outcome; (2) focus on a reduction in the demand for and use of mangrove wood is not a specific output/outcome; (3) the entrenched expectation of cash for time or work results in significant potential for stakeholder conflict.

Conclusions

The program's "three-tiered approach" of implementing activities simultaneously at the regional, national, and local levels is a self-reinforcing approach that should pay dividends in the longer-term towards maintaining political will and investment-focus on coastal resilience. The approach is further manifested in the program's two strategies, namely: (1) Promote effective (site-based) interventions; and (2) Improve the policy and enabling environment. The initial approach to detail vulnerabilities, identify intervention options, and prioritize options through a highly consultative process is a good approach and has been well received.

Developing a theory of change that meaningfully guides annual program work planning is an iterative process that requires continual review and update. It would be useful for the program to carry out a final review of the TOC before program completion, bringing key stakeholders together for this purpose. Coastal resilience is a broad, multi-disciplinary topic and the exercise of updating the TOC would benefit from inclusion of external reviewers and consultants in the stakeholder dialogue.

Recommendations

1. The program should revisit the program TOC to integrate feedback relationships and assumptions, including explicit assumptions about the timing and sequencing of steps. In revising the TOC, develop specific results chains that can be tested and validated for future programming. The TOC should pay special attention to the governance framework together with policies and land tenure arrangements that will establish the enabling context for successful mangrove management and conservation. It should be kept in mind that mangrove management solutions are, in general, not technical in nature. Rather, they are about the political economy of the “mangrove sector”, and require direct involvement by those having livelihood interests to be included in decision-making that is backed by authorities. The technical solutions can then be effectively applied and improved with specific individuals motivated to make it work.
2. An update of the program TOC is best done through a learning event or other multi-stakeholder process. Visioning of the outputs and outcomes should involve key stakeholders at all levels in order to elicit better intervention outcomes and ownership of the program purpose and objectives.

2.2 How have site selection criteria and contextual factors served to either support or detract from the successful implementation of WA BICC activities? What are the merits and shortcomings of the site selection criteria used to select target communities and mangrove restoration sites? Have any successes or failures of site-based activities been strongly influenced by contextual factors?

Findings

With respect to restoration sites, the program initially carried out extensive site analysis whereby a total of 63 potential restoration sites were evaluated, mapped, and characterized. Detailed land cover maps were prepared using Landsat satellite imagery to establish mangrove cover baselines and to understand rate of loss. Contextual factors for site selection were identified, but it is unclear to what extent they were actually utilized for site selection.

In all cases, the program consulted with community stakeholders to select sites for mangrove restoration. Multiple factors were considered, including biophysical factors such as soil type and hydrology, extent of mangrove degradation, exposure of houses to natural hazards, accessibility of the site, etc., among other factors. The evaluation team learned that site selection was a deliberate, consensus-based process at first, but later became more *ad hoc* as many of the initial sites failed and the Mangrove Restoration Committees (MRCs) felt pressure to begin restoration efforts elsewhere to show success and receive the cash incentive¹⁶.

Some mangroves were planted in areas with acceptable soil quality but with limited tidal influence. In many cases, mangroves were planted in sites exposed to extensive herbivory by domestic animals. Several other sites proved to be not acceptable for reasons of unsecured land tenure. These contextual factors negatively affected the success of many of the restoration activities.

The program completed a Knowledge, Attitudes, and Practices (KAP) survey which included a seasonal calendar of activities at the community-level, stakeholder mapping, and information about resource utilization. The KAP survey was important for an understanding of socioeconomic dynamics and allowed for more informed decisions regarding program planning and selection of site-based activities.

Whereas WA BICC did utilize CLA in its implementation approach, the large number of target coastal communities and the considerable travel and other logistical challenges of getting to and spending time in those

¹⁶ See Annex II for WABICC's response

communities has diminished the effectiveness of the CLA approach, as evidenced by the repeated unsuccessful efforts at mangrove restoration in some communities.

Conclusions

Initial efforts to systematically assess, map, consult, and identify potential restoration sites was an appropriate and critically important first-step for the program's signature work on mangrove restoration. But it is equally important to carry through with the use of uniform/required criteria in the selection of restoration sites and nursery sites, and to continually reassess/re-evaluate the physical, chemical, biological, governance, tenure, and other factors that ultimately determine success or failure.

The KAP survey was also valuable and important for an understanding of socioeconomic dynamics and allowed for more informed decisions regarding program planning and selection of site-based activities.

Recommendations

1. The program should undertake a systematic inventory and assessment of mangrove restoration (MR) sites across all 26 communities, and evaluate to what extent restoration site success/failure is a consequence (or a combination) of site selection, land tenure, timing of or planting technique, monitoring and control, or the overall governance framework. For example, what motivates MRCs (and individual members) today to care about monitoring and control? Do they have effective procedures and reporting systems for doing that? Has there been any peer-to-peer exchange among communities to share what works and not? Are there any incentives given to those communities that are more successful? WA BICC sites represent a rich repository of experience and lessons learned, and such information would be invaluable for future MR efforts.
2. Aside from the biophysical conditions that must be met, the governance setting around MR activities is of course also critical for success. Future programming should place more emphasis on community-wide education and involvement (i.e., not just committees). It is important that pilot sites be given every opportunity for a successful demonstration effect, and be built upon adaptive management processes based on learning-by-doing. Resource tenure arrangements that bring closed access dedicated to a specific group of mangrove resource users can motivate and incentivize stewardship based on the opportunity for demonstrable revenue streams.

2.3 How well does WA BICC address the particular drivers of mangrove loss and degradation, including the biophysical, socio-cultural, and economic factors? How well does WA BICC incorporate analysis of climate vulnerability?

Findings

WA BICC contracted with a group from Columbia University to produce a mangrove cover change map and baseline for carbon stocks of the SLCLC from 1990 to 2016. The results of the study indicate that the country has lost about 1 percent of total mangrove forest each year since 1990. According to the study, the highest percentage loss of mangrove cover occurred in the 2.5km and 5km buffers inland from the coast, and is most likely due to conversion to agricultural or forest plantation land and cutting of mangroves for fuelwood.

The evaluation team found little evidence of attention given to the main drivers of mangrove loss and degradation in the coastal communities – the continuing and increasing demand for mangrove wood for a range of activities, including fish-smoking, salt-making, fuelwood, construction material, and land conversion for rice agriculture. Efforts to reduce demand, or to better understand the economics and quantities of wood consumed for each activity, appear not to have been made.

As for the incorporation of data and analysis related to climate vulnerability, WA BICC, as previously mentioned, contracted with a group from Columbia University to conduct the comprehensive CCVA for Sierra Leone. The CCVA has been well received and the program is finishing work on a version of the CCVA that can be undertaken more rapidly and at less expense. One important aspect of vulnerability that was (intentionally) not assessed during the CCVA is sea level rise (SLR).

Conclusions

The case could be made that the program should have taken a more landscape/ecosystem scale approach in developing interventions to counter the major drivers of mangrove cover loss. But the need to address the coastal vulnerabilities of specific interest to the target communities is understood as the principal objective of Component 2, and of course every program must make strategic decisions based on resource availability.

A logical activity for a program like this would be the stimulation of supply and demand for improved fish smoking ovens. Technology exists to reduce mangrove wood use for fish smoking by as much as 40-60 percent. From a systems perspective, planting mangrove seedlings in isolation of constant engagement with communities to overcome the persistent drivers of mangrove loss and degradation is counterproductive and unsustainable.

Successful mangrove management and conservation requires systems-thinking and an integrated approach. Sea levels globally are expected to rise by more than two-and-a-half feet by the end of the century, and are expected to rise faster than the global average in West Africa, according to the West African Economic and Monetary Union.¹⁷ In addition, sand-mining is an extensive practice in coastal Sierra Leone and over time will diminish the ability of mangrove forests to build sediments and successfully adapt to sea-level rise. These are factors that must be included in analyses of how to approach mangrove management and conservation.

The CCVA has been well received and should serve the country and region well as efforts to replicate and scale-up climate change vulnerability analyses move forward. One important aspect of vulnerability that was not assessed during the CCVA is sea level rise (SLR). The evaluation team understands and concurs with the decision by the authors of the CCVA not to address SLR vulnerability given their available time and resources. Local vulnerability to SLR depends on many factors and data are not available related to historical SLR and storm surge. These facts make SLR scenario mapping and planning challenging at best. Having said that, SLR is a reality that will need to be addressed sooner than later. The WA BICC program is well positioned to initiate preliminary study and discourse on the topic.

Recommendations

1. The program should undertake an economic study of the mangrove “sector”, with attention to the political economy of mangrove wood use, the volumes/weights of wood use, the sources and end-uses of mangrove wood, and the valuation tradeoffs between an intact healthy mangrove forest and its conversion to other low value uses (e.g., salt-making).
2. The program should support research that explores how to build successful business models around mangrove restoration, including the precursor requirement of land tenure. Examine what has been accomplished at Anyanui, a village of the Volta Estuary in Ghana, by bringing fishers, farmers, and wood cutters together to form an Association that has been given land tenure rights over a section of mangrove forest that allows for the marketing of mature mangrove trees in sustainable, stewardship-driven manner.¹⁸
3. The program should begin to bring SLR into the policy and management dialogue as part of the CMP and CCAP processes, and could start by developing first-generation SLR scenario maps of the coast using simple, public domain SLR mapping tools that are widely available.

¹⁷ Fagotto, M., 2016

¹⁸ Torell and Tobey, 2012, p. 36

2.4 How well are WA BICC activities managed and coordinated to achieve objectives? How effective is the collaboration and coordination between WA BICC staff and other key stakeholders? Does the program have the staff, expertise, and capacity to design, implement, and achieve program objectives as perceived by stakeholders?

Findings

Component 2 is staffed with a team whose sole focus is largely Component 2. The evaluation team observed that at the national level within Sierra Leone, some MDAs, especially in the early phases of the program, felt slighted by a lack of focus on their own inclusion and strengthening. They expressed that at times WA BICC was “out-in-front” on certain activities that were felt to be within their purview and on which they should have been leading. In attempting to triangulate these comments, the evaluation team found these feelings to be connected with attitudes about jurisdictional authority.

WA BICC has made what everyone agrees is a very positive contribution in the formation of and support for the Coastal Chiefdoms Natural Resources Management Network (CCNRMN). The CCNRMN serves to enhance communication and coordination between national authorities, Paramount Chiefs, Section and Town Chiefs, Regional Councils, local elected officials, and representatives of various community-level user groups and associations. The Network is comprised of approximately 59 local leaders, including 48 men and 11 women. Network members use WhatsApp to communicate news of any incident, forecast, or other event. Now that it is established, however, it remains to be seen whether it will achieve the necessary political will, resources, and accountability to be sustained. Presently, it appears to be in a somewhat dormant stage.

As mentioned earlier, the evaluation team heard mostly positive comments related to WA BICC staff in terms of their technical expertise, skills, and capacity to deliver on program objectives. Stakeholders expressed confidence in the people – both staff and consultants – that WA BICC has involved. The program’s ability to plan, organize, and implement workshops and activities appears to be well respected and certainly appreciated. The evaluation team heard from a few communities that feel that WA BICC staff did not follow through on all promises, such as returning to the community in the indicated timeframe in order to assess progress and make incentive payments.

Conclusions

WA BICC has demonstrated a high-level of inclusivity and coordination in implementing activities in Sierra Leone. The approach has been well-received by the MDAs involved, and there appear to be no “key stakeholders” that have been missing from the program. Communication and coordination have been greatly enhanced with creation of the CCNRMN and its WhatsApp communication platform. WA BICC staff are given mostly high grades for their expertise and capacity, although the frequency of program staff visits to the 26 target communities remains a challenge for the daunting logistics of reaching the many remote sites.

Recommendations

1. Future programming should strive to involve all relevant stakeholders as partners, not merely recipients, in the process of generating (and owning) information for decision-making. All key stakeholders should be involved in the development of program vision, Theory of Change, and program results framework.
2. The program should use the process to develop and adopt the proposed CMP as opportunity to improve the coordination and communication between the principal MDAs involved in coastal resilience.
3. Related to the previous recommendation, a new sub-committee of the CCNRMN should be created to serve as a “policy committee”, and responsible to assist with communication and coordination between

levels of government and coastal communities regarding further refinements of the policy and governance framework.

3.3 LIKELIHOOD OF PROGRAM GOALS TO BE ACHIEVED AND SUSTAINED

3.1 What perceptions do stakeholders have regarding the prospect for activities to achieve impact at sufficient scale to achieve intended results? Is WA BICC on track to achieve its mangrove conservation and restoration, coastal protection, and livelihood goals? Is the proper scale of the challenges being adequately addressed?

Findings

This is a difficult question and not a very feasible one to answer at this time. Nor is it necessarily a “fair” question, given that a principal purpose of the site-based activities is “demonstration and learning”. That said, the evaluation team was unable to assess whether stakeholders believe the program will achieve impact at scale or achieve intended results. Few if any community-level stakeholders have perspective to respond to this question, and there is not yet enough information consolidated and macro-analysis completed to allow national-level stakeholders to reach an informed opinion.

A similar analysis of the extent and needs to address coastal erosion is not available. For example, the full extent of coastal erosion is not readily known, at least not in terms of miles, rates, and locations of eroding coastline. The two embankment activities are really intended to be a pilot-test of a low-cost technology involving locally available materials.

Nor is there quantitative data showing the program’s contribution to improved livelihoods and household income. Such data is not being tracked and there is no baseline.

The evaluation team did not undertake an analysis of the program’s M&E Plan, principally because the indicators and targets specified in the Plan are associated with all three components of WA BICC. There is no break-down of targets associated with Component 2 only. The evaluation team can therefore reach no meaningful conclusions about whether Component 2 is on-track to achieve targets for the site-based activities in the SLCLC.

Conclusions

To put the question of mangrove loss/gain into perspective, the evaluation team considered the following cursory calculation:

The total area of mangrove forest in Sierra Leone stands at about 105,000 ha. The CCVA found that about 1 percent of this area, or about 1,000 ha is lost each year. The program’s mangrove restoration strategy identified about 117 ha of area within the SLCLC suitable for restoration, or about 1% of the total area that is lost each year. Finally, the program reports to have achieved about 10 ha of mangrove restoration thus far, or about 0.01 percent of total area that is lost each year. That is the “big picture” with respect to mangrove losses and gains. It is the evaluation team’s understanding that the demand for mangrove wood is increasing as fishing effort and population continues to expand.

Despite the absence of quantitative data showing the cumulative contribution from VSLA efforts to improved livelihoods, clearly the VSLAs are an important (i.e., necessary but not sufficient) step towards achieving gains in supplemental or alternative livelihoods.

Recommendations

1. Future programming should strive to elucidate more clearly the intentions of the program and its expected outputs and outcomes. Although WA BICC was not designed to “achieve impact at sufficient scale”, it can and should make every effort to help decision-makers understand what is needed to achieve impact at scale related to the various coastal sector challenges.
2. A thorough analysis of mangrove wood utilization and the economic values and tradeoffs underway vis-à-vis the current status quo, could be an important legacy achievement of WA BICC.

3.2 What activities and outcomes are likely to be sustained and why? By program end and for each of the core activities, will the necessary enabling conditions (policy, legal/regulatory, institutional, financial, social capital, etc.) be in place and sufficient to sustain activities and outcomes?

Findings

This too is a question for which the evaluation team can only speculate. But looking at community-level activities, it is likely that most if not all of the VSLA groups will continue beyond completion of WA BICC. There appears to be enough intrinsic operational momentum, strong group dynamics, and self-interest to keep these groups going. That said, there is a need for additional training and to introduce mechanisms and record-keeping that will allow new members to join the VSLA groups.

It is doubtful that any significant degree of additional mangrove restoration or construction of embankment will occur independent of external assistance. From the evaluation team’s discussions with communities about their motivations to undertake mangrove restoration, it is clear that the cash incentive given by the program has played a major role in their motivation. As that disappears with the program, it is likely that there will be little motivation to continue restoration efforts.

Rice-Mangrove Integration (RMI) is, however, a type of restoration that has greater potential for scale-up and to be sustained. Farmers who have tried RMI generally find value in the practice, although many are not yet entirely convinced that there is an overall positive cost/benefit ratio. The program piloted RMI in 4 communities. It is possible that RMI, together with climate-smart agriculture (CSA) and other improvements to rice agriculture, can be more broadly scaled-up. However, the practice of converting shoreline mangrove forest to rice agricultural land is highly questionable and a topic deserving of further analysis in the context of land use planning and zoning for these coastal communities.



Figure 16: Rice-Mangrove Integration

Regarding embankments, it is possible that some communities will attempt to emulate the design and construction technique that has been demonstrated at the two communities. In fact, one community in the BSRE (Hangin Site) is, through self-initiative and at their own expense, constructing a similar style embankment to protect their village. At least a couple other communities indicated interest in an embankment, but are so far only requesting WA BICC support.

At the national level, the enabling conditions for mangrove conservation and management will take an important step forward if WA BICC and NPAA are together successful in drafting, socializing, and gaining adoption for the proposed CMP that will include a chapter on mangrove management. That is a lot to accomplish in just 15 months and there are over-lapping authority issues that may impede progress. But if that goal can be achieved,

and if the previously mentioned draft CCAP is also adopted, then two key pieces of the governance framework will be in place for further linkage with coastal communities and their Paramount Chiefs. In this regard, it will be important as well for the CCNRM Network to be sustained.

Conclusions

WA BICC is playing an important role in helping to consolidate and harmonize the various policies and authorities related to the SLCLC. The many overlapping authorities is a recipe for conflict and inefficiency, and WA BICC's efforts to clarify roles, responsibilities, accountability, and effectiveness should be commended. Improvement in the transparency of coastal land resource use will improve the investment climate and user incentives for responsible long-term management.

Coordination and responsibility-sharing between the MDAs relative to enforcement and monitoring of environmental compliance will be an important development for Sierra Leone. EPA appears to carry the responsibility for most environmental compliance, but has limited capacity and resources for field monitoring and enforcement. Public financing as well as private sector involvement for improved regulatory compliance and enforcement will be necessary to achieve the objective of improved coastal resilience.

Recommendations

1. In assisting NPAA with development of the mangrove management component of the CMP, the program should strive to insert 'systems thinking' into policy, public discourse, and social and behavioral change (SBC) efforts. A key element will be discussion of the role that mangrove wood plays in overall energy supply and demand in the rural area – for cooking, for smoking fish, for salt-making, and other uses. Simply put, alternative livelihoods and reduced energy demand should be seen as central to successful mangrove management and coastal resilience. Identifying and creating supply chains and demand for alternative and cheaper forms of energy, or using improved technology to reduce overall energy demand, should be considered high priority for the remainder of WA BICC. The evaluation team has prepared an initial list of ideas for consideration (Annex 10).
2. Future programming should include attention to land and resource tenure. The current 'open access' nature of most coastal resources, including mangrove forests and fisheries, is not supportive of responsible, long-term stewardship, sustainable use, and conservation. An analysis of existing customary land and resource tenure practices, together with facilitated discussion vis-à-vis the CCNRMN, would be an important first step.
3. Future programming should evaluate and attempt to quantify the roles that sand-mining and salt-making play in the degradation and lost ecosystem services of Sierra Leone's estuaries.
4. The program should undertake, or consult with UNDP to undertake as part of the CCAP, a focused sea-level rise study for Sierra Leone that includes a time-series study of erosion rates and mapping of SLR scenarios. SLR should be a key topic dealt with in the CCAP and CMP efforts.
5. While voluntary compliance of environmental regulations is the preferred approach, especially in rural areas, there will always be the need for at least some monitoring and enforcement authority and capacity. Future programming should examine ways and means to improve coordination and responsibility-sharing between MDAs relative to monitoring and enforcement of coastal bylaws. EPA appears to carry most responsibility but has limited capacity for field monitoring and enforcement.

3.4 LESSONS LEARNED

Mangrove Restoration

There is little justification to establish a nursery; it requires time, labor, and expense. Direct seeding (with seed pods collected from within the mangrove forest) results in higher survival rates and requires only minimal training or technical expertise. Transplanting wildlings is a second-best alternative, although roots are easily damaged

during the transplanting process. Regardless of the selected technique, site selection, seasonal timing of planting (rainy season is best), and species selection are critical factors to ensure high success rates. Fencing for animal control is essential where there are roaming grazers. The resolution of land tenure issues and authorized permission to restore a particular area must be secured in advance.

Determinants of the success of mangrove restoration are myriad, including: hydrologic regime (which controls survivorship, growth rate, and distribution of mangrove species); zonation (emanating from environmental tolerance and physiological preferences of individual mangrove species); soil and substrate; salinity; tidal fluctuation and wave energy; propagule availability; ecological knowledge and community participation; and monitoring and adaptive management.

Even before the hydrologic regime is considered it is important to consider the size and extent of drainage basin, extent and area of mangroves at the downslope end of the basin, topography and bathymetry of the mangrove area, hypsometric characteristics to calculate the current tidal prism of the mangrove area, rates of terrestrial input of water, sediment, and nutrients, as well as climatic water balance.

Mangrove Demand Management

A focus on mangrove management, including restoration, in the absence of concerted efforts to reduce the demand for mangrove wood, is not a sustainable strategy. Population growth and increased fishing effort are pushing the demand for mangrove wood to new levels. Efforts are critically needed to develop supply chains and create demand for improved fish-smoking ovens, cook stoves, and to better understand the potential role for alternative and cheaper sources of energy in mangrove conservation.

Rice-Mangrove Integration

The practice of RMI has potential for scale-up and sustainability. Farmers like the erosion and manatee control afforded by the mangroves, but are concerned about losing cultivable land to an expanding buffer strip of mangroves along the coast. They also indicate that birds roosting in the mangroves eat their rice, suggesting that scarecrow/bird control technology should be investigated. However, the practice of converting mangrove forest, especially shoreline forest, is highly questionable and deserving of more analysis before being encouraged further (directly or indirectly) by future donor funding.

VSLA

Future training should take place in each community and made available to the entire community so that everyone understands the purpose and opportunity of the VSLA. Taking only a couple members to an external training can easily cause misunderstanding and frustration. It is necessary to conduct refresher training and to introduce bylaws that allow for additional new members to join. This will be to everyone's advantage and make for a stronger more capitalized VSLA.

Embankment

The decision to construct an embankment requires site analysis and solid understanding of the coastal dynamics at play. Communities should not be encouraged to take this initiative on their own without credentialed technical assistance from a coastal engineer. Embankments must be properly located and installed, taking into account biophysical factors and with care not to augment erosion at either end.

Providing cash incentive for work/time

The widespread practice of providing cash incentive for program participants in Sierra Leone has the potential to engender jealousy, mistrust, and conflict within a community. It also can create expectations that are not met resulting in frustration and failure. The practice should be re-considered, with the identification of other ways to incentivize communities and individuals. Taking true "ownership" of mangrove conservation and management cannot succeed until there is a transformational attitudinal and behavioral shift across coastal communities. That

cannot be achieved if the major motivation is cash. Peer-to-peer learning, study tours, twinning arrangements, and other types of incentive may, over time, help to diminish the need for direct cash incentive.

Climate Change Vulnerability Assessment

The CCVA for Sierra Leone focused on the four estuaries and their fringing forests of mangroves. It indicated higher rates of mangrove loss and degradation farther inland from the coast, but did not include an assessment of the human activities causing those impacts. It will become increasingly important to undertake VA at the landscape/ecosystem scale, especially as SLR and other climate change and human activity factors “push” remaining mangrove forests farther inland. Future programming would benefit from an action-research component focused on ridge-to-coast.

Livelihoods

The creation of savings and micro-credit loan opportunities is important and greatly appreciated by coastal communities. It should be considered an essential pre-cursor to sustainable development. However, support must also be given to the creation or strengthening of supplemental or alternative livelihoods. Especially needed are enterprises that have ancillary environmental benefits, such as reducing natural resource demand or eliminating/reducing a pollutant. There should be concerted focus and effort on engaging the private sector in the development of ‘conservation enterprises’.

3.5 RECOMMENDATIONS

Recommendations: Short-Term

Mangrove Management Plans

The preparation, socialization, and adoption of the proposed Co-Management Plan should be given high priority. The remaining time for WA BICC is a critical window-of-opportunity for NPAA and the GoSL to complete this important piece of the governance framework for mangrove forest management. The Plan will include a chapter on mangrove management and, as the evaluation team understands, a model plan based on the Bonthe-Sherbro River Estuary. It will include mapping, zoning, and sustainable harvest and monitoring requirements and will ultimately be adopted by Parliament and serve as the basis for extending coastal bylaws across the country.

Sea-Level Rise

Bring SLR into the policy and management dialogue as part of the Co-Management Plan process and as part of the CCAP process. Develop SLR scenario maps of the coast (using online tools from Google Earth, Google Maps, NOAA, etc.) to help inform the Plan and begin discussions about the longer time horizon for the country. Conduct a study tour/exchange visit with Cote d’Ivoire where the program is undertaking a time-series study of coastal dynamics. Begin to incorporate SLR into community education and sensitization messaging.

Economic Analysis of the Mangrove Sector

Undertake a comprehensive study of the demand and use of mangrove wood in Sierra Leone. Identify sources and end uses, with volumes/weights involved in each. Develop costing and other economic analyses associated with key uses, including fish smoking, fuelwood, salt-making, and timber. Determine the degree to which sourcing at increased distance and cost is placing added burden on communities, and identify trade-offs between the value of an intact mangrove forest and certain low-value uses of mangrove wood, such as salt-making. Include analysis of the energy content of mangrove wood that is sourced and used, and cost comparison with other forms of energy to allow policy-makers to see a clearer picture of the multiple benefits being lost by mangrove forest removal and implications for the longer-term (Annex 10).

Mangrove Wood Demand Management

In concert with the above economic analysis, solicit ideas from key stakeholders, including the CCNRMN, on ways to identify and convene the major mangrove wood cutters in the country. Work to understand their

sourcing locations, harvest practices, and the economics of their industry. Focus BCC efforts to enlist their participation in the overall effort of mangrove management, and begin to organize their participation for the adoption of sustainable harvesting requirements of the Co-Management Plan. In addition, undertake an inventory to determine the number and type of fish-smoking ovens in use throughout the country. Estimate the reduction in wood use possible with the introduction of IFSS. Bring this information to a private sector incubation workshop.

CCNRM Network

The sustainability of the CCNRMN should be considered an important component of the overall governance framework and key to successful adoption and application of the Co-Management Plan. The program should convene the Network for the purpose of assessing lessons learned, current capacity and commitment, and to develop a road map for its future. It is imperative to establish working groups at various administrative levels (local, regional, national) to make the Plan operational. A smaller sub-group that can meet more frequently – a policy committee – should be considered to take the lead on key policy issues that will need to be addressed during the development and roll-out of the Plan and coastal bylaws. In reconvening the Network, discussion would be useful on ways to create and instill accountability for the Network and its leadership, through some planned media spotlight or other means.

WA BICC Management Team Visit to Coastal Communities

Undertake a “programmatic assessment” of the 26 communities by sending a team of senior WA BICC management and technical specialists to clarify and agree upon remaining activities to be completed by the program. Assess frustration levels and help to manage any outstanding expectations or misunderstandings. Clarify what is expected by the communities in return. Begin the assessment by hearing from community animators their view of the issues and reviewing the FGD summaries in this report (Annex 8).

VSLA Refresher Training

In concert with the above assessment, ensure that all members of the VSLA groups have clear understanding of the purpose and operational requirements of the VSLA. Provide refresher training as needed, and assist to develop bylaws and procedures as necessary to ensure that new members can join the VSLA at any time. Discuss criteria for the use of loan funds, with the objective that loan funds should not under any circumstance be used to purchase illegal fishing nets or gear. Create an options list of potential conservation enterprises that might be relevant to a range of communities, and provide information to stimulate further action.

Radio Drama Series and BCC

Intensify BCC efforts in each community and stimulate dialogue on how best to create community self-responsibility and leadership on resilience issues, including how to alter the current practice of cash incentive so that it is not the major motivating factor and cause for disunity. Conduct a pre/post assessment of the effectiveness of the radio drama series to understand uptake and attitudinal change. Consider ways to increase the involvement of youth and youth leadership, through youth groups, clubs, curriculum, sports, and competitions. Consider as well opportunities that may exist to involve Imams in helping to deliver key messaging to their faith communities. Discuss with them the potential and utility of issuing a Fatwa on a particular environmental issue, such as solid waste management, to engender behavioral shift.

Coastal Climate Change Adaptation Plan

Determine with EPA the remaining steps to complete the CCAP, including consultations with MDAs, community surveys and sensitization, and adoption. Given the dwindling time remaining in WA BICC, consider whether the program can continue to support these actions or if other options should be sought. Consider handing-off the CCAP activities to UNDP for inclusion in their new coastal resilience program which will continue after WA BICC concludes. Meanwhile, place additional focus and energy of WA BICC staff on the Co-Management Plan, its harmonization with other policies/plans/bylaws, additional analyses (e.g., SLR, energy and economics of the mangrove sector, etc.) plus other activities prior to closeout.

Recommendations: Long-Term

Mangrove restoration vs. natural regeneration

Mangrove restoration should not be the major focus of future programming for improved coastal resilience in Sierra Leone. There are higher priorities and precursors needed to improve the preparedness and coping capacity of coastal communities and the governance framework for resilience. Attention to the human factors that play a role in resilience – those related to the socioeconomics of mangrove use, zoning, building codes, early warning systems, land use, land tenure, political will, and governance – will pay larger dividends for health, safety, and welfare in the long-term (Figure 17). This will necessarily involve resettlement of communities and allowing for landward migration of mangrove forests in response to SLR. If care is given to ensure that the biophysical requirements of mangrove forests remain intact, then natural regeneration will vastly outpace restoration, with better result and at no cost.

Mangrove Planting for Profit

Future programming could make a substantial contribution by analyzing mangrove fuelwood value chains, and developing fast growing plantations and agroforestry systems with local communities and entrepreneurs to meet growing demand. Plantations (woodlots) and agroforestry systems have the added advantage in that carbon credits for such efforts can be sold under both the Clean Development Mechanism (CDM) and voluntary markets, and producers can get paid for both sequestration and, after a period of time, harvesting and sale of product. Learn from the example at Anyanui, Ghana, where fishers, farmers, and wood cutters formed an Association and where income generating wood harvest has been sustained for more than 20 years.¹⁹

Private Sector Engagement

Convene a ‘coastal enterprise incubation workshop’ to discuss private sector ideas and opportunities for conservation enterprises in coastal areas. Invite the appropriate GoSL Ministry/Minister to sponsor/host the workshop. Prime the discussion with relevant information, analysis, and case-studies from elsewhere. Consider the use of a revolving fund to stimulate private sector engagement. Some ideas to include: IFSS, cook stoves, oyster culture, alternatives to artisanal salt-making, tourism, etc. Linking private sector interests with the VSLA groups may allow for demand and quick uptake of new products/technologies at competitive prices.

¹⁹ Torell and Tobey, 2012, p. 36

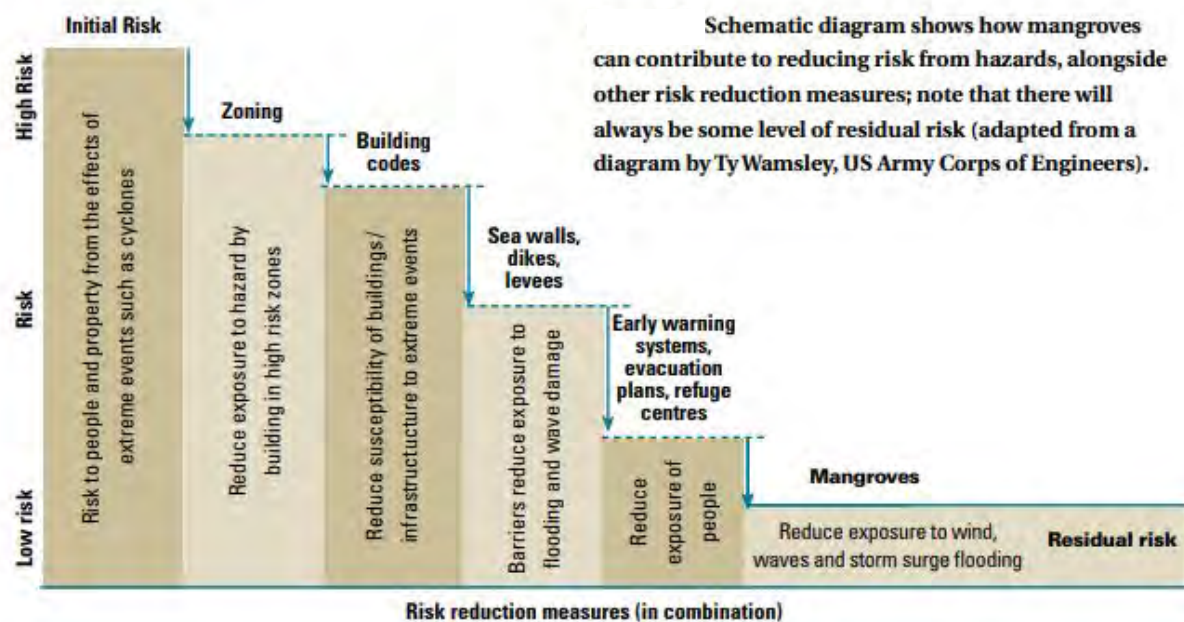


Figure 17: Integrated risk reduction for improved coastal resilience (from M.W. Beck, Ed., 2014)

Land and Resource Tenure

Future programming should consider how best to assist Sierra Leone in developing sound and equitable governance of land and mangrove forest resources. This might be piloted through community-based activities, and may include policy and/or legal reform of land and resource tenure as it affects mangrove forests on communal lands and open access and unprotected areas. There will likely be definitional and legal differences between land and resource tenure options for urban vs. rural areas, or those under the norms of Western law and those under the norms of customary law. Sound and equitable governance of land and mangrove forest resources is an important precursor for Sierra Leoneans to move out of poverty. When combined with other objectives, such as better access to markets and diversification of incomes, it can be transformative. A legal and institutional framework that allows coastal communities in SL to make productive investments in their lands and mangrove forests is a cornerstone of coastal development and resilience. Careful stewardship of mangrove forests and other natural resources will follow from more secure rights if accompanied by clear delineation of responsibilities, capacity building for community enforcement, and sustainable economic growth opportunities.

Fisheries management

Fisheries is by far the most important source of livelihood and food security for coastal communities in Sierra Leone, but all indications point to a current trend of over-exploitation. Improving coastal resilience for these communities must logically include attention paid to the status and management of fish stocks. The open access nature of fisheries, as is also the case for mangrove forests, will continue to stymie efforts to control fishing effort. Ideally the country can move quickly to some form of controlled access, whereby communities or groups of communities have preferential access to fish stocks within their geographic boundary. Co-management arrangements should be pursued, and all efforts made to stem the proliferation of small-mesh nets that are currently decimating the resource. Sustainable management of shellfish fisheries within mangrove forests through co-management arrangements can also provide numerous co-benefits.

Transformational Change

Coastal nations worldwide are in a race against time. The impacts of sea-level rise, storm surge, and extreme weather make living in low-lying coastal areas a growing struggle that will likely end in forced resettlement for many communities. Mangrove management and conservation can help to forestall that consequence, but success

will require integrated approaches based on systems-thinking. The policy goal for mangrove management should be “no net loss”. To achieve that goal will require simultaneous efforts on many fronts, beginning with an understanding of the scale, dimensions, and political economy of mangrove forest loss and degradation.

Improved coastal resilience will ultimately be judged by how well a community has reduced its exposure to risk and increased its capacity to cope and adapt. This too will require new systems-thinking and an approach to disaster preparedness that includes actions related to pre-disaster, disaster, and post-disaster. Closely aligned must be community plans and actions that consider the continuum of actions that may be needed to reduce risk: avoid, protect, adapt, or retreat. It is not too early to introduce these ideas and actions into policy and management dialogue in Sierra Leone.

EVALUATION TEAM

Team Leader – Mr. Richard Volk

Richard Volk is a natural resources management and coastal resilience specialist with more than 35 years of experience in leading, managing, and providing technical assistance on a wide range of international and domestic programs. He recently completed 20 years at USAID where he provided worldwide technical and managerial support for numerous water security, coastal and fisheries management, biodiversity conservation, and climate adaptation activities as a senior technical advisor to the Agency's E3 Bureau. Richard routinely consults and advises on all aspects of water resources management, adaptation and resilience, biodiversity conservation, rural livelihoods, WASH service provision, integrated coastal management, and small-scale fisheries. He has spoken, written, and published extensively on the cross-cutting themes related to these technical areas, including policy, governance, environmental and social assessment, science for management, stakeholder participation, and public outreach and communication. Richard has lived and worked in South Pacific and Caribbean small-island developing states for more than 12 years, and has traveled extensively on professional assignments in more than 40 countries.

Coastal Ecosystem and Mangrove Expert – Mr. Abdoulaye Diame

Abdoulaye Diame has over 20 years of experience helping local committees and governance systems to develop adaptation and resilience strategies for estuarine ecosystems in West Africa and elsewhere. He has experience with both quantitative and qualitative research methods related to this evaluation, including the multi-country study "A Decade of Mangrove Reforestation in Africa (1999-2009): Serie I: An Assessment in Five West African Countries – Benin, Ghana, Guinea, Nigeria, and Senegal". Abdoulaye is the Executive Director and co-founder of the West African Association for Marine Environment (WAAME) and has led the organization since its inception in 1995. WAAME is a Senegal-based NGO dedicated to enhancing marine and coastal conservation and livelihoods. Abdoulaye also served as Executive Secretary and co-founder of the African Mangrove Network from 2004 to 2015. He is fluent in French and a proficient speaker of English.

Quantitative and Qualitative Researcher – Professor Frederick Ato Armah

Frederick Ato Armah is an interdisciplinary scientist with deep interest in the natural and human dimensions of environment and health. His core domains include environmental multivariate statistics; global environmental change mitigation and adaptation; environmental management, remediation and policy; human health risk assessment and management; climate change-human health nexus; pollution of environmental media and biota; participatory resources management; and socio-ecological systems. Frederick has an extensive list of publications in peer-reviewed journals. His research includes *Evaluating Differences in Barriers to Climate Change Adaptation between the Poor and Non-Poor Coastal Tanzania*, published in *Climate Change Management: Innovation in Climate Change Adaptation* (2016); *Land access constraints for communities affected by large-scale land acquisition in Southern Sierra Leone*, published in *GeoJournal*; and *Does Previous Experience of Floods Stimulate the Adoption of Coping Strategies? Evidence from Cross Sectional Surveys in Nigeria and Tanzania*, published in *Environments*; among others. Frederick is currently an Associate Professor at the Department of Environmental Science, University of Cape Coast, Ghana, where he lectures on Environmental Impact Assessment, Environmental Statistics and Research Methods, System Dynamics Modelling, and Human and Ecological Risk Assessment. Frederick has worked in the Environment Sector since 2001.

GLOSSARY OF TERMS

Capacity building -- this involves training of individuals and groups by WA-BICC to enhance proficiency, core competencies, knowledge, skills and attitudes of beneficiaries in three core areas namely mangrove conservation and restoration, livelihood, and embankments.

Content Analysis -- the systematic, objective, qualitative and quantitative description of the manifest or latent content of print or non-print communications.

Core activities -- these are the three main focus areas of WA-BICC interventions namely mangrove restoration and conservation, embankments, and livelihoods.

Direct seeding -- the process of planting a new mangrove tree by taking a seedling from a mature tree, or picking up seedlings that have only recently fallen from the tree, and, after soaking the seed, planting it in a new location.

Embankments -- physical structures erected to protect communities threatened by erosion and flooding.

Focus Groups -- small, roundtable discussion groups charged with examining specific topics or problems, including possible options or solutions. Focus groups usually consist of 4-12 participants, guided by moderators to keep the discussion flowing and to collect and report the results.

Indicator -- a quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect changes connected to an intervention, or to help assess the performance of a development actor.

Key stakeholders -- people, who can devise, pass or enforce laws and regulations (e.g., government players including national and regional bodies, ministries, agencies, departments, institutions. In the context of WA-BICC, these are stakeholders responsible for sustaining activity achievements.

Key Informant -- these are individuals whose social positions in a research setting give them specialist knowledge about other people, processes or happenings that is more extensive, detailed or privileged than ordinary people, and who are therefore particularly valuable sources of information to a researcher, not least in the early stages of a project.

Livelihood -- activities individuals engage in to make a living. In the context of WA-BICC, these include small grants to communities such as payment for labor in mangrove planting or purchase of seedlings; establishment of improved smokehouses, village and savings loan association, and climate smart agriculture.

Metric -- a calculated or composite measure or quantitative indicator based upon two or more indicators or measures. Metrics help to put a variable in relation to one or more other dimensions.

Primary stakeholders -- people who are the direct beneficiaries or target of WA-BICC interventions/activities (i.e., individuals, communities and identifiable groups).

Restoration -- activities individuals and communities undertake to reverse degraded ecosystems. In the context of WA-BICC, it includes community education (workshops, meetings, field events), technical research to understand ecology of mangroves, monitoring and control (mangrove mapping, mangrove health survey, sedimentation surveys). It also includes community participation (establishment and maintenance of community

nurseries, replanting, identifying and training of community animators, establishment of mangrove restoration committees and coastal communities' natural resource management networks).

Secondary stakeholders -- those directly involved with or responsible for beneficiaries or targets of the WA-BICC activities (i.e., WA-BICC staff, NGOs).

Questionnaire -- structured sets of questions on specified subjects that are used to gather information, attitudes, or opinions.

Quota sampling -- a type of purposive sampling in which data is collected from a homogeneous group. In quota sampling, you select people non-randomly according to some fixed quota. There are two types of quota sampling: *proportional* and *non-proportional*. In **proportional quota sampling** you want to represent the major characteristics of the population by sampling a proportional amount of each. For instance, if you know the population has 40% women and 60% men, and that you want a total sample size of 100, you will continue sampling until you get those percentages and then you will stop. So, if you've already got the 40 women for your sample, but not the sixty men, you will continue to sample men but even if legitimate women respondents come along, you will not sample them because you have already "met your quota." In the context of WABICC, level of mangrove degradation may be used as quota (degradation estimated under 30%; 31-60%; 61-100%), which is anticipated to also correlate with mangrove product demand and market access factors.

Reliability -- the degree to which a measure yields consistent results. If the measuring instrument [e.g., survey] is reliable, then administering it to similar groups would yield similar results. Reliability is a prerequisite for validity. An unreliable indicator cannot produce trustworthy results.

Saturation -- a situation in which data collection or data analysis begins to reveal repetition and redundancy and when new data tend to confirm existing findings rather than expand upon them.

Subcultures -- ethnic, regional, economic, or social groups exhibiting characteristic patterns of behavior sufficient to distinguish them from the larger society to which they belong.

Triangulation -- a multi-method or pluralistic approach, using different methods in order to focus on the research topic from different viewpoints and to produce a multi-faceted set of data. Also, it is used to check the validity of findings from any one method.

Unit of Analysis -- the basic observable entity or phenomenon being analyzed by a study and for which data are collected in the form of variables.

Validity -- the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure. A method can be reliable, consistently measuring the same thing, but not valid.

Variable -- any characteristic or trait that can vary from one person to another [age, ethnicity, gender, income] or for one person over time [age, political beliefs]. It may also be considered as a label or name that represents a concept or characteristic of the subjects that varies.

REFERENCES

Adger, W. N., Hughes, T. P., Folke, C., Carpenter, S.R., and Rockstroem, J. (2005) Social-ecological resilience to coastal disasters. *Science*, VOL 309.

Center for International Earth Science Information Network (CIESIN) of Columbia University (2006). CSD Coastal Population Indicator: Data and Methodology Page. http://sedac.ciesin.columbia.edu/es/papers/Coastal_Zone_Pop_Method.pdf

E. Torell and Tobey, J. (2012) Enterprise Strategies for Coastal and Marine Conservation: A Review of Best Practices and Lessons Learned. Coastal Resources Center, University of Rhode Island.

Fagotto, M. (2016) West Africa is Being Swallowed by the Sea. Foreign Policy. October 21, 2016. <https://foreignpolicy.com/2016/10/21/west-africa-is-being-swallowed-by-the-sea-climate-change-ghana-benin/>

L. Croitoru, Miranda, J.J., and Sarraf, M. (2019) The Cost of Coastal Zone Degradation in West Africa: Benin, Cote D'Ivoire, Senegal and Togo. World Bank Group. Washington, DC, USA.

M.W. Beck (Editor) (2014) Coasts at Risk: An Assessment of Coastal Risks and the Role of Environmental Solutions. A joint publication of United Nations University-Institute for Environment and Human Security, The Nature Conservancy, and the Coastal Resources Center at the University of Rhode Island Graduate School of Oceanography. URI/CRC. Rhode Island, USA.

P. Mondal, Trzaska, S., and de Sherbinin, A. (2017) Landsat-Derived Estimates of Mangrove Extents in the Sierra Leone Coastal Landscape Complex during 1990-2016. Published online in *Sensors*, VOL 18, Issue 1.

S. Trzaska, de Sherbinin, A., Kim-Blanco, P., Mara, V., Schnarr, E., Jaiteh, M., and Mondal, P. (2017) Sierra Leone Coastal Vulnerability Assessment: A report on the vulnerability of ecosystems and communities in mangrove areas. Center for International Earth Science Information Network (CIESIN) of Columbia University. Prepared under contract with Tetra Tech as part of the WA BICC Program.

UNEP (2014). The Importance of Mangroves to People: A Call to Action. Van Bochove, J., Sullivan, E., Nakamura, T. (Eds). United Nations Environment Programme World Conservation Monitoring Centre, Cambridge. 128 pp.

USAID (2015). Fact Sheet. West Africa Biodiversity and Climate Change Program. www.usaid.gov/west-africa-regional/fact-sheets/west-africa-biodiversity-and-climate-change-wa-bicc

ANNEXES

ANNEX I: EVALUATION STATEMENT OF WORK



USAID | WEST AFRICA
FROM THE AMERICAN PEOPLE

ASSESS Project – Commissioned Activity

Activity	Performance Evaluation of the West Africa Biodiversity and Climate Change (WA-BiCC) Project
Requestor	USAID/WA Environment Team
Project Information	Implementing Partner: Implemented by Tetra Tech ARD, in association with Palladium, Center for International Earth Science Information Network (CIESIN), PCI Media Impact (PCI), and Pact Inc.

I. INTRODUCTION AND BACKGROUND

WA-BiCC is a five-year, \$48.9 million project awarded in 2015 with the goal to “address both direct and indirect drivers of natural resource degradation to improve livelihoods and natural ecosystems across the region. The project works with partners at the community, national and regional levels to strengthen policies and systems that will improve natural resource management and the health and resilience of selected coastal and upland forest ecosystems.”

I.1 Description of the West Africa Biodiversity and Climate Change (WA-BiCC) Project

The Theory of Change (TOC) for WA-BiCC focuses on “strengthening the feedback loop among regional, national, and local levels so that better practices filter down from the regional level while better practices developed at local and national levels are pulled up by regional institutions and are subsequently disseminated through that same feedback loop”.

The TOC assumes that: IF capacities to combat wildlife trafficking are strengthened (Component 1); AND coastal resilience is improved in West Africa (Component 2); AND deforestation, degradation, and biodiversity loss are reduced in key forests in West Africa (Component 3); THEN West Africa will see improved coastal resilience, reduced deforestation, and degradation in key forests while linking policy and practices to boost the social and economic well-being of West Africans.

WA-BiCC’s activities include three core components: (1) combatting wildlife trafficking, (2) improving coastal resilience, and (3) reducing deforestation, forest degradation, and biodiversity loss in mangrove and upland forests. These components are implemented in an integrated manner and are designed to address crosscutting issues. These three core components include the following activities:

1. Combat wildlife trafficking through the revision and operationalization of national and regional policies, laws, and regulations. The program will strengthen national and regional networks and institutions by building their capacity to enforce trafficking laws. National Action Plans and community-led behavioral change campaigns will be developed to shrink the supply chains of trafficked wildlife.

2. Improve coastal resilience in West Africa through integrated planning and the strengthened capacity of local, national and regional frameworks. WA-BiCC will build local, national and regional capacity to generate and use climate information in coastal planning, support the National Adaptation Planning process, and pilot and scale up coastal adaptation strategies that are effective.
3. Reduce deforestation, degradation and biodiversity loss in key forests through WA-BiCC technical and knowledge management support. The program will improve capacity for economic planning and development of Low Emissions Development Strategies, REDD+, and transboundary conservation strategies while simultaneously engaging the private sector and supporting frameworks to integrate best practices for the sustainable management of natural resources.

Within these core components, the WA-BiCC Project includes a range of specific activities. For the first of these, WA-BiCC will be mapping wildlife trafficking networks and conducting trainings with wildlife officers, customs officers, judiciaries, and parliamentarians. As part of its work on improving coastal resilience, WA-BiCC will conduct education campaigns through drama episodes and call-in shows. The project will also engage communities for the sake of vulnerability assessments, options analysis and conservation and rehabilitation activities. The Project will likewise provide technical assistance to national-level policy formation in the targeted landscapes and will work with national agencies to assess the status of their REDD+ readiness.

1.2 WA-BiCC's Sierra Leone Coastal Landscape Complex/Intervention to Be Evaluated

While the WA-BiCC Project includes a wide range of activities in a variety of locations, the proposed evaluation is focused on a set of mangrove conservation activities in the Sierra Leone coastal landscape complex (hereafter SLCLC). The activities in the SLCLC is depicted in Figure 1 below.

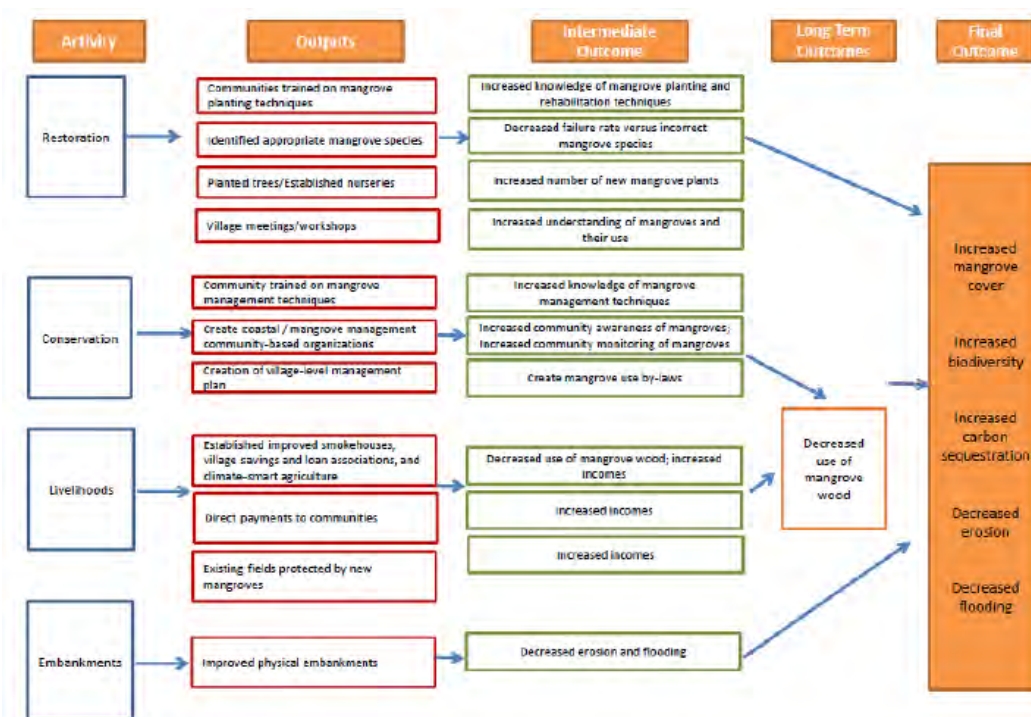


Figure 1: WA-BiCC Regional Approach

These activities are planned to improve knowledge, mangrove by-laws and, ultimately, mangrove cover, biodiversity, and carbon sequestration, while also reducing local erosion and flooding. Work in the SLCLC also includes livelihood activities and embankments. WA-BiCC will be implementing livelihood activities designed to reduce reliance on mangrove wood, leading to increased mangrove cover and its associated benefits. Meanwhile, its work on embankments will be designed to reduce flooding and erosion in select communities. These activities will span four coastal landscapes in the country—Scarcies River Estuary, Sierra Leone River Estuary, Yawri Bay and Bonthe Sherbro River Estuary.

The activities implemented in the four coastal landscapes will vary based on the level of mangrove degradation, the local economy, and the needs and priorities of the community. Generally speaking, communities will be engaged in a combination of (1) restoration, (2) conservation, (3) livelihood, and/or (4) embankment activities.

Restoration activities will take place in areas which show a 60-100% degradation of mangroves based on historical data for communities included in WA-BiCC's vulnerability assessment. Overall, 25 villages, consisting of 57 sites which span over 117 hectares, are expected to be included in the restoration activities with eight of these sites (consisting of 32 hectares) designated as "priority sites."

Across the 57 sites, WA-BiCC staff will conduct a number of exercises for restoration, such as community education, technical research, community participation, and monitoring and control. Community education will include workshops, meetings, and field events to raise awareness of mangroves and their use. Technical research will be conducted—potentially by graduate students—to understand the ecology of mangroves in the project sites. Community participation will consist of replanting; the establishment and maintenance of community nurseries (in selected sites); identifying and training Community Animators (CAs) within each community; establishing Mangrove Restoration Committees (MRCs) within each community; and establishing the Coastal Communities Natural Resources Management Network (CCNRMN), which will span across communities. Lastly, monitoring and control activities will include mangrove mapping, mangrove health surveys, and sedimentation surveys, which will be conducted by the CAs and WA-BiCC staff.

Conservation activities will be implemented both in areas surrounding restoration sites—through buffer zones—and in communities where there are no restoration activities (i.e. areas where mangrove degradation is estimated to be less than 60%). As WA-BiCC staff are still in the process of engaging local leaders and communities in order to identify conservation sites, the exact number and extent of these sites is not yet known. Once identified, however, conservation activities will include sensitization efforts to raise awareness of mangroves and conservation techniques, as well as the creation of village-level management groups, management plans, and by-laws for the conservation sites.

Livelihood activities in the selected villages are expected to include small grants to local communities (e.g. as payment for labor used in mangrove planting or for purchasing mangrove seedlings from community nurseries) and the establishment of improved smokehouses, village and savings loan associations, and climate-smart agriculture. Restoration and conservation activities conducted by the project may also have livelihood impacts, such as providing greater protection to rice fields via mangrove replanting.

Embankment activities will take place in four communities, which are acutely threatened by erosion and flooding, and if left unchecked, may force communities to relocate. WA-BiCC's work is focused on improving the physical embankments which surround these communities.

2. PURPOSE OF THE PERFORMANCE EVALUATION

USAID/West Africa is commissioning this evaluation to contribute to the evidence base on effective development programming for mangrove conservation and restoration activities. The evidence base for conservation projects lags behind other sectors, with little available evidence on the efficacy of these types of interventions that could inform policy or program design. The proposed evaluation will thus contribute to filling this gap by providing an assessment of the WA-BiCC interventions in Sierra Leone, in order to provide lessons for programming and policymaking related to coastal mangroves and other forest conservation programs more broadly.

USAID/West Africa, USAID/E3/Forest and Biodiversity Office and the WA-BiCC implementing partners are the primary audiences for the evaluation results. Secondary audiences for the evaluation results include Tetra Tech and other practitioners engaged in conservation and climate-resilience projects in Sierra Leone, including UNDP and Bird Life—whom WA-BiCC staff have identified as potentially beginning projects on these topics in the future. These findings will also be important to the Government of Sierra Leone, the Environment Protection Agency, and the Ministry of Fisheries and Marine Resources. The lessons learned from this evaluation will also be useful outside Sierra Leone, including in other WA-BiCC countries and other regions where mangrove deforestation is an acute challenge.

2.1 Evaluation Questions

The midterm performance evaluation will address the following six evaluation questions and related sub-questions:

Table 1: Evaluation Questions per Thematic Area

Thematic Area	Evaluation Questions
1. Activity achievements and contextual factors of Action Plan for Restoration and Management: Mangrove restoration, Embankments and Livelihoods	What are the strengths and challenges of the different mangrove restoration activities, embankment activities, and livelihoods activities under implementation in the SLCLC, in terms of their implementation and intended outputs and outcomes? To what extent are communities adopting these activities, and what are their perceived achievements to date? What factors appear to enhance or detract from the quality, acceptability, usefulness and effectiveness of these activities for targeted communities?
2. Activity achievements and contextual factors of Action Plan for Restoration and Management: Mangrove management plans	Is SLCLC leading to the successful development of mangrove management plans for conservation at the village level? Why or why not? How has the success or failure of management plans been influenced by contextual factors at the village level, such as: a. Initial level of mangrove degradation b. Degree of economic dependence on mangrove wood c. Remoteness / access to markets d. Characteristics of local authorities e. Formal and informal local institutional context
3. Targeting and participation	Who was targeted by and benefited from the different mangrove restoration and livelihoods activities, within the selected villages or restoration sites? Were the targeting criteria adequate and appropriate?
4. Effectiveness of activities	How is the quality, effectiveness and suitability of the different SLCLC mangrove restoration and livelihoods activities perceived by beneficiaries within the selected communities? How, if at all, do perceptions and experiences with the SLCLC mangrove restoration and livelihoods activities differ for women, youth, and the poor in the targeted communities? What are the reasons why?
5. Implementation processes	What are the institutional and organizational mechanisms in use for the implementation of the different mangroves restoration activities? What is the perceived capacity, quality of relations/exchanges and coordination between these different groups (including local implementing partners), at the different levels of implementation?
6. Lessons learned and Sustainability	Based on the evidence, what activities and outcomes are likely to be sustained, and why? What are the key lessons learned and best practices that should inform the continuation of mangrove restoration and livelihoods activities to project end?

Based on the findings from the evaluation questions listed above, the midterm PE will also recommend any adjustments to activity design or implementation that could improve the likelihood of achieving desired results by the activity end.

Gender Aspects of Questions

In line with USAID's Gender Equality and Female Empowerment Policy and Automated Directives System 205.3.6, the evaluation will consider the gender-specific and differential effects of the SLCLC activities. In addressing the evaluation

questions, data collection and analysis approaches will devote particular attention to identifying differences in the ways that men and women interacted with the project and the organizations established under it, as well as the differences in how men and women were affected by the project and its activities. The research will evaluate if the benefits of the project are experienced similarly by men and women, such as direct payments for mangrove replanting and for the sale of mangrove seedlings through community nurseries. The research will also examine how gender-linked activities, such as harvesting mangrove wood and smoking fish—tasks which are typically performed by women in Sierra Leone—are affected by the project.

While gender considerations are particularly incorporated into evaluation questions 1, 3 and 4, gender is considered for all evaluation questions, as reflected in Table 2 below. For all SLCLC activities examined, the evaluation team will assess perceptions and engagement by gender, and aim to understand what factors may have contributed to differential experiences and outcomes for men and women beneficiaries. The evaluation team will also seek to understand whether activities such as community outreach and sensitization on conservation, restoration and livelihoods activities reached men and women equally. The evaluation team will also consider how any prior barriers to women's engagement in may shape their livelihood and other participation opportunities in the project.

The evaluation team will employ qualitative sampling for group discussions and key informant interviews, and will seek to capture the range of women's experiences in the SLCLC activities. The GDs described in Table 3 below will be gender segregated, with an equal number of GDs conducted for men and women. The KIs described in Table 4 will also include women, with village-level KIs aiming for equal representation across men and women. As communicated by WA-BiCC staff, there are no women-only groups that have been formed as part of the intervention, however it is possible that such groups have been formed as a result of the project's activities without WA-BiCC's direct involvement. The evaluation team will pursue further inquiry on gender themes as they emerge during data collection and analyses. Table 2 provides a breakdown of the gender considerations for each evaluation question.

Table 2: Gender Considerations by Evaluation Question

Evaluation Question	Sex Dis-aggregated Data	Gender Specific/Differential Effects: Access and Participation	Gender Specific/Differential Effects: Results and Benefits
1. What are the strengths and challenges of the different mangrove restoration activities, embankment activities, and livelihoods activities under implementation in the SLCLC? To what extent are communities adopting these activities, and what are their perceived achievements to date? What factors appear to enhance or detract from the quality, acceptability, usefulness and effectiveness of these activities for targeted communities?	✓ Yes	Perceptions of strengths and challenges of activities may vary based on gender. Participation in restoration, embankment, and livelihood activities may vary based on gender. Perceptions of the value of the quality, acceptability, usefulness and effectiveness of restoration, embankment, and livelihood activities may vary based on gender.	Benefits of restoration, embankment, livelihood, and management activities may vary based on gender.

Evaluation Question	Sex Dis-aggregated Data	Gender Specific/Differential Effects: Access and Participation	Gender Specific/Differential Effects: Results and Benefits
2. Is SLCLC leading to the successful development of mangrove management plans at the village level? Why or why not? How has the success or failure of management plans been influenced by contextual factors at the village level?	✓ Yes	Participation in the Development of mangrove management plans may vary based on gender.	Costs of adhering to mangrove management plans may vary based on gender.
3. Who was targeted by and benefited from the different mangrove restoration activities, embankment activities, and livelihoods activities, within the selected villages or restoration sites? Were the targeting criteria adequate and appropriate?	✓ Yes	Participation in restoration activities (e.g. nursery activities, grants for replanting, etc.) may vary based on gender. Participation in embankment activities (e.g. embankment committee membership and payments for labor) may vary by gender. Participation in livelihood activities (e.g. improved smoke houses) may vary based on gender.	Benefits of restoration, embankment, and livelihood activities may vary based on gender.
4. How is the quality, effectiveness and suitability of the different SLCLC mangrove restoration and livelihoods activities perceived by beneficiaries within the selected communities? How, if at all, do perceptions and experiences with the SLCLC mangrove restoration and livelihoods activities differ for women, youth, and the poor in the targeted communities? What are the reasons why?	✓ Yes	Perceptions of the effectiveness and suitability of restoration, embankment activities, and livelihood activities may vary based on gender. Perceptions of the value of restoration and management activities may vary based on gender.	Benefits of restoration, embankment, livelihood, and management activities may vary based on gender.
5. What are the institutional and organizational mechanisms in use for the implementation of the different mangroves restoration activities? What is the perceived capacity,	✓ Yes	Participation in the development, implementation, and enforcement of mangrove restoration and management plans and flood awareness and	Perceptions of benefits for participating in institutional and organizational mechanisms may vary based on gender.

Evaluation Question	Sex Dis-aggregated Data	Gender Specific/Differential Effects: Access and Participation	Gender Specific/Differential Effects: Results and Benefits
quality of relations/exchanges and coordination between these different groups (including local implementing partners), at the different levels of implementation?		community response plan may vary based on gender.	
6. Based on the evidence, what activities and outcomes are likely to be sustained, and why? What are the key lessons learned and best practices that should inform the continuation of mangrove restoration and livelihoods activities to project end?	✓ Yes	Perceptions of the value of restoration, embankment, livelihood and management activities may vary based on gender.	Benefits of restoration, embankment, livelihood, and management activities may vary based on gender.

3.0 EVALUATION DESIGN AND METHODOLOGY

Detailed evaluation design and methodology will be developed after the evaluation team has been approved and mobilized. This will be presented in the **Inception Report** together with the evaluation tools and field work schedule.

Generally, this evaluation will make use of both primary and secondary data. Primary data collection will be carried out through (a) Focus Group Discussions (FGDs), (b) Key Informant Interviews (KII), and (c) General Interviews of sampled beneficiaries, while secondary data collection will be implemented through a review of project documents, special studies (if any), and monitoring and evaluation data. Questionnaires will be developed to suit the target respondents.

The team will use rigorous mixed method research approaches to address the evaluation questions and will describe how each evaluation question will be addressed. The research will be conducted in accordance to USAID regulations. Some of the regulations to be applied in this evaluation will include:

1. Automated Directives System (ADS) Chapter 205 Integrating Gender Equality and Female Empowerment in USAID's Program Cycle;
2. Criteria to Ensure the Quality of the Evaluation Report – Mandatory Reference for ADS Chapter 201;
3. USAID Evaluation Report Requirements – A Mandatory Reference for ADS Chapter 201;
4. ADS Chapter 578 Information Quality Guidelines;
5. ADS Chapter 579 USAID Development Data;
6. Protection of Human Subjects in Research Supported by USAID – A Mandatory Reference to ADS Chapter 200;
7. USAID How-To-Note on Preparing Evaluation Reports;
8. USAID Technical Note on Conducting Mixed-Method Evaluations;
9. USAID TIPS on Constructing an Evaluation Report, a Supplemental Reference to the ADS Chapter 203;
10. Evaluation Learning from Experience – USAID Evaluation Policy'

ASSESS will make the latest versions of these documents available to the evaluation team and will supervise adherence to the policies and requirements.

3.1. Place of Performance

While the WA-BiCC Project includes a wide range of activities in a variety of locations, the proposed evaluation is focused on a set of mangrove conservation activities in the Sierra Leone coastal landscape complex. This evaluation is therefore restricted to Sierra Leone.

3.2. List of Background Documents

The following documents will be provided to the Evaluation team by WA-BiCC:

- West Africa Biodiversity and Climate Change (WA-BiCC) First Annual Work Plan (Oct. 2015-Sept. 2016)
- E3 Analytics and Evaluation Project: Project & Impact Evaluation Options for the West Africa Biodiversity and Climate Change Program
- E3 Analytics and Evaluation Project: DRAFT Literature Review: West Africa Mangrove Conservations and Sustainable Use
- A Site Prioritization and Selection Framework for Inland Forest Sites West Africa Biodiversity and Climate Change Project (WA-BiCC)
- Report of the Coastal Vulnerability Assessment Scoping Mission to Sierra Leone for the West Africa Biodiversity and Climate Change (WA-BiCC) Program
- Options Analysis to Improve Coastal Resilience in the Sierra Leone Landscapes (draft)
- Action Plan for Restoration and Management Restored Mangrove Areas in the Sierra Leone Coastal Landscape Complex (SLCLC) (draft)
- Work Plan (“Copy of Working_Doc_Zee_update Recent”) (draft)
- ArcGIS files of restoration sites
- Action Plan for Sustainable Livelihoods in the Sierra Leone Coastal Landscape Complex (SLCLC)
- Climate Change Adaptation Plan for the Sierra Leone Coastal Landscape Complex
- Climate Change Vulnerability Assessment in Mangrove regions of Sierra Leone (Full Report)
- Climate Change Vulnerability Assessment in Mangrove Regions of Sierra Leone (Abridged Report)
- Coastal Chiefdom Natural Resources Management Network Organizational Network Analysis
- Completion of the Establishment of a Coastal Chiefdom Natural Resources Management Network in Sierra Leone
- Institutional Stakeholders Mapping and Analysis in the Sierra Leone Coastal Landscape Complex
- Piloting the Integration of Mangrove and Rice Cultivation in Bonthe Sherbro
- Strengthening Embankments to Increase Community Resilience to Climate Change in the Sierra Leone Coastal Landscape Complex
- Traditional Chief's Network of the Coastal Landscapes in Sierra Leone (3rd draft)
- Methodological Approach for the Assessment of Vulnerability in the Lagoon of Fresco Area, Cote d'Ivoire
- Fiche descriptive sur les zone humides Ramsar (FDR)
- Fresco RAMSAR map
- Report of the Coastal Vulnerability Assessment Scoping Mission to Cote d'Ivoire for the West Africa Biodiversity Conservation and Climate Change (WA-BiCC) Project
- Work Plans (All)
- Annual Reports (All)

3.3. Other Requirements

All quantitative data collected by the evaluation team must be provided in machine-readable, non-proprietary formats as required by USAID's Open Data policy (see ADS 579). The data should be organized and fully documented for

use by those not fully familiar with the project or the evaluation. USAID will retain ownership of the survey and all datasets developed.

All modifications to the required elements of the SOW of the contract/agreement, whether Select those that are applicable and included: in technical requirements, evaluation questions, evaluation team composition, methodology, or timeline, need to be agreed upon in writing by the COR. Any revisions should be updated in the SOW that is included as an annex to the Evaluation Report.

4. DELIVERABLES

List specific deliverables, reporting requirements, audiences, and timeframes that the evaluation team should know. The only required deliverables are the evaluation design, draft report, and final report, but additional deliverables may be beneficial.

i. Team Planning Meeting

After sending the draft evaluation SOW, the Contract Officer Representative schedules a meeting with ASSESS to answer questions, clarify the SOW and get the process started.

ii. Evaluation Kickoff Meeting

Once the Evaluation team has been on boarded, the team should have a virtual (or in-person if team members are located in Accra) in-briefing with USAID/WA for introductions and to discuss the team's understanding of the assignment, initial assumptions, evaluation questions and/or to adjust the SOW if necessary.

iii. Updated Inception report/Evaluation Design

The evaluation team shall prepare an updated inception report based on the evaluation design proposal developed by NORC, which must contain the following information:

- An updated work plan, which indicates the phases in the evaluation with key deliverables and milestones and key personnel responsibility.
- An updated timeline showing the evaluation phases (data collection, data analysis and reporting) with their key deliverables and milestones.
- Discussion of logistics of carrying out the evaluation. Include specific assistance that will be required from USAID, such as providing arrangements for key contacts within the Mission or Government.
- Updated team composition with specific responsibilities of each team member for each evaluation phase. Include any changes in the evaluation team.
- Updated evaluation design if deemed necessary, which should include:
 - Complete set of evaluation questions and elaborate on them as necessary. Any questions added during the contract negotiations must be clearly indicated and any deleted questions must be mentioned with a reason as to their exclusion.
 - Discussion of the overall approach of the evaluation, highlighting the conceptual model(s) adopted. This must incorporate an analysis of the intervention logic of the program.
 - Discussion of risks and limitations that may undermine the reliability and validity of the evaluation results.
 - Discussion of the data collection and data analysis methods that will be used for each question. State the limitations for each method. Include the level of precision required for quantitative and qualitative methods and value scales or coding used for qualitative methods. Standard data collection methods for USAID evaluations are: surveys, questionnaires, interviews, focus groups, document review and observations.
 - Detail key data sources that will be selected to answer each evaluation questions.
 - Explanation of how existing data will be incorporated and used to answer the evaluation questions.
 - Discussion of the sampling methods and details. Include area and population to be represented, rationale for selection, mechanics of selection, sample size (for each unit of analysis), sample precision and confidence and limitations.
 - Discussions on field design testing (testing on survey tools especially if translated)

- o Summarized evaluation methodology in an evaluation planning matrix that must contain the following column headings: evaluation question, measure (s) or indicator(s), data collection method(s), data source, design strategy / framework for each question, sampling methodology, data collection instrument(s) for each question and data analysis methodology on each evaluation question.
- o Appended draft instruments for data collection specific to questions and indicators in the evaluation.

USAID offices and relevant stakeholders will require at least **10 business days** to review and consolidate comments on the updated evaluation design. Once the MEL platform receives the consolidated comments on the initial evaluation design and work plan, they are expected to respond with a revised evaluation design and work plan within **seven (7) business days, and before field data collection begins.**

iv. In-Briefing with USAID/Sierra Leone

The evaluation team will conduct an in-briefing with the USAID/Sierra Leone for introductions and to discuss the team's understanding of the assignment, initial assumptions, evaluation questions, methodology and work plan.

v. Out-Briefings

The evaluation team is expected to hold a final presentation in person to discuss the summary of findings and recommendations **both to USAID/Sierra Leone and USAID/West Africa after field has been completed.** This presentation will be scheduled as agreed upon during the team planning meeting and in-briefing with country team. The evaluation team shall prepare and share, at least one day in advance of the exit briefing, a 10 slide (or less) presentation describing the status of data collection and analysis, and any preliminary findings. The presentation should be no more than 30 minutes in length with 30 minutes left for Q&A and discussion.

vi. Final Evaluation Report

The evaluation team will be asked to take no more than **10 business days** to respond/incorporate the final comments from USAID/West Africa. The MEL platform will then submit the final report to the AOR/COR. All project data and records will be submitted in full and should be in electronic form in easily readable format, organized and documented for use by those not fully familiar with the intervention or evaluation, and owned by USAID.

vii. Dissemination Products

All dissemination plans should be developed with USAID and include information on audiences, activities, a two-page summary, flyers/poster of evaluation findings and deliverables (including any data visualizations to help communicate evaluation findings/conclusions/results).

viii. Submission to the DEC

Per USAID policy (ADS 201 and the Evaluation Policy) the Contractor must submit evaluation final reports and their summaries to the Development Experience Clearinghouse (DEC) within three months of final approval by USAID. Per USAID ADS 579 and the Evaluation Policy, the Contractor must also submit to the COR and the Development Data Library (DDL), at www.usaid.gov/data, in a machine-readable, non-proprietary format, a copy of any Dataset created or obtained in performance of this award. The Dataset should be organized and documented for use by those not fully familiar with the intervention or evaluation.

4.1. Final Report Format

The final version of the report must be submitted to USAID/WA electronically in Microsoft Word. The evaluation final report should include an abstract (of not more than 250 words); executive summary; background of the local context and the strategies/projects/activities being evaluated; the evaluation purpose and main evaluation questions; the methodology or methodologies; the limitations to the evaluation; findings, conclusions, and recommendations. The report should not be longer than 40-50 pages (excluding table of contents, references, and annexes), written in English, single-spaced in Gills Sans MT, size 11 type font. The final evaluation report must contain the following sections:

- Executive Summary: This section shall be 3-5 pages in length and must summarize the purpose, project background, evaluation design and methodologies including main evaluation questions, key findings, conclusions, and recommendations and lessons learned from the evaluation.
- Background: This section must provide a brief description of the project that highlights the scope of the project, project development hypothesis, activities undertaken in the project, key impact indicators of the project and impact areas of the project. Other activities that complemented the project activities directly or indirectly in the intervention districts must also be highlighted.
- Methodology: This section must detail the methodology and related research protocols undertaken in conducting the evaluation, data collection, analysis, selection criteria/sampling, and related constraints or limitations encountered during the project implementation and evaluation.
- Findings: Empirical facts collected during the evaluation: This section must present findings from the evaluation. The evaluation findings must be presented as analyzed facts, evidence and data and not based on anecdotes, hearsay or the compilation of people's opinions. The evaluation findings must assess key outcomes and impacts as structured around the organizational framework of the evaluation questions. The findings must be specific, concise and supported by strong quantitative and qualitative evidence analyzed through scientifically plausible methodologies. Sources of information used in arriving at the findings must be properly acknowledged and listed in an annex.
- Conclusions (Interpretations and judgments based on the findings): Evaluation conclusions must be presented for each key finding. The Conclusions must logically follow from the gathered data and findings. These must be explicitly justified. If and when necessary, the evaluator must state his/her assumptions, judgments and value premises so that readers can better understand and assess them.
- Recommendations (Proposed actions for management): This section must precisely and clearly present recommendations that must be drawn from specific findings. The recommendations must be stated in an action-oriented fashion, must be practical, specific, and with defined responsibility for the requisite action. The recommendations presented in this section must follow the evaluation questions as the organizational framework.
- References: This section should include all documents reviewed, including background documentation and records of technical data application and decision-making.
- Annexes: These may include, but not limited to, statement of work, tools used in conducting the evaluation such as questionnaires, checklists, discussion guides, sources of information, etc.

The annexes to the report shall include:

- The Evaluation SOW;
- All data collection and analysis tools used in conducting the evaluation, such as questionnaires, checklists, and discussion guides;
- All sources of information, properly identified and listed; and
- Signed disclosure of conflict of interest forms for all evaluation team members, either attesting to a lack of conflicts of interest or describing existing conflicts of.
- Any "statements of difference" regarding significant unresolved differences of opinion by funders, implementers, and/or members of the evaluation team.
- Summary information about evaluation team members, including qualifications, experience, and role on the team.

4.2. Criteria to Ensure the Quality of the Evaluation Report

Draft and final evaluation reports will be evaluated against the criteria outlined in ADS 201, Criteria to Ensure the Quality of the Evaluation Report, to ensure the quality of the evaluation report. See ADS 201, USAID Evaluation Report Requirements and the Evaluation Report Review Checklist from the Evaluation Toolkit for additional guidance.

5. EVALUATION TEAM COMPOSITION AND MANAGEMENT

5.1. Team Composition

ASSESS has identified three (3) experts to form the team to conduct this evaluation. These include:

1. **Mr. Richard Volk:** *Evaluation Team Leader/ Natural Resources and Climate Change Expert*

Richard Volk is a natural resources management and resilience specialist with more than 30 years of experience in leading, managing, and providing technical assistance on a wide range of international and domestic programs. He recently completed 20 years at the U.S. Agency for International Development (USAID) where he provided worldwide technical and managerial support for numerous water security, climate adaptation, and natural resources management activities as a senior technical advisor to the Agency's Water Office.

Mr. Volk routinely consults and advises on all aspects of water resources management, adaptation and resilience, biodiversity conservation, rural livelihoods, WASH service provision, integrated coastal management, and small-scale fisheries. He has spoken, written, and published extensively on the cross-cutting themes related to these technical areas, including policy, governance, environmental and social assessment, science for management, stakeholder participation, and public outreach and communication. Richard is a frequent contributor as curriculum designer and trainer for USAID staff courses on program design, monitoring, and evaluation related to the technical areas highlighted above. He has many years of experience in building and leading effective teams, and collaborating with host governments, other donors, and stakeholders at all levels. Richard has lived and worked in the developing world for more than 12 years, and has traveled extensively on professional assignment in more than 40 countries.

Responsibilities: Evaluation Team Leader/ Natural Resources and Climate Change Expert will provide technical direction and overall guidance to the evaluation team for all activities, with a particular focus on supervising data collection, analysis and the preparation of evaluation plans, approaches, methods and reporting. He/she will have knowledge and experience working on coastal landscapes issues and mangrove restoration. He/she will also have experience leading a multi-disciplinary team with knowledge of and expertise in evaluating a natural resources and environmental programs, which typically are implemented in environments with complex interactions between economic, political, and social elements. The leader will have experience with mixed-method studies and be able to analyze, synthesize, and draw broader conclusions and lessons learned from various sources of data and findings. Specifically, the Evaluation Team Leader will:

- Provide technical guidance and supervision of evaluation team
- Finalize the evaluation design and methodology
- Coordinate fieldwork and data collection
- Serve as the primary point of contact with ASSESS on technical issues
- Coordinate activity implementation to ensure goals, outcomes, benchmark, and reporting requirements are met
- Consolidate and guide individual input from team members
- Provide key findings, conclusions and recommendations to USAID

2. **Mr. Abdoulaye Diame:** *Coastal Ecosystem and Mangrove Expert*

Mr. Abdoulaye Diame has over 20 years of experience bringing local committees, governance and estuarine ecosystems to develop adaptation strategies and resilience to climate change in coastal West Africa and beyond. Mr. Diame has both quantitative and qualitative research experience and has been in several researches in his study area, which include the multi-country study “A Decade of Mangrove Reforestation in Africa (1999-2009): Serie I: An Assessment in Five West African Countries – Benin, Ghana, Guinea, Nigeria, and Senegal”.

Mr. Diame is the Executive Director and Co-founder of West African Associates for Marine Environment and has been managing the WAAME since its inception in 1995. WAAME is a local NGO dedicated to enhancing marine and coastal conservation and livelihoods. He was also the Executive Secretary and Co-founder of African Mangrove Network from 2004 to 2015. Mr. Diame is fluent in French and a moderate speaker of English.

Responsibilities: The Coastal Ecosystem and Mangrove Expert is technically responsible for supporting the team to evaluate mangrove restoration, embankments and livelihoods and mangrove management plans. The Expert will support the design of data collection, analysis and the preparation of evaluation plans, approaches, methods and reporting.

3. **Prof. Frederick Ato Armah:** *Qualitative and Quantitative Researcher (With Environmental Management Experience)*

Prof. Ato Armah is an interdisciplinary scientist with deep interest in the natural and human dimensions of environment and health. His core domains include environmental multivariate statistics; global environmental change mitigation and adaptation; environmental management, remediation and policy; human health risk assessment and management; climate change human health nexus; pollution of environmental media and biota; participatory resources management; and socio-ecological systems.

Prof. Armah has extensive research publications in his core domains in peer-reviewed journals. His researches and studies include *Evaluating Differences in Barriers to Climate Change Adaptation between the Poor and Non-Poor Coastal Tanzania*, published in *Climate Change Management: Innovation in Climate Change Adaptation* (2016); *Assessing the environmental and socio-economic impacts of artisanal gold mining on the livelihoods of communities in the Tarkwa Nsuaem municipality of Ghana*, published in the *Journal of Environmental Research and Public Health*; *Land access constraints for communities affected by large-scale land acquisition in Southern Sierra Leone*, published in *GeoJournal*; *Does Previous Experience of Floods Stimulate the Adoption of Coping Strategies? Evidence from Cross Sectional Surveys in Nigeria and Tanzania*, published in *Environmetrics*; among others. He has collaborated with partners in both developed (Canada, Sweden, Netherlands, USA) and developing countries (Ethiopia, Cameroon, Ghana, Sierra Leone, Cambodia, Tanzania).

He is currently an Associate Professor at the Department of Environmental Science, University of Cape Coast, Ghana, where he lectures courses such as Environmental Impact Assessment, Environmental Statistics and Research Methods, System Dynamics Modelling, Human and Ecological Risk Assessment, among others.

Responsibilities: The Quantitative and Qualitative Research/Evaluation Expert is responsible for supporting the subject matter experts to design the evaluations. He/she will assist with developing and administering evaluation instruments, conducting quantitative and qualitative analyses, and communicating evaluation and research findings for various audiences in a variety of formats. Specifically, the expert will:

- Collaborate with other team members to design the evaluation, including methodological and theoretical design of evaluation, literature reviews, data collection plans, analysis plans, and reporting/communication plans.
- Develop logic models and create program indicators to guide evaluation efforts.
- Develop evaluation instruments (e.g., survey instruments, observation protocols, focus group protocols, and interview protocols).
- Assess adequacy of available data and determine necessary actions to collect additional data.
- Analyze data sets using advanced statistical techniques to identify actionable insights and submit data and materials in machine-readable formats to ASSESS.

- Convert survey results into clear narratives and visually-compelling presentations designed for different stakeholders.
- Work with the team to identify key variables needed to measure in order to address the evaluation questions.
- Demonstrated knowledge of USAID practices, policies, and regulations as related to projects and evaluations.

Field Data Collection Assistant: The Field Data Collection Assistant will be based in Sierra Leone and will provide support to the team in terms of data collection, by helping out with the community entry processes, participating in data collection, among others.

5.2. ASSESS Supervision

- The ASSESS Chief of Party (COP), Fedelis Dadzie, will provide overall technical coordination and supervision as well as communication among the key stakeholders including the USAID/WA, WA BiCC and government representatives. He will serve as the main link between ASSESS and the evaluation team and will communicate all formal decisions and requests to USAID/WA. All requests and communication from the evaluation team to USAID will have to be addressed to the COP.
- The ASSESS Activity Manager-Evaluation Specialist, Nana Fredua-Agyeman will coordinate and facilitate field visits by the evaluation team by scheduling appointments with the stakeholders to be reached for information, interviews, brainstorming sessions and workshops.
- The M&E Specialist, Barbara Arthur will provide technical assistance to the evaluation team with respect to the development and administration of evaluation data collection tools and analysis techniques.

5.3. USAID Participation

Regular communication between ASSESS and the designated USAID/WA focal point for this evaluation will be essential to the successful execution of the evaluation activities. The evaluation team will keep focal point apprised of changes and developments that necessitate/require any significant decision-making or modification of the approved Evaluation Design Proposal.

USAID/WA Environment Team will facilitate communication between the Implementing Partners (IPs) and ASSESS. ASSESS will liaise with USAID/WA Environment Team in the event of significant delays in sharing project documents or data or in challenges in coordinating the implementation and evaluation activities. USAID may also be asked to provide introductions to government partners or key stakeholders, as needed. Staff from USAID and IPs may be involved in field reconnaissance, but will not be responsible for data collection or evaluation team logistics.

The evaluation team may also include one or two technical experts from USAID/WA and USAID/Sierra Leone. To the extent possible, schedules should be coordinated so that the evaluation team can draw on USAID's expertise in meetings with counterparts. In general, USAID staff participating in the evaluation would be anticipated to have less time available for the field visits than independent evaluators. The writing of the report will be the sole responsibility of the independent evaluators; however, if mutually agreed, the USAID staff members working on the evaluation may be asked to contribute to the report in their technical discipline. USAID team members will participate in interviews and meetings, but the independent evaluators may wish to have certain interviews without USAID staff present.

6. EVALUATION AND LEARNING EVENT SCHEDULE

The table below shows the proposed schedule of activities.

Table 5: Evaluation Tasks and Timelines

Activity/Deliverables	Tasks	Timelines
Response SOW and Budget	1. Develop SOW and Budget; 2. Put together a team (contracting; signing of conflict of interest forms; sanction search list; etc.) of relevant experts	D0 ²⁰
Kick off Meeting	1. Remote introduction of team members to USAID/WA Environment Team and ASSESS; 2. Team presents understanding of SOW and evaluation questions; 3. ASSESS shares background documents with Evaluation Team	D0+1 ²¹
Reconnaissance survey of study area	1. A reconnaissance survey to understand the terrain and plan for the field work; 2. The reconnaissance team shares understanding of the field with team members;	D1+6
Document Review Report	1. Responding to evaluation questions based solely on project documents; 2. Together with the Inception Report will serve as the basis for the draft evaluation report;	D7+8
Evaluation Team Updates the Inception Report	1. Work plan (Implementation Schedule); 2. Development of an evaluation matrix; 3. Update methodologies for each evaluation question; 4. Development of Data Collection tools; 5. Development of field schedule;	D15+10
Evaluation Team Submits the Inception Report to ASSESS for Reviews and inputs	1. ASSESS reviews the Inception Report and makes input to meet USAID requirements, and submits report to USAID/WA 2. Inception Report will include the draft data collection tools	D25+5
USAID/WA reviews and provide feedback on Inception Report	1. Review of Inception report by USAID/WA. Comments shared with ASSESS.	D30+10
In-briefing with USAID	1. Meeting with USAID/WA to present the inception report, discuss evaluation questions, methodology, and work plan (implementation schedule), and/or adjust the SOW.	D40+2
Working sessions for Evaluation Team	1. Finalize Inception Report; 2. Finalize all survey tools and field schedule;	D42+3

²⁰ D0 ends only after the approval of the response SOW with the budget and team

²¹ Days estimated refer to working days not calendar days

Activity/Deliverables	Tasks	Timelines
Field Work	1. Travelling to Sierra Leone 2. Data collection 3. Working sessions 4. Progressively collating data into appropriate format, analyzing data, and developing report; 5. Isolating actionable recommendations 6. Debriefing with USAID/Sierra Leone	D45+15
Debriefing and Working Sessions	1. Working sessions to identify relevant emerging findings, conclusions, and recommendations from the evaluation; 2. Debriefing with USAID/WA to present the emerging findings, conclusions, and recommendations; 3. Working sessions to incorporate USAID comments and allocate the report drafting responsibilities among team members	D60+5
Draft Report	1. The draft report will be developed from the initial report 2. Draft report will be submitted 3 weeks (15 working days) after the out-briefing; 3. See previous table for outline	D65+15
USAID/WA reviews and provide feedback on Draft Report	1. Review of draft evaluation report by USAID/WA. Comments shared with ASSESS.	D80+15
Final Report	1. Incorporate comments from reviewers 2. ASSESS reviews and ensures all comments have been addressed 3. Improve report as best as possible	D95+10
Development of 2-page report on evaluation	1. After approval of final report, ASSESS will develop a 2-page report for dissemination;	D105 ²² +5
USAID/WA reviews and provide feedback on 2-page report	1. USAID reviews the 2-page report and shares comments with ASSESS	D110+10
Finalization of 2-page report	2. ASSESS reviews comments and finalizes the 2-page report	D120+3

²² D105 will be the day the report was approved.

ANNEX 2: EVALUATION QUESTIONS AND SUB-QUESTIONS

	Evaluation questions		Sub-questions
Objective 1 To evaluate progress toward meeting activity objectives			
1.1	To what extent are communities adopting the core WA-BICC activities, and what are their perceived achievements to date? [Core activities = mangrove restoration and conservation, embankments, & livelihoods]	1.1a	What evidence is there for community self-initiative, investment, and engagement in achievements to date?
		1.1b	What do individuals say about the achievements to-date of the core WA-BICC activities? Are they generally positive and prideful about them? Do they think more should have been accomplished by now? Reasons for achievement or non-achievement? How is the quality, effectiveness, and suitability of the different activities perceived by beneficiaries within selected sites? Do beneficiaries identify any strengths or weaknesses of the core activities based on technical merits of design, quality, or effectiveness?
1.2	To what extent is WA-BICC succeeding in building the capacity of local communities to participate and take ownership of activities?	1.2a	How do beneficiaries within local communities rate themselves on improved knowledge, skills, and attitudes (KSA) as a result of WA-BICC activities?
		1.2b	How does WA-BICC identify and target capacity-building needs for local communities? What additional C-B needs do the communities say they need?
1.3	To what extent is WA-BICC succeeding in building the capacity of government authorities and other organizations to effectively support, manage, monitor and sustain the activities?	1.3a	What KSA do partner authorities and organizations feel they have gained that have improved their ability to perform their duties and functions?
		1.3b	How does WA-BICC identify and target capacity-building needs for partner authorities and organizations? What additional C-B needs do the authorities/organizations say they need?
1.4	To what extent are WA-BICC efforts leading to the development and implementation of mangrove management plans at the local level?	1.4a	Is the process and timeline to develop mangrove management plans understood and supported by key stakeholders?
		1.4b	Have any of the plans been adopted or has the implementation of any actions begun?
		1.4c	Do the management plans have support, or are key stakeholders expressing any concerns? If so, what concerns?
1.5	How effective is WA-BICC in promoting diversification and equity in coastal resilience activities?	1.5a	To what degree has WA-BICC achieved female participation and inclusiveness across activities? Do participating women feel they are gaining concrete benefits from the project? What benefits are they excited about?
		1.5b	To what degree has WA-BICC achieved participation and inclusiveness of other groups (e.g., youth)? Do these groups feel they are gaining concrete benefits from the project? What benefits are they excited about?
Objective 2 To evaluate the continued validity of activity design, approaches, and assumptions			
2.1	How valid are the Theory of Change, assumptions, and approaches that underlie WA-BICC efforts as perceived by key stakeholders?	2.1a	How well do key stakeholders understand the overall purpose, theory-of-change, and assumptions that underlie the WA-BICC activities?
		2.1b	What are the merits and shortcomings of the strategic approach of WA-BICC activities as perceived by key stakeholders? Do stakeholders mention any innovations that are of particular interest?

	Evaluation questions		Sub-questions
2.2	How have site selection criteria and contextual factors served to either support or detract from the successful implementation of WA-BICC activities? [Examples of contextual factors: Degree of mangrove degradation; Economic dependence on mangrove wood; Remoteness/access to markets; Characteristics of local authorities; Degree of commitment of the beneficiaries and local partners; etc.]	2.2a	What are the merits and shortcomings of the site selection criteria used to select target communities and mangrove restoration sites? Were any important contextual factors missing from the site selection criteria?
		2.2b	Have any particular successes or failures of WA-BICC site-based activities been strongly influenced by contextual factors of any kind?
2.3	How well does WA-BICC address the particular drivers of mangrove loss and degradation?	2.3a	How well does WA-BICC incorporate understanding of biophysical, socio-cultural, economic and other factors in addressing mangrove loss and degradation?
		2.3b	How well does WA-BICC incorporate analysis of climate vulnerability?
2.4	How well are WA-BICC activities managed and coordinated to achieve objectives?	2.4a	How effective is the collaboration and coordination between implementing partners and other key stakeholders in contributing to activity objectives?
		2.4b	Do implementing partners have the staff, expertise, and capacity to design, implement, and achieve program objectives as perceived by stakeholders?
Objective 3 To evaluate the likelihood of activity goals to be achieved and sustained			
3.1	What perceptions do stakeholders have regarding the prospect for activities to achieve impact at sufficient scale to achieve intended results?	3.1a	Is WA-BICC on track to achieve its mangrove conservation and restoration goals? If not, what is needed to improve that prospect? Is the proper scale of the challenge being adequately addressed?
		3.1b	Is WA-BICC on track to achieve its goals with respect to coastal erosion and flooding? If not, what is needed to improve that prospect?
		3.1c	Is WA-BICC on track to achieve its goals with respect to livelihoods? If not, what is needed to improve that prospect?
3.2	What activities and outcomes are likely to be sustained and why?	3.2a	By project end and for each of the core WA-BICC activities, will the necessary enabling conditions (policy, legal/regulatory, institutional, financial, social capital, etc.) be in place and sufficient to sustain activities and outcomes?
Objective 4 To identify lessons learned and recommend actions for improving performance			
4.1	What are the key lessons learned and best practices that should inform the continuation and sustainability of mangrove restoration and livelihood activities in the SLCLC?	5.1a	Are there recommendations to be made with respect to: activity design; implementation strategies or approaches; adaptive management; communication/coordination with partner organizations; technical matters; meeting targets; exit strategy and sustainability; etc.

ANNEX 3: EVALUATION MATRIX

EQ#	Evaluation Question	Proposed Sub-questions	Data Collection Method	Data Sources	Sampling or Selection Criteria	Data Analyses Methods
1.1	To what extent are communities adopting the core WA-BICC activities, and what are their perceived achievements to date? [Core activities = mangrove restoration and conservation, embankments, & livelihoods]	1.1a What evidence is there for community self-initiative, investment, and engagement in achievements to date?	Document review, FGD, interview	Annual project reports, activity reports, MoUs signed, letters of implementation, partnership agreements, Community members involved in 3 core activities; WA-BICC Project Staff	Exhaustive review of project documents; Purposive and quota sampling	Content Analysis, Descriptive Analysis, Thematic Analysis
		1.1b What do individuals say about the achievements to-date of the core WA-BICC activities? Are they generally positive and prideful about them? Do they think more should have been accomplished by now? Reasons for achievement or non-achievement?	FGD, interview	Beneficiaries of core activities	Purposive and quota sampling	Descriptive analysis, Thematic analysis
1.2	To what extent is WA-BICC succeeding in building the capacity of local communities to participate and take ownership of activities?	1.2a How do beneficiaries within local communities rate themselves on improved knowledge, skills, and attitudes (KSA) as a result of WA-BICC activities?	Survey, Interview	Community members involved in 3 core activities	Purposive and quota sampling	Descriptive analysis, KSA rankings
		1.2b How does WA-BICC identify and target capacity-building needs for local communities? What additional C-B needs do the communities say they need?	Document review, FGD	Annual project reports, activity reports, MoUs signed, letters of implementation, partnership agreements; Beneficiaries of core activities	Exhaustive review of project documents; Purposive and quota sampling	Content Analysis; Descriptive analysis
1.3	To what extent is WA-BICC succeeding in building the capacity of government authorities and other organizations to effectively support,	1.3a What KSA do partner authorities and organizations feel they have gained that have improved their ability to perform their duties and functions?	Survey, Document review, Interview	Annual project reports, activity reports, MoUs signed, letters of implementation, partnership agreements; interviews of partner organizations and authorities	Exhaustive review of project documents; Purposive and quota sampling	Content Analysis; Descriptive analysis, KSA rankings

EQ#	Evaluation Question	Proposed Sub-questions	Data Collection Method	Data Sources	Sampling or Selection Criteria	Data Analyses Methods
	manage, monitor and sustain the activities?	1.3b How does WA-BICC identify and target capacity-building needs for partner authorities and organizations? What additional C-B needs do the authorities/organizations say they need?	Document review, Interview	Annual project reports, activity reports, MoUs signed, letters of implementation, partnership agreements; interviews of partner organizations and authorities	Exhaustive review of project documents; Purposive and quota sampling	Content Analysis; Descriptive analysis
1.4	To what extent are WA-BICC efforts leading to the development and implementation of mangrove management plans at the local level?	1.4a Is the process and timeline to develop mangrove management plans understood and supported by key stakeholders? Has indigenous knowledge and local practice been incorporated?	Document review, interview	Project's M&E data, Indicator performance tracking tables, annual project reports, M&E reports	Exhaustive review of project documents	Content Analysis
		1.4b Have any of the plans been adopted or has the implementation of any actions begun?	Document review; site inspection; Interview	Project's M&E data, Indicator performance tracking tables, annual project reports, M&E reports	Exhaustive review of project documents; Purposive and quota sampling	Content Analysis; Descriptive analysis
		1.4c Do the management plans have support, or are key stakeholders expressing any concerns? If so, what concerns and how are they addressed?	Document review, interview, FGD	Interviews of partner organizations and authorities; Project's M&E data, Indicator performance tracking tables, annual project reports, M&E reports	Exhaustive review of project documents; Purposive and quota sampling	Content Analysis; Descriptive analysis
1.5	How effective is WA-BICC in promoting diversification and equity in coastal resilience activities?	1.5a To what degree has WA-BICC achieved female participation and inclusiveness across activities? Do participating women feel they are gaining concrete benefits from the project? What benefits are they excited about?	Document review, FGD, interview	Project's M&E data, Indicator performance tracking tables, annual project reports, M&E reports	Exhaustive review of project documents	SWOT Analysis

EQ#	Evaluation Question	Proposed Sub-questions	Data Collection Method	Data Sources	Sampling or Selection Criteria	Data Analyses Methods
		1.5b To what degree has WA-BICC achieved participation and inclusiveness of other groups (youth, indigenous people)? Do these groups feel they are gaining concrete benefits from the project? What benefits are they excited about?	Document review, FGD, interview	Project's M&E data, Indicator performance tracking tables, annual project reports, M&E reports	Exhaustive review of project documents	Content Analysis; Descriptive analysis; SWOT Analysis
2.1	How valid are the Theory of Change, assumptions, and approaches that underlie WA-BICC SLCLC efforts as perceived by key stakeholders?	2.1a How well do key stakeholders understand the overall purpose, theory-of-change, and assumptions that underlie the WA-BICC activities?	interview, FGD	Interviews of partner organizations and authorities; Project's M&E data, Indicator performance tracking tables, annual project reports, M&E reports	Purposive and quota sampling	Content Analysis; Descriptive analysis
		2.1b What are the merits and shortcomings of the strategic approach of WA-BICC activities as perceived by key stakeholders? Do stakeholders mention any innovations that are of particular interest?	Interview; Document review	Annual project reports, activity reports, MoUs signed, letters of implementation, partnership agreements; interviews of partner organizations and authorities	Exhaustive review of project documents; Purposive and quota sampling	SWOT Analysis; Content Analysis; Descriptive analysis
2.2	How have site selection criteria and contextual factors served to either support or detract from the successful	2.2a What are the merits and shortcomings of the site selection criteria used to select target communities and mangrove restoration sites? Were any	Interview; Document review	Annual project reports, activity reports, MoUs signed, letters of implementation, partnership agreements; interviews of partner organizations and authorities	Exhaustive review of project documents;	SWOT Analysis; Content Analysis;

EQ#	Evaluation Question	Proposed Sub-questions	Data Collection Method	Data Sources	Sampling or Selection Criteria	Data Analyses Methods
	implementation of WA-BICC activities? [Examples of contextual factors: Degree of mangrove degradation; Economic dependence on mangrove wood; Remoteness/access to markets; Characteristics of local authorities; Degree of commitment of the beneficiaries and local partners; etc.]	important contextual factors missing from the site selection criteria? 2.2b Have any particular successes or failures of WA-BICC site-based activities been strongly influenced by contextual factors of any kind?			Purposive and quota sampling	Descriptive analysis
			Interview; Document review; Site inspection	Annual project reports, activity reports, MoUs signed, letters of implementation, partnership agreements; interviews of partner organizations and authorities	Exhaustive review of project documents; Purposive and quota sampling	Content Analysis; Descriptive analysis
2.3	How well does WA-BICC address the particular drivers of mangrove loss and degradation?	2.3a How well does WA-BICC incorporate understanding of biophysical, socio-cultural, economic and other factors in addressing mangrove loss and degradation?	Document review, FGD, interview	Annual project reports, activity reports; TOC diagram	Exhaustive review of project documents	Content Analysis; Descriptive analysis
		2.3b How well does WA-BICC incorporate analysis of climate vulnerability?	Interview; Document review; FGD	Annual project reports, activity reports, interviews of partner organizations and authorities	Exhaustive review of project documents; Purposive and quota sampling	Content Analysis; Descriptive analysis
2.4	How well are WA-BICC managed and coordinated to achieve objectives?	2.4a How effective is the collaboration and coordination between implementing partners and other key stakeholders in contributing to activity objectives?	Interview; Document review	Annual project reports, activity reports, MoUs signed, letters of implementation, partnership agreements; interviews of partner organizations and authorities	Exhaustive review of project documents; Purposive and quota sampling	SWOT Analysis; Content Analysis; Descriptive analysis
		2.4b Do implementing partners have the staff, expertise, and capacity to design, implement, and achieve program objectives as perceived by stakeholders?	Interview; Document review	Annual project reports, activity reports, MoUs signed, letters of implementation, partnership agreements; interviews of partner organizations and authorities	Exhaustive review of project documents; Purposive and quota sampling	Content Analysis; Descriptive analysis

EQ#	Evaluation Question	Proposed Sub-questions	Data Collection Method	Data Sources	Sampling or Selection Criteria	Data Analyses Methods
3.1	What perceptions do stakeholders have regarding the prospect for activities to achieve impact at sufficient scale to achieve intended results?	3.1a Is WA-BICC on track to achieve its mangrove conservation and restoration goals? If not, what is needed to improve that prospect? Is the proper scale of the challenge being adequately addressed?	Document review; site inspection; FGD	Project's M&E data, Indicator performance tracking tables, annual project reports, M&E reports	Exhaustive review of project documents; Purposive and quota sampling	Content Analysis; Descriptive analysis
		3.1b/c Is WA-BICC on track to achieve its goals with respect to coastal erosion and flooding, and livelihoods? If not, what is needed to improve that prospect?	Document review; site inspection; FGD	Project's M&E data, Indicator performance tracking tables, annual project reports, M&E reports	Exhaustive review of project documents; Purposive and quota sampling	Content Analysis; Descriptive analysis
3.2	What activities and outcomes are likely to be sustained and why?	3.2a By project end and for each of the core WA-BICC activities, will the necessary enabling conditions (policy, legal/regulatory, institutional, financial, social capital, etc.) be in place and sufficient to sustain activities and outcomes?	Document review, interview	Annual project reports, activity reports	Exhaustive review of project documents; Purposive and quota sampling	Content Analysis; Descriptive analysis
4.1	What are the key lessons learned and best practices that should inform the continuation and sustainability of mangrove restoration and livelihood activities in the SLCLC?	4.1a Are there recommendations to be made with respect to: activity design; implementation strategies or approaches; adaptive management; communication/coordination with partner organizations; technical matters; meeting targets; exit strategy and sustainability; etc.		All the above		

ANNEX 4: DATA COLLECTION INSTRUMENTS

VILLAGE SITE VISITS – INTRODUCTORY STATEMENT

Upon arrival at each village, we will convene WA-BICC stakeholders (men and women) together for introductions and general messaging. The Community Animator (CA) for that area will acknowledge the chief(s) and welcome and thank everyone in attendance. Following prayer, the CA will say:

We are here to gather this community's input to help assess progress and future direction of the WA-BICC program. Here with us is a team with expertise in coastal resilience and livelihoods in West Africa. They are an independent team – that is, they are not part of the WA-BICC program or USAID. This is one of more than 12 villages they will visit. They will also speak with government and other officials at the national and regional levels. Their main goals are to learn if the WA-BICC program is meeting its objectives, to identify lessons learned, and to recommend ways to improve this and future programs that aim to assist coastal communities facing similar challenges.

The CA will then ask the evaluation team members to introduce themselves. Following brief introductions, the CA will say:

My colleague (standing here) and I will serve as translators for the team. They have asked that I first briefly explain the process today. Following our discussion here as a group, and answering any questions that you may have, we ask that you identify two locations – one for the female FGD and one for the male FGD. Once we are separated into two groups, we will have several questions for you, and we will ask for your full and honest answers to the questions. It is important for you to understand that your answers are for the team's learning only, and will not – in any way – affect the project activities or services that WA-BICC will provide. The group discussion will last for approximately 1 hour.

The CA will pause, and ask if everyone understands.

The evaluation team has invited each of you to participate as an individual today, and want to hear about your own involvement and experience with the WA-BICC program. They want to learn what you think has worked well (and why), and what has not worked so well (and why). They want to learn if the program is meeting your expectations, and if you are seeing benefits to you and your family. The reason we will have separate discussions with men and with women, is to learn if there are any differences in the WA-BICC activities as perceived by women and men.

The CA will pause, and ask if everyone understands.

The evaluation team wants you to know that your participation is voluntary. You do not have to participate, or to answer every question. Comments received will not be attributed to any individual. Your comments will be merged with the comments received from the other villages, and that will allow the team to make some overall conclusions and recommendations related to each question. At conclusion of the group discussion you may leave, but some of you may be asked to stay and participate in a short interview to allow for some more detailed questioning by the team. Once again, this will be voluntary, and should not take more than an additional 15-20 minutes.

The CA will pause, and ask if everyone understands.

If you agree to participate you will be asked to sign the attendance sheet in your group discussion. Are there any questions?

FOCUS GROUP DISCUSSION GUIDE

Village Name		Session Moderator	
Date of FGD		Session Translator	
Start Time		Number of Participants	
End Time		Men / Women	

EQ	QUESTION	RESPONSE SUMMARY	EVALUATION TEAM COMMENTS AND ANALYSIS
2.1	What is the overall purpose of the WA-BICC project?		Listen for mention of biodiversity, climate adaptation, and reducing mangrove loss
	Is this project similar to or different than other programs that have assisted your community?		
1.1	How has WA-BICC supported community activities in this village?		- listen for evidence of self-initiative or community investment - listen for evidence of community pride - listen for evidence of disappointment - Question for translator: does rating scale of 1-10 make sense, or better to use poor-fair- good-excellent?
	Which activities are so far the most successful?		
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful and sustainable?		
1.2	Are there any additional training needs to improve the VSLA?		
	What types of livelihood activities will the loans support?		
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?		
	How would you rate the overall success of the VSLA activity with WA-BICC support? (see rating note)		
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?		- listen for evidence of frustration or pride - listen for evidence of expectations that were not met - listen for their interest in continuing MR, including monitoring growth and replanting where necessary
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?		
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful and sustainable?		
1.2	Are there any additional training needs to improve restoration efforts?		
2.3	How and why did the community select the mangrove restoration site(s)?		
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?		
	Does your community make any rules to protect the mangroves?		
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?		
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?		
	Where and how do you get your mangrove wood today?		

1.1	Speaking about the embankment , has WA-BICC provided the necessary training and support to help make the embankment successful and sustainable?		
1.2	Are there any additional training needs to improve embankment efforts?		
	How long will the embankment last before replacement is necessary?		
3.2	Which activities will your community continue after WA-BICC has finished?		
3.1	Do you think that the WA-BICC project and your community will achieve the purpose and goals that you mentioned at the beginning of this discussion?		
1.5	Has the WA-BICC project encouraged and supported women and youth to become involved in activities?		
	Have there been any differences in the way the project has involved women or men or youth?		
	Have you personally benefited from the project, and if so in what ways?		
	As a result of the project, how will your own personal behavior or daily routine (or that of your family) be different than before?		
4.1	Are there lessons learned from the WA-BICC project that are important to include in future projects?		

INTERVIEW DISCUSSION GUIDE – VILLAGE LEVEL

Name of interviewee		Male / Female / Youth	
Role within WA-BICC		Interviewed by	
Village		Translator	
Date			

EQ	QUESTION	RESPONSE SUMMARY	EVALUATION TEAM COMMENTS AND ANALYSIS
1.1	Which activity (or activities) have you been most involved with?		
	Have you seen your community come together in support of WA-BICC, or are there some differences or concerns among members?		
1.1	Are community members willing to invest their own time and effort to sustain the activities?		
	What kind of training have you received during the project?		
1.2	Was the training useful, or could it have been made more useful?		
1.2	As a result of the training, how do you rate the knowledge and skills acquired (on scale of 1-10)?		
1.2	Have there been any noticeable changes in the attitudes of community members towards the activities of the WA-BICC project?		
	Do you believe your own attitude has changed towards these activities? If so, how?		

1.4	Do you believe that mangrove conservation has the full support of the community, or do some people feel it is not that important?		
1.5	Have you been given the opportunity to participate in all of the WA-BICC activities?		
	Are there reasons why you did not participate more?		
3.1	Does the community discuss how it will keep the activities going after the WA-BICC project is finished?		
3.2	Do government stakeholders have the capacity and tools needed to help sustain activities?		
2.1	Do you have any suggestions for how WA-BICC could improve the way it provides assistance to your community?		
2.1	Do you feel that the purpose of the WA-BICC project has been well explained to the community?		
2.3	Did the project make efforts to understand the priorities and organization of this community before it offered assistance?		
2.4	Do you feel that WA-BICC staff have the necessary skills, expertise and resources to implement this project?		
	Do you have any additional comments you would like to make?		

INTERVIEW DISCUSSION GUIDE – NATIONAL/REGIONAL LEVEL

Name of interviewee		Male / Female	
Institutional affiliation		Interviewed by	
Date		Translator	

EQ	QUESTION	RESPONSE SUMMARY	EVALUATION TEAM COMMENTS AND ANALYSIS
2.1	What do you understand is the overall purpose of the WA-BICC project?		Contextual factors: degree of mangrove loss or degradation; dependence on mangrove wood; distance to market; characteristics of local authorities; degree of commitment of target communities
	Do you believe that the project's approach and assumptions are appropriate, or do you have suggestions for improvement?		
2.2	A principal objective of the project is to restore mangroves where they have been lost or degraded. Are you familiar with the restoration site selection criteria that were used and do you think they are the most appropriate?		
1.3	What kind of training have you received during the project?		
	Was the training useful, or could it have been made more useful?		
	As a result of the training, how do you rate the knowledge and skills acquired (on scale of 1-10)?		
1.3	Have there been any noticeable changes in the attitude of your organization towards the challenges facing coastal communities as a result of the WA-BICC project?		
	Do you believe your own attitude has changed towards those challenges? If so, how?		

	Would additional training in any aspect of the coastal challenges be of particular interest to you or your organization?		
1.4	Do you understand the process and timeline to develop Mangrove Management Plans under the project?		
	Do you believe the MMPs will have the support of local communities, or will there need to be significantly more outreach and education?		
2.3	Do you believe that WA-BICC has done an effective job at incorporating analysis of climate variability into project activities?		
3.1	Will the WA-BICC project achieve impact at scale that is meaningful (related to mangrove restoration, conservation, or shoreline protection)?		
	If not, what will be needed to achieve impact at scale?		
3.2	Are WA-BICC activities helping to improve any of the enabling conditions needed to sustain activities (i.e., policy, legal, institutional, financial, etc.)?		
2.3	Do government stakeholders have the capacity and tools needed to help sustain activities?		
2.4	How effective has the collaboration and coordination been between WA-BICC and key stakeholders at the national and regional levels?		
2.4	Do you feel that WA-BICC staff have the necessary skills, expertise and resources to implement this project?		
	Do you have any additional comments you would like to make?		

WA-BICC EVALUATION SURVEY QUESTIONNAIRE:

TO ALL REGIONAL, NATIONAL, DONOR, NGO, PRIVATE SECTOR STAKEHOLDERS WHO HAVE BEEN INVOLVED IN WA-BICC ACTIVITIES IN THE SIERRA LEONE COASTAL LANDSCAPE COMPLEX (SLCLC):

Thank you for participating in this performance evaluation of the WA-BICC Program. Your input will greatly assist our understanding of program achievements, effectiveness, relevance, and opportunities for improvement. We estimate the survey will take no more than 10-15 minutes.

Please note that your responses will be entirely confidential to the evaluation team, and there will be no attribution given in the evaluation report – either to an individual or an organization. Section A (Personal Information) will be used by the evaluators only to disaggregate data to best determine if/how improvements can be made in the remaining months of the Program.

Once again, we thank you for your inputs and continued engagement in the coastal resilience challenges of the region. – The Evaluation Team

SECTION A: PERSONAL INFORMATION

1	What is the name of your organization?		
2	Which of the following best describes your organization?	Regional Governmental	1
		National Governmental	2

		NGO/CSO	3
		Private	4
		Donor	5
3	What is your Gender?	Male	1
		Female	2
4	Which of the following best describes your age group?	18 – 30 years	1
		31 - 40 years	2
		41 - 50 years	3
		51 years or above	4
5	How long have you worked with your current organization?	1-5 years	1
		6-10 years	2
		11-15 years	3
		More than 15 years	4
6	What is your highest level of educational attainment?	No Formal Education	0
		Primary Education	1
		Junior Secondary School	2
		Senior Secondary School / Vocational/Technical	3
		Tertiary	4
7	How many years of experience do you have in natural resource management /governance/development?	Less than 1 year	1
		1-5 years	2
		More than 5 years	3
8	How long has your organization partnered with WA-BiCC?	Less than 1 year	0
		1 year	1
		2 years	2
		3 years	3

SECTION B: EVALUATION OF THE WA-BICC PROGRAM

	Read through the following statements carefully	Circle the column that MOST represents YOUR VIEW of the WA-BiCC Program				
	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
9	I understand the overall purpose of the WA-BICC project	5	4	3	2	1
10	I believe that the WA-BICC project's approach and assumptions are appropriate	5	4	3	2	1

11	I am familiar with the restoration site selection criteria that were used and I think they are the most appropriate	5	4	3	2	1
12	I have received one or more trainings on resource use during the WA-BiCC project	5	4	3	2	1
13	The training(s) I received was/were very useful	5	4	3	2	1
14	The training I received needs to be improved	5	4	3	2	1
15	My knowledge and skills have improved immensely due to the training I received	5	4	3	2	1
16	There are noticeable changes in the attitude of my organization towards the challenges and opportunities facing coastal communities as a result of the WA-BiCC project	5	4	3	2	1
17	I believe my own attitude has changed towards those challenges and opportunities	5	4	3	2	1
18	Additional training in any aspect of the coastal challenges will be of particular interest to me or my organization	5	4	3	2	1
19	I understand the process and timeline to develop Mangrove Management Plans (MMPs) under the project	5	4	3	2	1
20	I believe the MMPs will have the support of local communities	5	4	3	2	1
21	There is need for significantly more outreach and education on the MMPs	5	4	3	2	1
22	WA-BiCC has done an effective job at incorporating analysis of climate variability into project activities	5	4	3	2	1
23	The WA-BiCC project will achieve impact at scale that is meaningful (related to mangrove restoration, conservation, or shoreline protection)	5	4	3	2	1
24	WA-BiCC activities are helping to improve the enabling conditions needed to sustain activities (i.e., policy, legal, institutional, financial, etc.)	5	4	3	2	1
25	Government stakeholders have the capacity and tools needed to help sustain activities	5	4	3	2	1
26	The collaboration and coordination between WA-BiCC and key stakeholders at the national and regional levels have been effective	5	4	3	2	1
27	WA-BiCC staff have the necessary skills, expertise and resources to implement this project	5	4	3	2	1

28	<i>We will appreciate your comments on the following:</i> The most important contribution that WA-BICC has made to your organization: Key lessons learned for future coastal resilience programming in West Africa: Recommendations for the remaining months of WA-BICC: Final thoughts:
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THANK YOU!!

ANNEX5: DOCUMENTS REVIEWED

1. Tetra Tech. (2018a). USAID/West Africa Biodiversity and Climate Change (WABiCC), Year 4 Annual Work Plan, 2nd Labone Link, North Labone, Accra, Ghana. 63 pp.
2. Tetra Tech. (2017a). USAID/West Africa Biodiversity and Climate Change (WABiCC), Year 3 Annual Work Plan, 2nd Labone Link, North Labone, Accra, Ghana. 55 pp.
3. Tetra Tech. (2017b). USAID/West Africa Biodiversity and Climate Change (WABiCC), Year 2 Annual Report, 2nd Labone Link, North Labone, Accra, Ghana. 77 pp.
4. Tetra Tech (2015). USAID/West Africa Biodiversity and Climate Change (WABiCC)/ First Annual Work Plan (October 2015–September 2016), Accra, Ghana. 76pp.
5. Tetra Tech (2016a). USAID/West Africa Biodiversity and Climate Change (WABiCC)/ Year 1 Annual Report (October 2015–September 2016). Accra, Ghana. 47pp.
6. Tetra Tech (2016b). USAID/West Africa Biodiversity and Climate Change (WABiCC) Year 1 Semi-Annual Report, Accra, Ghana. 48pp.
7. Tetra Tech (2017c). USAID/ West Africa Biodiversity and Climate Change (WABiCC) Year Two Annual Report (October 2016-September 2017), Accra, Ghana. 82pp.
8. Tetra Tech. (2017d). USAID/West Africa Biodiversity and Climate Change (WABiCC), Year 2 Semi-annual Report, 2nd Labone Link, North Labone, Accra – Ghana. 56pp.
9. Tetra Tech. (2018b). USAID/West Africa Biodiversity and Climate Change (WABiCC), Year 3 Annual Report, 2nd Labone Link, North Labone, Accra – Ghana. 79 pp.
10. Tetra Tech. (2018c) USAID/ West Africa Biodiversity and Climate Change (WABiCC) Monitoring and Evaluation Plan (MEP), Revised. Accra, Ghana. 103 pp
11. Assessing Biophysical Factors to Inform Mangrove Restoration in the Sierra Leone Coastal Landscape Complex. (Draft). 18 pp
12. Massaquoi, A. S. Feasibility Report for Improved Fish Smoking Systems in the Sierra Leone Coastal Landscape Complex. 33 pp.
13. Achor, E. and Nduwayo, E. (2017). Coastal Chiefdom Natural Resources Management Network Organizational Network Analysis, Port Loko District, Sierra Leone. 29 pp.
14. Environmental Review Form for USAID WA BICC Grant Project. 9 pp.
15. Technical Assessment and options analysis for the strengthening of embankments in Momaya and Kortimoh in the Sierra Leone Coastal Landscape Complex. 19 pp.
16. Bakarr, S. A. and Massaquoi, A. S. Action Plan for Sustainable Livelihoods in the Sierra Leone Coastal Landscape Complex (SLCLC). 31pp.
17. Bakarr, S. A. Feasibility Report for Climate-Smart Agriculture (CSA) in the Sierra Leone Coastal Landscape Complex (SLCLC). 20 pp.
18. Massaquoi, A. S. Climate Change Adaptation Plan for the Sierra Leone Coastal Landscape Complex. 77 pp.
19. Center for International Earth Science Information Network (CIESIN) and Tetra Tech. (2017). Sierra Leone Coastal Vulnerability Assessment: A report on the Vulnerability of Ecosystems and Communities in Mangrove Areas. 195 pp.
20. Integrating Mangrove and Rice Cultivation as an Anticipated Behavior Change Practice to Increase Resilience to Climate Change in the Sierra Leone Coastal Landscape Complex. 17 pp.
21. Establishing Mangrove Nurseries in the Sierra Leone Coastal Landscape: the WA BiCC Experience. 18 pp.
22. Tetra Tech. (2018). USAID/West Africa Biodiversity and Climate Change (WABiCC) Lebbie T., & Massaquoi A-B. S. (2018) Action plan for restoration of degraded mangrove areas in the SLCLC. 20 pp.
23. Massaquoi, A-B. S. Climate Change Adaptation Plan for the Sierra Leone Coastal Landscape Complex. 77 pp.

24. Technical Assessment and options analysis for the strengthening of embankments in Momaya and Kortimoh in the Sierra Leone Coastal Landscape Complex. 19 pp.
25. WA-BiCC Assessment of Vulnerability to Climate Change in Coastal Areas of Sierra Leone. WA BiCC Validation Workshop, PowerPoint Presentation, 5th December 2016.
26. WA-BiCC Assessment of Vulnerability to Climate Change in Coastal Areas of Sierra Leone. WA BiCC Validation Workshop, PowerPoint Presentation, 5th December 2016.
27. Options to Improve Coastal Resilience in the Sierra Leone Landscapes. 26 pp.
28. Tetra Tech, Field Trip Report. (2016) West Africa Biodiversity and Climate Change Program. Presentation of CCVA Studies to Local Stakeholders. 7pp.
29. Training Manual on Mangrove Seed Identification and Nurseries Establishment in the Sierra Leone Coastal Landscape Complex. 13 pp.
30. Training Manual on Mangrove Seed Identification and Nurseries Establishment. 14pp
31. Facilitation Guide for the Mangrove Seedling Identification and Nursery Establishment Training. 2 pp.
32. Ecosystems Mangrove Restoration Training on Propagule Identification and Nurseries Establishment in the Sierra Leone Coastal Complex, Sierra Leone 12th-23rd June 2017. 15 pp.
33. USAID/West Africa Biodiversity and Climate Change, (2018), Report on the Workshop on Climate Information for Adaptation Planning, 2nd Labone Link, North Labone, Accra, Ghana. 52 pp.
34. Sankoh, S. (2017). West Africa Biodiversity and Climate Change Project: Traditional Chief's Network of the Coastal Landscapes in Sierra Leone. 109 pp.
35. Sankoh, S. (2017). Workshop Report on Strengthening Local Governance Structures to Increase Coastal Resilience to Climate Change in Sierra Leone, Freetown Sierra Leone 10-12 July 2017. 52 pp
36. Growth Rate Monitoring Chart for Mangroves Transplanted on the 14th. - 15th. July, 2017.
37. Persha, L. and Wendt, R. (2014). Evaluation Design Proposal Performance Evaluation of the West Africa Biodiversity and Climate Change (WABiCC) Project. USAID/NORC, University of Chicago 56pp.
38. ASSESS Project: Commissioned Activity for the WA-BiCC Performance Evaluation. 23pp.
39. Reffell, F. A. and Gandi, I. (2018). West African Biodiversity Climate Change, (WABiCC) Program: Feasibility Study and Mobilization of Village Savings and Loans Association. 38 pp.
40. Sierra Leone Coastal Landscape Complex VSLA Baseline Draft Report, January 2019. 25 pp.
41. WA BiCC Communications Unit and Moody, V. West Africa Biodiversity and Climate Change (WABiCC): Report of Behavior Change Communications Pretest and Channels in the Sierra Leone Coastal Landscape Complex. 52 pp.
42. Sankoh, S.A., Mamie, J.C., Kamara, A. and Sankoh, Z. A. (2015). Integrated Coastal Zone Management Plan. Environment Protection Agency – Sierra Leone. 49 pp.
43. Environment Protection Agency (2015). Sierra Leone State of the Marine Environment Report 2015. Freetown, Sierra Leone. 74 pp.
44. Mattai, J., Scott-Manga, J., Johnny, A., Sesay, S. and Medo, J. (2014). Final Boundary Delineation of the Four Declared Marine Protected Areas (MPAs) in Sierra Leone: Sierra Leone River, Scarcies River, Yawri Bay and Sherbro River Estuaries. Freetown, Sierra Leone. 83 pp.
45. Government of Sierra Leone, Environment Protection Agency Sierra Leone (2017). Sierra Leone's Second National Biodiversity Strategy and Action Plan 2017-2026. 129pp.
46. Government of Sierra Leone (2010). Forestry Policy, 2010. 22 pp.
47. Government of Sierra Leone. Ministry of Transport and Aviation (2007). National Adaptation Programme of Action (NAPA), Final Report. 122 pp.
48. Government of the Republic of Sierra Leone. Ministry of Transport and Aviation and Climate Change Secretariat of the Environment Protection Agency (EPA). Third National Communication of Sierra Leone to the United Nations Framework Convention on Climate Change. 382 pp.
49. Mapping Pilot Degraded Mangrove Forest Sites for Restoration in the Sierra Leone Coastal Landscape Complex. 20 pp.
50. Tetra Tech. (2018). USAID/West Africa Biodiversity and Climate Change (WABiCC), Monitoring and Evaluation Plan (MEP), Accra – Ghana. 103pp.

ANNEX 6: PERSONS INTERVIEWED

	NAME	SEX	POSITION	ORGANIZATION
1	Layemin Joe Sandi	M	Mayor	Bonthe Municipal Council
2	Bintu Theresa Moseray	F	Project Manager	UNDP
3	Salieu K. Sankoh	M	National Coordinator	West Africa Regional Fisheries Program
4	Alpha Umaru Leigh	M	Director	Forestry Division, Ministry of Agriculture, Forestry and Food Security
5	Sahr Kellie	M	Deputy Director	Forestry Division, Ministry of Agriculture, Forestry and Food Security
6	Kate Garnett	F	Acting Director	National Protected Areas Authority
7	Yetta Kamara	M		National Protected Areas Authority
8	Cornelius Langdor	M		National Protected Areas Authority
9	Ben Lamine	M		National Protected Areas Authority
10	Braima Bamara	M		National Protected Areas Authority
11	Ibrahim Kamara	M		Meteorological Department
12	Sheka Koroma	M	Animator	Scarcies region
13	Woudie Koroma	M	Animator	SLRE region
14	Charles Barlay	M	Animator	Yawri Bay region
15	Amara Kalone	M	Animator	Bonthe-Sherbro region
16	Name withheld	F	Participant	Mamamki
17	Name withheld	F	Participant	Tombo
18	Name withheld	M	Non-Participant	Tombo
19	Name withheld	M	Participant	Tombo
20	Name withheld	M	Non-Participant	Mamamki
21	Name withheld	M	Non-Participant	Yeliboya
22	Arthur Chinsman-Williams	M	Mangrove Specialist	WABICC
23	Anada Tiega	M	Component 2 Lead	WABICC
24	Fatmata D. Katta	F	Communications Officer	WABICC
25	Zebedee Njisuh	M	SLCLC Landscape Manager	WABICC
26	Eslon Nduwayo	M	Capacity Building Specialist	WABICC

ANNEX 7: COMMUNITIES VISITED

Distribution of participants in community FGDs

Community	Estuary	Sex	Youth	Adult	Total
Tombo	Yawri	Male	4	11	15
		Female	5	11	16
Deep Eye Water	SLRE	Male	6	9	15
		Female	4	6	10
Mamanki	SLRE	Male	7	9	16
		Female	4	11	15
Kafunka	SLRE	Male	5	10	15
		Female	9	10	19
Kortimoh	Scarcies	Male	5	10	15
		Female	4	11	15
Yeliboya	Scarcies	Male	1	13	14
		Female	1	9	10
Sasiyek	Scarcies	Male	1	14	15
		Female	12	3	15
Mahela	Scarcies	Male	7	8	15
		Female	4	11	15
Samu	Yawri	Male	6	9	15
		Female	8	7	15
Shengebull	Yawri	Male	1	12	13
		Female	10	7	17
Yagoi	BSRE	Male	12	4	16
		Female	9	11	20
Momaya	BSRE	Male	5	10	15
		Female	3	12	15
Bonthe	BSRE	Male	7	7	14
		Female	7	9	16
TOTAL			147	244	391

ANNEX 8: FOCUS GROUP DISCUSSION SUMMARIES

[Note: The facilitation guide questions have been shortened in these summaries to save space for this report. The entire facilitation guide, as appear in annex 4, was used in each FGD.]

FOCUS GROUP DISCUSSION SUMMARY

Village Name	SASIYEK, Scarcies	Session Moderator	Richard
Date of FGD	4/9/19	Session Translator	Woudie
Start Time	1:15pm	Number of Participants	15 (3 adults, 12 youth)
End Time	2:30pm	Male / Female FGD	Female FGD

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	A: When WABICC came they first made a feasibility study, looking at soil fertility for mangrove restoration. After that we had a workshop and we said we want to restore mangroves. WABICC brought tools and equipment, and they indicated an area for a nursery. We later transplanted both in front and in back of the community. The mangrove transplants did not survive because fish and animals ate them. A: We tried to plant three times but all efforts failed. A: We also had 2 VSLA groups here before WABICC arrived; with maybe 20 members each. WABICC supplied security boxes for each group and some training for 2 people in Kychom. The first training was on mangrove restoration and the second on VSLA. A: The VSLA activities were organized around our existing groups, and we made bylaws which deal with fees and fines. One group has started making loans. We use the loan money for various things, including fish mongering, cooking items, and school fees. The VSLA groups are going well but we still need more training. We know how to take care of the books but we could use additional business skills and improved fish smoking ovens. Overall rating of VSLA: EXCELLENT. A: WABICC taught us the importance of mangroves, which are to prevent flooding, serve as wind break, and improve fish habitat. A: Mangroves will regenerate if the roots are left intact. A: WABICC brought materials and showed us how to transplant.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	
	Does your community use today the same, more, or less mangrove wood	

	than before the WA-BICC project started?	A: We still use mangrove wood and there has been no change in that. We have to source and buy wood from far away and bring here by boat. A: Some of the wood from the wood cutters is with cut roots. We use traditional bandas here. We requested help from WABICC for improved fish smoking ovens. Overall rating for mangrove restoration: POOR. A: There have been no differences between men and women in the opportunities to participate in WABICC activities. But there has been a division of labor. Y: Same with youth: we can participate. A: No one has left our groups. A: We have not received help from WABICC for improved fish smoking ovens, although we have asked. We also requested help for our resettlement (such as roofing iron) A: We are now able to make loans to each other with the VSLA, and we have agreement and unity to restore mangroves – these are the benefits from WABICC. A: Mangrove restoration was unsuccessful because fish and animals ate the plants. We need to have a strong fence to protect against the animals. It is also better to plant in the rainy season and it is better to use wildlings than plant from the nursery. A: We need a boat to use to collect the propagules. And we would like to have an embankment to protect our community (like the one in Kortimoh).
	Where and how do you get your mangrove wood today?	
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	
3.2	Which activities will your community continue after WA-BICC has finished?	
3.1	Do you think that the WA-BICC project and your community will achieve the purpose and goals that you mentioned at the beginning of this discussion?	
1.5	Has the WA-BICC project encouraged and supported women and youth to become involved in activities?	
	Have there been any differences in the way the project has involved women or men or youth?	
	Have you personally benefited from the project, and if so in what ways?	

FOCUS GROUP DISCUSSION SUMMARY

Village Name	MAMAMKI, SLRE	Session Moderator	Richard
Date of FGD	4/7/19	Session Translator	Woudie
Start Time	9:15am	Number of Participants	15 (11 adults, 4 youth)
End Time	10:30am	Male / Female FGD	Female FGD

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	A: The purpose of WABICC is to inform us about mangrove restoration to prevent flooding. A: WABICC explained about climate change, and how mangroves help to prevent wind damage to our houses. A: WABICC helped to make bylaws regarding mangrove cutting and to protect trees. A: They also helped us to establish a VSLA.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	

	Which activities are so far the most successful?	VSLA was the most successful activity.
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	A: We have not yet received training, no formal training. We only received message regarding how to save money in the security box.
1.2	Are there any additional training needs to improve the VSLA?	A: We need thorough training on record-keeping, financial management, and how to invest money.
	What types of livelihood activities will the loans support?	A: Yes, we have started making loans to our members. We have three different VSLA groups of 10. Y: We use the loans for buying and selling fish, and to make food for sale. A: I use the loans for trading, school tuition and supplies. A: I use the loan to make food for sale.
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	A: We give loans of 100,000le and require 20,000le in interest payback. We have bylaws and there are both fees and fines.
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	A: We need more capital. Y: We need more services in this community, including school and hospital.
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	Overall rating of VSLA activity: Excellent.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	A: We have two groups working on mangrove restoration, one of females and one of males. We alternate going out to work, and we have competition with each other to see who can plant the most.
1.2	Are there any additional training needs to improve restoration efforts?	Y: After the war, we cut mangroves for lots of uses, but there were many problems as a result. We now must stop cutting so we don't have any more fish decline or flooding. A: Since WABICC came here, we no longer cut mangrove. We harvest oysters from the mangrove roots. Some people cut the roots, but others just scrap off the oysters.
2.3	How and why did the community select the mangrove restoration site(s)?	A: WABICC provided tools, polythene bags, boots, etc. All tools have worn out, as they have rusted in the saltwater. A nursery was established, and transplanting made. Y: Crabs ate many of the small transplanted seedlings.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	A: We need additional training and tools, plus food while we work in the mangroves. We also need a boat and engine so we can monitor. It is too far to go without a boat.
	Does your community make any rules to protect the mangroves?	A: Today, we use only upland wood. A: We don't allow mangrove cutting within our boundaries. A: We use traditional fish-smoking technique only, which is not a large fish-smoking oven.
1.4	Did the WA-BICC project help to change any of the rules, and if so, is there full support for the rules?	Overall rating of the mangrove activity: Excellent.
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	A: We all participate equally, men and women and youth.
	Where and how do you get your mangrove wood today?	A: We now see fish returning and catch improving since we no longer cut mangroves. A: We also do salt-mining and there
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	
3.2	Which activities will your community continue after WA-BICC has finished?	
3.1	Do you think that the WA-BICC project and your community will achieve the purpose and goals that you	

	mentioned at the beginning of this discussion?	is now higher salt content in the soil. Y: We benefit from receiving loans from VSLA
1.5	Has the WA-BICC project encouraged and supported women and youth to become involved in activities?	Y: We will continue both VSLA and mangrove restoration.
	Have there been any differences in the way the project has involved women or men or youth?	Y: In the beginning, we really enjoyed mangrove restoration work, as there were incentives for us to go outside to work. But now we don't see the incentives and some members don't see any benefit. A: We were encouraged by WABICC to put our cash incentives into the VSLA fund. We are not yet registered thought and we need help with the process of registration. It costs 250,000le and it is far (we must go to Port Loko to register our VSLA). A: We need help with VSLA for business development, including agriculture. A: We need to tend to upland trees as well, and there is a problem with salinization of groundwater. WABICC did not talk to us about this issue.

FOCUS GROUP DISCUSSION SUMMARY

Village Name	MAHELA, Scarcies	Session Moderator	Richard
Date of FGD	4/9/19	Session Translator	Woudie
Start Time	9:45am	Number of Participants	15 (11 adults, 4 youth)
End Time	11:15am	Male / Female FGD	Female FGD

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	A: WABICC said the purpose of the project is to restore mangroves, and they also said they would help to organize a VSLA and provide a security box. Y: WABICC said the purpose of mangrove restoration is to prevent flooding and provide for better fish habitat. Y: Mangroves can also serve as a wind break. A: We have never experienced flooding here. A: WABICC provided training for 3 people from our community; they were taken to Kychom for a training-of-trainers program. They trained us on how to fight poverty and also how to restore mangroves. A: For the VSLA, we were told to contribute 5,000le every Friday. Y: We were told to affiliate the VSLA with the Community Bank. A: We have 1 VSLA and we are registered with the Regional Council. It cost 160,000le, and yes, we are already making loans.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	

	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	A: We use the loans for petty trading and small business (e.g., tobacco, trade items, food for well, fish mongering, palm oil, rice, bread bakery, etc.). A: We pay back the loans with 20% interest.
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	A: We could use additional training in business skills, and we need more capital for the security box. A: We need more empowerment to expand the VSLA; we would like cash contribution from WABICC.
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	Overall rating for VSLA: GOOD
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	A: WABICC provided tools, cash incentive, and logistics support for mangrove restoration. A: They first helped to organize a Mangrove Restoration Committee. They asked for volunteers to join the MRC, which included both men and women. Y: The first step was to collect propagules, put into poly bags with mud, and add water. Then WABICC came and we transplanted them. A: We used to monitor the transplants and replace the dead ones. We will plant more in the same area.
1.2	Are there any additional training needs to improve restoration efforts?	
2.3	How and why did the community select the mangrove restoration site(s)?	
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	A: We use mangrove wood for cooking and fish-smoking. We use the same amount as before. A: WABICC spoke to sue about bandas, and we told them we would like improved fish smoking ovens. A: We get our wood today far away because we don't have large trees here.
	Does your community make any rules to protect the mangroves?	Overall rating for mangrove restoration: GOOD .
1.4	Did the WA-BICC project help to change any of the rules, and if so, is there full support for the rules?	We would still like to have food for work while we are restoring mangroves. But we will continue all activities; it is for our children.
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	A: The women here have all had equal opportunity (with men) to participate in WABICC activities A: My business has benefitted from loans received from the VSLA. Y: I and my business have benefitted from new knowledge. A: We have all benefitted from the VSLA being organized. Y: I received loans for my business and benefitted that way. A: We have not encountered any difficulties. No lessons learned, but we need more services in this community (school, hospital, etc.)

FOCUS GROUP DISCUSSION SUMMARY

Village Name	KORTIMOH, Scarcies	Session Moderator	Richard
Date of FGD	4/8/19	Session Translator	Woudie
Start Time	9:15am	Number of Participants	15 (11 adults, 4 youth)

End Time	10:30am	Male / Female FGD	Female FGD
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EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	A: WABICC first came to explain why it is not good to cut mangrove trees, and that we need to reduce wood consumption. They said that they would help us to construct improved fish smoking ovens and improve our businesses. A: WABICC promised to help us; water is eating our community with flooding. The embankment is now constructed, we have restored some mangroves, and we are advised not to cut mangroves but rather use upland forest wood for our needs.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	A: WABICC helped with our VSLA too. We now have strengthened unity. A: We see benefit from VSLA; originally, we were not united but now we are and we are helping ourselves. Y: There have been no other programs like this.
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	A: For the VSLA, we received a security box and some training on how to make contributions and build savings. A: The training was useful but we still need more; we need more knowledge. Y: I did not attend training but others did and told me about it.
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	A: We get our funds from member contributions, fees, and fines. We are now registered in Kambia and it cost 140,000le. We have 10 different groups here and they are all making loans. A: I used the loan for buying and selling fish. [Others also are fish mongers, and some used the loan for school fees, crab selling, selling fuel, and for her charging station business.]
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	Overall rating for VSLA activity: EXCELLENT. A: Mangroves are important for biodiversity and fish habitat; and the trees also provide wood for house construction. A: Mangroves help to prevent flooding and erosion. A: They decrease wave energy and help protect our farms from flooding. Y: Mangroves are a place to rest with nice shade and a wind break. [Note: They also buy water from other villages; groundwater is too salty here.]
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	Y: We have a mangrove nursery, but we also use wildlings for transplanting. A: Seedlings transplanted from nursery are healthier and have a better survival rate. Best to transplant during rainy season. A: WABICC provided tools, but they are all rusted now from the saltwater. Our expectations were not met, as the food promised for work did not happen. Incentives were given and went into the community bank.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	
1.2	Are there any additional training needs to improve restoration efforts?	A: We don't cut mangroves anymore; we have bylaws and there is a 50,000le fine for doing so. We bring mangrove wood from
2.3	How and why did the community select the mangrove restoration site(s)?	
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	
	Does your community make any rules to protect the mangroves?	
1.4	Did the WA-BICC project help to change any of the rules, and if so, is there full support for the rules?	

	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	far away now and we must buy it. Mangrove wood is best for fish smoking. But we don't have the improved fish smoking ovens that WABICC promised; they did not provide that help. It was WABICC's idea originally but they said that the cost and materials would be too high. Overall rating for mangrove activities: EXCELLENT. A: For the embankment, WABICC gave us tools and materials. They came with an engineer and survey equipment. A: There have been some problems, especially with the breaking of sand bags. Repair will be a continual process; at least yearly. A: We bring sand from sand bars in the river. It would be better if we use cement.
	Where and how do you get your mangrove wood today?	
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	
1.1	Speaking about the embankment , has WA-BICC provided the necessary training and support to help make the embankment successful?	
1.2	Are there any additional training needs to improve embankment efforts?	
	How long will the embankment last before replacement is necessary?	Overall rating of embankment activity: GOOD. Everyone said that women, men, and youth all have equal opportunity and are encouraged to participate in WABICC. There are no differences here. Y: I have received loans and that is my important benefit. A: I used the loan to help with college fees for myself.
	How would you rate the overall success of embankment activity with WA-BICC support? [poor, fair, good, excellent]	
3.2	Which activities will your community continue after WA-BICC has finished?	
		A: As for lessons learned, the lateness and delay in delivering assistance, especially with the mangrove restoration and embankment activities was frustrating. A: The embankment design was not correct at first (it was started at the wrong point of land). A: Payment for our labor did not fully materialize and it was not sufficient. A: We still have declining fish stocks and VSLA funds are not sufficient. We need more bags for the embankment.

FOCUS GROUP DISCUSSION SUMMARY

Village Name	KAFUNKA, SLRE	Session Moderator	Richard
Date of FGD	4/7/19	Session Translator	Woudie
Start Time	12:45pm	Number of Participants	19 (10 adults, 9 youth)
End Time	2:00pm	Male / Female FGD	Female FGD

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	A: WABICC told us that mangrove cutting is not good. Y: They said to stop mangrove cutting to let fish breeding improve. A: If mangrove is cut, they said to be sure to replace with a new tree. This will help to break the wind that hits our houses. A: Mangroves are good for biodiversity. Y: WABICC asked the community to identify mangrove degradation areas
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	

	Which activities are so far the most successful?	that could be good for restoration. And they discussed climate change with us.
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	A: WABICC provided training and tools for mangrove restoration. A: They also introduced VSLA and provided a security box for us, and incentive to help us get started. [Note: some of the women in the room did not know that the security box was provided by WABICC.] Both VSLA and mangrove restoration were successful. A: For VSLA, I have not yet received training; we only received a box. Y: We made bylaws for the VSLA, with fines and fees. A: We also have passbooks and ledgers for record-keeping. A: We need more training for new members, and training on new topics such as how to prepare financial statements. A: Our VSLA is not yet registered; we have to travel far and pay to get registered. Y: We have received loans, and I used mine for home use (it was only a small amount). A: I used mine for home use also (50,000le). Y: In terms of lessons learned for VSLA, the activity has a good focus, WABICC was good, and so we followed it. A: The VSLA activity was good but we have trouble raising capital. We need more start-up capital. Overall rating for VSLA: GOOD. Y: Mangroves are important for wind break, flood control, and fish breeding. Y: We used to take mangrove wood but since WABICC we stopped and our husbands complain at lost revenue (because they have to go far to cut and/or buy wood). A: Mangrove restoration is necessary, but there are many problems. The sun is hot in the dry season and the seeds dried out. Collecting propagules is very hard. We had to water the new seedlings every day for two months, until the plant has 4 leaves and is ready to transplant. A: We learned there are 4 species of mangroves in our area. We learned how to transplant and WABICC supplied tools. However, we get hungry working all day in the field. We are pausing planting for now, but we will start-up again in rainy season. A: Our parents used to cut mangroves for salt-making and this led to increased flooding. We now use upland forest trees for salt-making. We source our mangrove wood from far islands, and our husbands still bring wood here for sale/trade.
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	
1.2	Are there any additional training needs to improve restoration efforts?	
2.3	How and why did the community select the mangrove restoration site(s)?	
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	A: Mangrove restoration is necessary, but there are many problems. The sun is hot in the dry season and the seeds dried out. Collecting propagules is very hard. We had to water the new seedlings every day for two months, until the plant has 4 leaves and is ready to transplant. A: We learned there are 4 species of mangroves in our area. We learned how to transplant and WABICC supplied tools. However, we get hungry working all day in the field. We are pausing planting for now, but we will start-up again in rainy season. A: Our parents used to cut mangroves for salt-making and this led to increased flooding. We now use upland forest trees for salt-making. We source our mangrove wood from far islands, and our husbands still bring wood here for sale/trade.
	Does your community make any rules to protect the mangroves?	
1.4	Did the WA-BICC project help to change any of the rules, and if so, is there full support for the rules?	
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	
	Where and how do you get your mangrove wood today?	
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	
3.2	Which activities will your community continue after WA-BICC has finished?	

3.1	Do you think that the WA-BICC project and your community will achieve the purpose and goals that you mentioned at the beginning of this discussion?	A: We would like additional support in the way of food while work. Also, alternative livelihoods would allow us to reduce pressure on the mangroves. Overall rating for mangrove activities: GOOD. Y: There has been equal encouragement and opportunity for both men and women and youth. Our main complaint is lack of food for labor. Y: I have mainly benefited from VSLA loan, I used it to seek medication. Y: I used a loan for school fees and to buy food. Y: I bought cigarettes and diamonds for trading. A: In terms of lessons learned, the mangrove restoration did not work well. Most of the transplants died; a high death rate. Y: We need more food support for working in the restoration areas. A: We did not know the best season to transplant, but now we do. We know it is not necessary to make a nursery; direct transplant with wildlings is best and during the rainy season. Y: People don't want to see failure. They get frustrated and then leave the project. [Note: Groundwater is too salinized for drinking here, and the community must source water from another community. WABICC did not discuss the connection between mangrove loss, SLR, and salinization of coastal aquifer.]
1.5	Has the WA-BICC project encouraged and supported women and youth to become involved in activities?	
	Have there been any differences in the way the project has involved women or men or youth?	
	Have you personally benefited from the project, and if so in what ways?	

FOCUS GROUP DISCUSSION SUMMARY

Village Name	BONTHE, BSRE	Session Moderator	Richard
Date of FGD	4/13/19	Session Translator	Amara
Start Time	2:00pm	Number of Participants	16 (9 adults, 7 youth)
End Time	3:15pm	Male / Female FGD	Female FGD

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Y: WABICC told us the main purpose of the project is mangrove restoration. Y: They told us about the dangers of climate change and the role that mangroves play to protect against wind and wave damage, erosion and flooding. Y: We also learned the importance of mangroves in elevating the land, plus the role mangroves play in biodiversity, providing habitat for fish and animals.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	
	Which activities are so far the most successful?	

1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	A: We were trained in nursery and transplanting techniques. Before, we cut mangroves everywhere, but now we protect them and add more to the forest. A: We are happy that trees are now protected, as they provide shade and protection against wind damage. A: WABICC also told us about VSLA and savings and loans. Y: We learned that when harvesting oysters we should not cut the mangrove roots. We made bylaws regarding mangrove protection. There are 4 VSLA groups here in Bonthe. Y: When WABICC first came, they helped organize us (we are market sellers), and told us how to save and give loans. They provide a box and taught us record keeping. Y: Before VSLA started, we had training by WABICC here in Bonthe. We learned bookkeeping and they gave us a small incentive to put in the box.
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	A: We can use more training, especially in financial management. I use the loan money for my petty trading business. Y: As a student, I'm happy about VSLA, but we need more starting capital. A: WABICC supported us in mangrove activity with tools, equipment, and training. They trained us to make a nursery (we made 2 nurseries). Both were successful but some plants died during transplanting. Y: We learned later that direct seeding is more successful. But our group has received no tools or training because we are newcomers to WABICC. There are now 3 restoration sites in Bonthe. Y: One of the sites, the largest one near the market in Bonthe, is now the site of a new development plant. Construction workers have cleared the young mangroves and they are planning to fill it with soil for a new development. It's government land because it's tidal water. Y: We completed that mangrove restoration as part of the WABICC project and so we have to follow their lead to see if they will complain to government about this decision. No one from the community was consulted. Y: Yes, we still use mangrove wood for fuelwood, and the bark for medicine and dye. It is used for fish smoking and house construction. Y: We get our wood far away; men go for it, but sometimes we buy it when wood cutters bring it here. They must cut wood from the interior of a mangrove forest, and they must plant a new tree for everyone they take. That is what our bylaws say. A: We use traditional bandas for fish smoking, but there is not much fish smoking done here in Bonthe. Y: For those doing smoking, WABICC asked if IFSS would be of interest and we said yes; but there has been no follow-up yet.
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	
1.2	Are there any additional training needs to improve restoration efforts?	
2.3	How and why did the community select the mangrove restoration site(s)?	
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	
	Does your community make any rules to protect the mangroves?	
1.4	Did the WA-BICC project help to change any of the rules, and if so, is there full support for the rules?	
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	
	Where and how do you get your mangrove wood today?	
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	
3.2	Which activities will your community continue after WA-BICC has finished?	
3.1	Do you think that the WA-BICC project and your community will achieve the purpose and goals that you	

	mentioned at the beginning of this discussion?	Y: We could use tools, raincoats, boots; and we will look for new sites to do restoration. We also need training. Zebedee said WABICC can provide incentive only for restoration work, and not for the VSLA. Y: We women have equal opportunity to participate in the WABICC activities, and to let our voice be heard. Before WABICC, those who don't go to school couldn't even participate in most things. But with WABICC, it is much better and everyone is encouraged. Y: WABICC encouraged me to speak publicly; and they provided me with training and a VSLA loan. Y: Now, with WABICC training, I can manage savings through VSLA; before I kept money in the house but it was not secure. Y: One lesson we learned is that we planted mangroves with the hope to get a small livelihood (incentive), but we are frustrated because the mangrove site is now destroyed. We need more support, and we must solve the issue of who owns the land. Y: As newcomers, we all volunteer and have not yet received tools, training, or incentive. A: During restoration training, we learned the best season to plant and where. Heat and salt/sand is not good for mangroves. Y: I'm a pretty active member, but sometimes people laugh at us going to do restoration; they say we won't get any benefit. We are just doing things on our own. Y: Another concern is that WABICC only asked 1-2 people to attend the workshop and it's always the same persons. The WABICC chairperson here decides who participates. It's not always fair.
1.5	Has the WA-BICC project encouraged and supported women and youth to become involved in activities?	
	Have there been any differences in the way the project has involved women or men or youth?	
	Have you personally benefited from the project, and if so in what ways?	
.	As a result of the project, how will your own personal behavior or daily routine (or that of your family) be different than before?	

FOCUS GROUP DISCUSSION SUMMARY

Village Name	DEEP EYE WATER, SLRE	Session Moderator	Richard
Date of FGD	4/6/19	Session Translator	Woudie
Start Time	4:45pm	Number of Participants	10 (6 adults, 4 youth)
End Time	6:00pm	Male / Female FGD	Female FGD

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	A: WABICC is a new type of program for us; it has brought many changes. Before WABICC, we had fish declines due to mangrove loss. Now we are restoring mangroves. A: WABICC brought about community cohesion. We are seeing fish return and have better wind protection. WABICC also introduced VSLA and we now make savings.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	

	Which activities are so far the most successful?	A: Both mangrove restoration and VSLA have been successful.
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	A: WABICC gave us a security box and trained us on how members should make investments/contributions. A: We received training on financial management, how to invest funds, how to make loans, and to keep a ledger.
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	A: We get funds for the VSLA from member dues. We have about 48 members, including a few men. A: We have made loans. Initially only 50,000le per loan. They must pay that back plus 10,000le in interest. Today we make loans of 260,000le.
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	A: I use the loan for trading food items (such as fish and mango). A: I use the loan for school fees. A: I use the loan for buying trade goods, school fees, and home use (food and other things).
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	A: WABICC did not support other livelihood activities, but we would be interested to learn more about vegetable gardening.
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	[Note: Youth are very reluctant to speak in this FGD.]
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	Overall rating on VSLA activity: Excellent.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	A: Mangroves are important for fish habitat and wind break. A: Important as flood barrier and fish nursery. A: We don't know what "biodiversity" means. Climate change means changing weather, including change in rainfall, temperature, and water availability.
1.2	Are there any additional training needs to improve restoration efforts?	
2.3	How and why did the community select the mangrove restoration site(s)?	A: We made a nursery and it was successful. But sometimes plants are damaged during transplanting. A: The restoration site was decided by us, the community.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	A: We now have mangrove bylaws and it is illegal to cut in our community. We now use only charcoal for cooking. A: We are not a fishing community so we don't do any fish-smoking. We did use mangrove wood before but not now.
	Does your community make any rules to protect the mangroves?	Overall rating of mangrove activity: Excellent.
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	A: There has been no difference in how WABICC involves men and women. Both have equal opportunity and we have all benefited. A: We now have savings resources. Training was provided. We put our incentive funds into VSLA.
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	A: As for lessons learned, we want WABICC to continue. A: We would like support for agriculture and financial loan-making. A: All expectations were met during this program.
	Where and how do you get your mangrove wood today?	Final thoughts: A: Women are most vulnerable, and we need more financial inputs. We can't secure loans yet from the bank. A: Our
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	

		children our dependent on us women, and so we can use more skills training for us and our children. A: Unemployment is too high. A: I am an ebola widow and need more help.
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FOCUS GROUP DISCUSSION SUMMARY

Village Name	YELIBOYA, Scarcies	Session Moderator	Richard
Date of FGD	4/8/19	Session Translator	Woudie
Start Time	12:30pm	Number of Participants	10 (9 adults, 1 youth)
End Time	2:00pm	Male / Female FGD	Female FGD

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	A: The first visit by WABICC was a general meeting, with discussion regarding mangrove restoration. They provided tools for restoration. A: WABICC brought us a security box. We have ~30 groups but only 6 were able to get boxes. All 6 are registered. A: We received a box with 3 locks and the locks are handled by different people. WABICC helped with organizing us and the rules for the VSLA. We also report to WABICC on savings progress. A: We were told by WABICC that they would make input if enough group savings are met. A: We have not started to make loans yet (none of the 6) because our savings is too small. We have only something like 1.5M or 2M Leones in the boxes now. Overall rating for VSLA activities: GOOD. A: We were encouraged to raise funds for a fence and we built it but animals still destroyed our nursery. We re-planted 7 times and failed each time. We have lost lots of money. A: Originally, we were 80 members (both men and women) in our mangrove committee, but after frustrations many people left. Y: WABICC trained us on how to transplant mangroves as a source of wood. A: The training showed us how to make nursery, use polythene bags, spacing, and transplanting. A: Mangroves are important as wind break and as fish habitat. A: Also, for erosion and flooding control. A: We transplant from both nursery and wildlings, but nursery plants do better.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	
1.2	Are there any additional training needs to improve restoration efforts?	

2.3	How and why did the community select the mangrove restoration site(s)?	We will try again on the same site. Yes, we can use more training, and we will contribute more money for a stronger fence.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	A: If we see anyone cutting mangrove here we will report to authorities; it is not legal. [Note: there isn't any mangrove wood left to cut here.]
	Does your community make any rules to protect the mangroves?	A: We still need mangrove wood for our bandas (traditional smoke ovens). We still use lots of wood. We really need improved ovens to reduce the amount of wood used. The Altoona oven is our preference. WABICC said they would discuss with their management and let us know, but nothing reported back to us yet.
1.4	Did the WA-BICC project help to change any of the rules, and if so, is there full support for the rules?	A: there are many health effects from bandas: on eyes, it is hot and we get dehydrated and anemic, we stand for too long and our joints ache.
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	Overall rating on mangrove activity: GOOD.
	Where and how do you get your mangrove wood today?	<u>KEIGA Regarding Rice-Mangrove Integration</u>
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	We have concern about lost area for rice cultivation, but we also know that mangroves are needed to stop erosion. We are happy to plant mangroves, because mangroves provide a wind break and flood protection. We are studying the manatees. Where mangroves exist, they cannot get to our rice; only where there are gaps in the mangroves can they come up on land to eat rice. Birds perch in the mangroves and come down to eat rice. Fish (tilapia, mullet) also eat young rice shoots. We don't use fertilizer. Direct seeding of mangroves works best.
3.2	Which activities will your community continue after WA-BICC has finished?	A: We have all had – women, men, youth – equal opportunity to participate in project activities. No differences.
3.1	Do you think that the WA-BICC project and your community will achieve the purpose and goals that you mentioned at the beginning of this discussion?	A: We are interested to continue after WABICC has finished. They have really helped us.
1.5	Has the WA-BICC project encouraged and supported women and youth to become involved in activities?	A: We would like help building an embankment, like they did in Kortimoh. We have erosion too.
	Have there been any differences in the way the project has involved women or men or youth?	A: I have benefited from improved fish catch as a result of mangrove restoration. And we have all benefited from the money WABICC gave us from MR incentive.
	Have you personally benefited from the project, and if so in what ways?	A: In terms of lessons learned, we are not satisfied with the mangrove restoration at all. Everything was destroyed after we tried 7 times.
	As a result of the project, how will your own personal behavior or daily routine (or that of your family) be different than before?	A: we have learned that a very strong fence is needed for a nursery where animals are nearby. And we must pay attention to the season – only transplant in the rainy season.
4.1	Are there lessons learned from the WA-BICC project that are important to include in future projects?	A: the 3-lock system is good; we have no challenges yet.

		A: We always like when WABICC comes. A: We need better tools; they have all rusted. A: It would be good to provide skills development for youth.
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FOCUS GROUP DISCUSSION SUMMARY

Village Name	YAGOI, Bonthe-Sherbro	Session Moderator	Richard
Date of FGD	4/12/19	Session Translator	Amara
Start Time	2:30pm	Number of Participants	20 total, including 3 from Keiga 11 adults, 9 youth
End Time	4:15pm	Male / Female FGD	Female FGD

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Y: When WABICC came they said we should do mangrove restoration to protect our environment and our houses. A: We learned to integrate mangroves with our rice farms to protect against erosion. A: We started a VSLA for savings and loans. Y: We learned that mangroves are important for fish habitat and oyster substrate. Y: Mangroves provide protection against wind and flooding. A: There are two VSLA groups in Keiga, and 1 in Yagoi. Y: WABICC provided training for 2 people who went to Bonthe for training. We also had one training here in Yagoi. A: WABICC trained us on savings and loans. Before, we used to borrow money from our friends, but now we get loans from VSLA. A: We can use loans for emergency purposes like when someone gets sick. Or some people use loans for school fees. We pay 20% interest. Neither VSLA group is yet registered with the Regional Council. We need help and money to get registered. Overall rating of VSLA: POOR
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	A: WABICC has not provided training or tools. Only 1-2 persons were trained but that's not enough. Many of us have volunteered our time but we don't see any benefits. WABICC came later and gave us incentive. A: I was one of those trained in Bonthe on mangrove restoration. We saw a video on the benefits and values of mangroves. A: From Keiga, we did not go for training. A: I have seen a nursery in video only. Neither of these communities developed a nursery.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	
1.2	Are there any additional training needs to improve restoration efforts?	

2.3	How and why did the community select the mangrove restoration site(s)?	A: We started with wildlings, but they failed to transplant well. We now use direct seeding, and this is more successful Yagoi: Same thing.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	We use less wood now, but we still use for fish smoking, cooking, and construction. The men go to cut wood and bring from far away with boats. Sometimes they buy it.
	Does your community make any rules to protect the mangroves?	We use traditional bandas for fish smoking. A: I use a slightly improved oven that uses about 40% less wood.
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	Y: We need training and tools for mangroves restoration. We also need capital for our VSLA box. A: We are now requesting WABICC to come and see our work and provide the incentive they promised.
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	
	Where and how do you get your mangrove wood today?	Overall rating for mangrove restoration: Yagoi: FAIR; Keiga: GOOD
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	A: Women can't leave home to go out of town for training, so WABICC needs to do training here in the community. Y: We also participate and have opportunity to do so.
3.2	Which activities will your community continue after WA-BICC has finished?	
3.1	Do you think that the WA-BICC project and your community will achieve the purpose and goals that you mentioned at the beginning of this discussion?	Non-Active person: I first started in WABICC but only some people went away for training. Many women thought that was unfair and the next time they, including me, did not come. A main benefit of the project is to attend a workshop, but since we didn't have the chance we were frustrated. We volunteer and do the work but don't always receive benefits, not even food for work.
1.5	Has the WA-BICC project encouraged and supported women and youth to become involved in activities?	Y: If there is no profit or benefit involved I don't participate. Y: I'm not always informed of meetings until after the fact. Y: Dishonesty in the community in the selection process. It's not clear who is legitimately involved and why participants for training are chosen.
	Have there been any differences in the way the project has involved women or men or youth?	
	Have you personally benefited from the project, and if so in what ways?	Y: VSLA benefits me with loans, but we don't get incentive from WABICC. A: VSLA box is important as a direct benefit.
.	As a result of the project, how will your own personal behavior or daily routine (or that of your family) be different than before?	Y: In terms of lessons learned on mangrove restoration, we learn from other communities that mangrove are good protection for our homes. A: I do rice-mangrove integration, and I have a concern about mangroves taking space from our rice cultivation. A: We used to get mangrove wood nearby but now must go far and it is expensive. A: Women should be more involved. Y: I recommend that WABICC allow only the most active members to be invited to trainings. A: We need more training on both VSLA and mangrove restoration.

FOCUS GROUP DISCUSSION SUMMARY

Village Name	SHENGEBULL, Yawri Bay	Session Moderator	Richard
Date of FGD	4/11/19	Session Translator	Amara
Start Time	3:05pm	Number of Participants	17 (7 adults, 10 youth)
End Time	4:30pm	Male / Female FGD	Female FGD

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	<u>Purpose</u> A: WABICC first told us to make a nursery, then plant, then they will come and provide incentive. A: WABICC came recently to tell us that the evaluation team will be coming. A: WABICC came for helping to start the nursery, and for restoration transplanting. A: We will benefit from incentive. A: We shared the incentive into our club (before we had VSLA). Y: They taught us that mangroves are important for fish breeding ground.
1.1	How has WA-BICC supported community activities in this village? Which activities are so far the most successful?	A: There are 5 VSLA groups here, and WABICC provided 5 boxes. We have both men and women in the groups. A: WABICC provided training on how to do bookkeeping, make contributions, and loans. We use the loans for emergency expenditures and must pay back 20% interest. A: Some loans have gone for fish mongering and petty trading.
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	A: All 5 VSLA groups are registered with the Regional Council.
1.2	Are there any additional training needs to improve the VSLA?	Overall rating for VSLA: GOOD-EXCELLENT.
	What types of livelihood activities will the loans support?	A: WABICC provided support with training and tools for mangrove planting. They helped to identify a nursery site, one that is cool and has shade. The restoration site was an existing mangrove site.
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	A: We transplanted from the nursery when the plants had 2-5 leaves. Something like only 60% of the plants in the nursery survived. And then many of the transplanted plants died also. We did not do any monitoring or replacing of the dead plants.
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	[Note: When asked about mangrove wood use, one woman was very reluctant/afraid to admit to using mangrove wood still.]
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	A: We use mangrove wood for smoking/drying fish and we must buy wood from elsewhere. Two of the women in this community use an improved fish smoking oven, and it results in reduced wood use and cost of buying wood.
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	
1.2	Are there any additional training needs to improve restoration efforts?	
2.3	How and why did the community select the mangrove restoration site(s)?	

	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	A: We asked for IFSS and Seinya indicated there might be some possible training.
	Does your community make any rules to protect the mangroves?	A: Yes, we have bylaws against cutting. If someone is caught they must pay 100,000le in fine. Mangroves here are for wind break, and that is the purpose of the bylaws. The bylaws were in place before WABICC came here, but there was some additional training.
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	Overall rating for mangrove restoration: EXCELLENT.
	Where and how do you get your mangrove wood today?	A: There has been equal opportunity for women and men to participate in WABICC activities including training. Two women have attended training in Shenge.
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	A: We get small incentive as our benefit, this allows individuals to save for our home affairs. A: I received a loan to fund my business. A: I learned from training some new business and savings skills.
		A: We learned that the nursery did not work because when the high-tide came in it was too salty for the young plants. A: We learned that during the dry season there is a lot of salt; we decided we have to wait until the rainy season to plant. We also learned that if we take wildlings it is important to take the whole mud ball around the root.

FOCUS GROUP DISCUSSION SUMMARY

Village Name	TOMBO, Yawri Bay	Session Moderator	Richard
Date of FGD	4/6/19	Session Translator	Woudie
Start Time	12:45pm	Number of Participants	16 (11 adults, 5 youth)
End Time	2:15pm	Male / Female FGD	Female FGD

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Y: The <u>purpose</u> of WABICC is to protect the landscape, provide fisheries habitat, and protect against flooding. A: Also to improve livelihoods through microloans (VSLA), and we received <u>training</u> on mangrove nursery and VSLA.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	A: WABICC provided us with a security box to keep our money, and provided <u>training</u> in bookkeeping. Y: We received <u>training</u> on how to manage our household finances, bookkeeping, and to keep our passbook to ensure our records match those of the VSLA.
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	Y: We <u>need more skills training</u> on new livelihood activities. Y: We need education on reading and writing. A: We need refresher training on business skills. A: We receive funds for
1.2	Are there any additional training needs to improve the VSLA?	

	What types of livelihood activities will the loans support?	the VSLA from member contributions (dues) and fines for non-attendance or late payment.
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	A: With the loans I sell cold water. A: I buy and resell fish and imported goods; I also grow a vegetable garden.
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	Y: We would like to have more skills-building in tailoring, fashion, and computers.
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	The overall rating of VSLA activities is: GOOD.
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	A: Mangroves are important for fish habitat, protecting against erosion, and they supply wood for fish-smoking. A: Flood protection. A: Animal habitat, and even the mangrove flowers provide food for animals.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	A: It is necessary to restore mangroves in some areas (rather than just leave to naturally regenerate). Restoration is faster.
1.2	Are there any additional training needs to improve restoration efforts?	A: We have >120 members in our MRC (Mangrove Restoration Committee), including 70+ women.
2.3	How and why did the community select the mangrove restoration site(s)?	A: WABICC provided training for the nursery 1 time at the Regional Council Office. A: They also provided tools (shovels, knives, baskets). A: The nursery was established but no transplanting occurred because of a land ownership claim. The owner said we cannot plant there. No action was taken or followed up to resolve the tenure dispute. Since then, animals have eaten the plants in the nursery, but we want to try again.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	A: We have identified other areas to plant, but many houses are encroaching into the area.
	Does your community make any rules to protect the mangroves?	
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	A: We use less mangrove wood today than before WABICC came here. We have bylaws against mangrove cutting, and someone has been arrested and taken to Freetown. A: It is not easy for mangrove wood to be brought in from the outside, although we prefer M wood for fish-smoking (it makes the fish taste better).
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	
	Where and how do you get your mangrove wood today?	Overall rating for MR activities: Excellent.
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	A: We want to continue with livelihood activities and the VSLA. We also don't want the mangrove restoration to phase-out.
3.2	Which activities will your community continue after WA-BICC has finished?	Y: All of us – both women and youth – have had opportunity to participate in WABICC, just like with the men.
3.1	Do you think that the WA-BICC project and your community will achieve the purpose and goals that you mentioned at the beginning of this discussion?	A: However, the MRC (mangrove group) was not fully supported by WABICC. We had many members at first, but expectations were not met, so many people have dropped out. We did not get paid for our labor, for the seedlings we collected, or even any food or refreshments while we worked.
1.5	Has the WA-BICC project encouraged and supported women and youth to become involved in activities?	

	Have there been any differences in the way the project has involved women or men or youth?	There were some changes to the program from what we were first told.
	Have you personally benefited from the project, and if so in what ways?	A: Our main benefit has been training received, related to mangrove restoration and VSLA. A: Before I wasn't saving any money but now I do. A: I am eager to do more mangrove restoration as I now understand better the importance of nature. Y: We have more trust in each other as a result of working together in the VSLA. A: The mangrove restoration work is not for profit or food, so we need more livelihood options. A: Main lesson learned is that there should be more focus on alternative livelihoods. A: Livelihoods will also help decrease mangrove loss. A: Women are more involved than men, and WABICC should pay more attention to us. A: The first phase of mangrove planting was not successful and we have lost a lot; it was not beneficial to us; we need more help and financial support. A: Many of us would like adult education and literacy training. A: We need improved fish-smoking ovens – it's for our health and to reduce mangrove use. We want help so we can construct IFSS for ourselves.

FOCUS GROUP DISCUSSION SUMMARY

Village Name	MOMAYA, BSRE	Session Moderator	Richard
Date of FGD	4/13/19	Session Translator	Amara
Start Time	9:50am	Number of Participants	15 (12 adults, 3 youth)
End Time	11:30am	Male / Female FGD	Female FGD

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Y: In our first meeting, WABICC told us not to cut mangroves, but to let them protect our community from erosion. A: WABICC told us to control mangrove wood cutting, and to start a nursery. The second time they came they brought tools and we made a nursery. We decided to plant mangroves along the coast where we grow rice. A: They asked us about our priorities and challenges, and they said they can help with 1-2 challenges. We said our first challenge is an embankment and the second challenge is mangrove restoration. We also asked for a machine to process rice, and we are a fishing community so we need boat and gear. A: WABICC also spoke to us about climate change. A: There is 1 VSLA group here, and we had a similar group here before WABICC came. If we accept new members they must pay the same amount as the rest of us. A: Three people from here were sent to the VSLA training in Bonthe. A: We learned how to organize ourselves, manage money, record-keep, and how to make loans. Y: If we take a
	Is this project similar to or different than other programs that have assisted your community?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	

1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	loan of 100,000le for 3 months, we must pay interest of 10,000le per month, or a total of 30,000le for 3 months.
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	A: I used the loan for fish mongering. Y: I too used loan for fish mongering, plus school fees.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	A: WABICC had done a lot, but our main challenge is drinking water. A: We need more training here for the whole group of us, not just a few. We also need more starting capital.
1.2	Are there any additional training needs to improve restoration efforts?	Overall rating for VSLA: GOOD-VERY GOOD.
2.3	How and why did the community select the mangrove restoration site(s)?	A: WABICC helped us with our nursery with tools, training, and materials, and how to take care of the nursery. They gave us 3 months to start the nursery, then they would provide incentive. WABICC did not come back however, and we got tired and frustrated from waiting, and the plants died. A: We have weakness from WABICC. They told us to provide land for restoration. But we waited too long before they came back, then the chief decided to plant rice on the same land. WABICC was offended and left the community. Later, they came back to encourage us to do direct seeding.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	
	Does your community make any rules to protect the mangroves?	
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	Y: Only a few plants from the nursery were used for restoration. We later decided to do rice-mangrove integration and we moved to another location for restoration.
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	Y: Before WABICC, we used mangrove wood for everything. Now we change our attitude to use wood, we use less wood. We also farm and so we use more bush wood that we collect near our farms. Best wood for fish smoking is mangrove wood.
	Where and how do you get your mangrove wood today?	Y: WABICC promised to teach us IFSS but they have not yet.
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	A: With R-M-I we have challenges; WABICC promised us a small incentive but they have not yet come to give it to us. Birds eat our rice and there is no compensation. WABICC doesn't come here anymore.
1.1	Speaking about the embankment , has WA-BICC provided the necessary training and support to help make the embankment successful?	Overall rating for mangrove restoration: GOOD – VERY GOOD (but no incentive)
1.2	Are there any additional training needs to improve embankment efforts?	We had embankment before WABICC came, but it was not very strong. We experienced flooding during high-tides and storms. WABICC brought an engineer 2-3 times and they interviewed us. We built a new embankment, and so far there has been no flooding. It offers about 90% protection for the village. Y: The only challenge is we must change bags every 3 months, and we must use rice husks to block the bags (UV radiation) from getting ruined.
	How long will the embankment last before replacement is necessary?	
	How would you rate the overall success of embankment activity with WA-BICC support? [poor, fair, good, excellent]	We are happy with the embankment, but we still need assistance like training and to change the embankment to one of concrete.
1.5	Has the WA-BICC project encouraged and supported women and youth to become involved in activities?	Overall rating for embankment: GOOD.
	Have there been any differences in the way the project has involved women or men or youth?	
	Have you personally benefited from the project, and if so in what ways?	

.	As a result of the project, how will your own personal behavior or daily routine (or that of your family) be different than before?	
4.1	Are there lessons learned from the WA-BICC project that are important to include in future projects?	A: Men have more opportunity than women for participation (about 70/30). We have to sit in the back and say less. But when it is time for contributions (e.g., money for the new sand bags) contributions must be equal. A: Men are marginalizing us women. I was originally the chair of WABICC, but men make decisions about who participates and now we have a male chairperson. A: WABICC tries to get women to speak up and participate. Y: I benefit most from the VSLA loan, but we did not receive incentive for the embankment. We have knowledge to replace the embankment when needed. A: We benefit because our land will have less erosion when we do R-M-I, but the issue is still with the birds eating our rice. A: I benefitted one time when I was part of a radio discussion. Y: The embankment is our best success because we all came together to construct it, buy materials, and to maintain it. Y: We are supporting the embankment, and will continue this activity. A: Mangrove restoration was a challenge to us, but we will still try. We learned that we must transplant during the rainy season. A: Mangrove transplanting in front of the embankment is a challenge; we've tried many times and have failed so far. A: We need help with drinking water.

FOCUS GROUP DISCUSSION SUMMARY

Village Name	SAMU, Yawri Bay	Session Moderator	Richard
Date of FGD	4/11/19	Session Translator	Amara
Start Time	11:30am	Number of Participants	15 (7 adults, 8 youth)
End Time	12:45pm	Male / Female FGD	Female FGD

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	A: WABICC first explained about mangroves as a wind break, fish habitat, and more. A: We have 2 VSLA groups here, with about 20 members. But not everyone participates. Y: We contribute to the security box all the time, we save, we make loans, and we make business with the loans. A: Before the VSLA, we borrowed from our friends, but now we borrow from VSLA. A: Only one of these 2 groups has enough money to make loans. A: I use the loan money for petty trading.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	

1.2	Are there any additional training needs to improve the VSLA?	A: The 2 VSLA groups did not exist before WABICC came. Neither are yet registered. A: There has been no discussion or training about registration. A: WABICC came here 6 times since the start of the project. They came last month/Friday to tell us that the evaluation team is coming soon. Overall rating for VSLA: GOOD. [Note: These women have a very poor understanding of the VSLA purpose and how it operates. Some women said that they just contribute but don't really know about it. There is belief that when the security box reaches a certain level of savings the VSLA money will be shared among the members. Adding to the confusion, WABICC did not call a community meeting when the security boxes were delivered, but simply gave the boxes to the VSLA chair persons who asked people to come and form a group. Some community members signed on to be VSLA members but don't really understand why or the purpose of the VSLA. I also asked if any new members have joined, but was told it is difficult, as now the members have contributed money for several months, leaving the impression that new members are not allowed.] A: WABICC said to replace mangroves if there are dead ones after planting. A: For this community, after mangrove restoration we received 7 million leones to share among ourselves. But we had more people involved than there was money to share around, and many people's expectations were not met. A: We continued with restoration work but received no additional help or support. WABICC doesn't come here anymore. A: We originally received tools and training. We made a nursery but it was unsuccessful. We learned that wildlings survive better than nursery plants for transplanting. A: We use fishing nets around the mangrove roots to catch small fish. A: We use the wood for fuel, house construction, and fish smoking. Y: I use a small traditional banda. A: We had already stopped cutting mangrove before WABICC came here. We use less wood today, and more 'bush' wood. There has been no discussion with WABICC regarding decreasing our use of mangrove wood. Overall rating for mangrove restoration: GOOD. A: For me, women are marginalized here, we are always sitting at the back and not asked our opinions. Men have the last say almost always, and this has been the pattern with WABICC here too.
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	
1.2	Are there any additional training needs to improve restoration efforts?	
2.3	How and why did the community select the mangrove restoration site(s)?	
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	
	Does your community make any rules to protect the mangroves?	
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	
	Where and how do you get your mangrove wood today?	
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	
3.2	Which activities will your community continue after WA-BICC has finished?	
3.1	Do you think that the WA-BICC project and your community will achieve the purpose and goals that you mentioned at the beginning of this discussion?	

1.5	Has the WA-BICC project encouraged and supported women and youth to become involved in activities?	A: We will benefit from the mangroves when they get bigger and provide wind break for our houses. We will also have more fish. A: I benefit from the VSLA loans; it can be used for emergency purposes. A: We really appreciate this evaluation team's approach to bring women together to talk like this (with just us women); it has never happened before. A: In terms of lessons learned, the mangrove restoration was a success because of the care-taking we did, including watering and replacing dead plants. Nurseries failed because crabs ate the young plants. Wildlings survived much better. Unfortunately, we did not received any food for our work and we are hungry in the field all day. A: It would be good to have starting capital for the security box.
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FOCUS GROUP DISCUSSION SUMMARY

Village Name	Momaya (BSRE)	Session Moderator	Frederick/Abdoulaye
Date of FGD	13 th April 2019	Session Translator	Charles
Start Time	09h55	Number of Participants	15 (5<30 years; 10>30 years)
End Time	11h35	Male / Female FGD	Male

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Most community members were aware of the overall purpose of the WA BICC project. A: and Y: Participants used key words such as wildlife conservation, coastal resilience, ecosystem conservation and mangrove restoration to express this awareness.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	A: and Y: WA BICC has supported three main activities namely mangrove restoration, village savings and loans associations (VSLA) and embankment in Momaya. Of the three, the most successful was embankment as the direct impact of tidal waves on their dwellings has reduced drastically. A: and Y: VSLA was the least successful as a result limited self-initiative. There is one VSLA group consisting of 30 people. Respondents indicated that although alternative livelihoods were very important to them WA BICC had hitherto not started any such initiative in their community. This is an unmet expectation likewise the promise by WA BICC to supply community members with seed rice.
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-	

	BICC support? [poor, fair, good, excellent]	A: and Y: Three people per group were trained but further training is required on how to prepare business plans. WA BICC supported the community with VSLA boxes. A: and Y: Contributions and savings are group-specific. One group of 20 members contributes 10000 Le monthly. Typically 100,000 Le is given as loan with 10% interest repayable in 3 months. A guarantor is held liable if the borrower fails to pay the loan within the stipulated time. A: and Y: Participants were unanimous on the need for mangrove restoration rather than allow it to naturally regenerate since the latter takes too long to occur. There is interest in continuing embankment, including monitoring and evaluation beyond the project life cycle although there is concern that the loading bags are unfit to hold the structure beyond 2 years maximum. A: and Y: Site for mangrove restoration was selected because the fact that there were no past land tenure disputes on the land. They requested sustainable livelihood opportunities and skills training to enable them have a constant stream of income. A: and Y: They made a request for WA BICC to expand the scope of their activities to cover good drinking water and health facilities. There was concern by members regarding a number of unmet expectations.
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	
1.2	Are there any additional training needs to improve restoration efforts?	
2.3	How and why did the community select the mangrove restoration site(s)?	
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	

FOCUS GROUP DISCUSSION SUMMARY

Village Name	Yeliboya (Scarcies)	Session Moderator	Frederick/Abdoulaye
Date of FGD	8 th April 2019	Session Translator	Sheka
Start Time	13h30	Number of Participants	13 (All above 30 years)
End Time	14h34	Male / Female FGD	Male

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Most community members were aware of the overall purpose of the WA BICC project. A: and Y: Participants used key words such as wildlife conservation and mangrove restoration to express this awareness.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village? Which activities are so far the most successful?	A: The Ministry of Fisheries project on marine resource management (AFCOD) initiated in the community in 1992-1994 had a similar focus as the WA BICC project. A: and Y: WA BICC has supported two main activities namely mangrove restoration and village savings and loans associations (VSLA) in Yeliboya. Of the two, the more successful was VSLA as it taught them to raise funds in the community. Mangrove
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	
1.2	Are there any additional training needs to improve the VSLA?	

	What types of livelihood activities will the loans support?	restoration was not successful owing to extensive herbivory by goats, sheep and crabs.
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	A: and Y: They requested for financial assistance to purchase fencing materials. There are 6 VSLA groups here and membership ranges between 20 and 45 people. Loans were given out without interest for members to support fish mongering. Respondents indicated that although alternative livelihoods were very important to them WA BICC had hitherto not started any such initiative in their community. This is an unmet expectation. Three people per group were trained but further training is required on how to prepare business plans.
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	A: and Y: VSLA was rated as fair by participants.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	A: and Y: Mangrove restoration (MR) was rated as good.
1.2	Are there any additional training needs to improve restoration efforts?	Although 20 people were trained, it appears they still lack the skill to monitor the growth of mangroves. Participants were unanimous on the need for mangrove restoration rather than allow it to naturally regenerate since the latter takes too long to occur.
2.3	How and why did the community select the mangrove restoration site(s)?	Y: There is interest in continuing MR, including monitoring growth and replanting beyond the project life cycle although they current lack the skill for doing so.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	A: and Y: Sites for mangrove restoration were selected because these places were the most exposed to tides, winds and natural hazards.
	Does your community make any rules to protect the mangroves?	
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	A: and Y: There are NO rules for protecting mangroves and more mangrove wood was being used than before. Most of these were obtained from distances that consume up to 2 gallons of fuel to reach. Y: There are no rice farmers here. A: and Y: They requested sustainable livelihood opportunities and skills training to enable them have a constant stream of income. They made a request for WA BICC to expand the scope of their activities to cover agriculture and fisheries management.

FOCUS GROUP DISCUSSION SUMMARY

Village Name	Mahela (Scarcies)	Session Moderator	Frederick/Abdoulaye
Date of FGD	9 th April 2019	Session Translator	Sheka
Start Time	10h04	Number of Participants	15 (7<30 years; 8>30 years)
End Time	11h10	Male / Female FGD	Male

EQ	QUESTION	RESPONSE SUMMARY
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2.1	What is the overall purpose of the WA-BICC project?	Most community members were aware of the overall purpose of the WA BICC project.
	Is this project similar to or different than other programs that have assisted your community?	A: and Y: Participants used key words such as coastal resilience, mangrove restoration and climate change adaptation to express this awareness.
1.1	How has WA-BICC supported community activities in this village?	A: The Ministry of Fisheries project on marine resource management (AFCOD) initiated in the community in 1992-1994 had a similar focus as the WA BICC project.
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	A: and Y: WA BICC has supported two main activities namely mangrove restoration and village savings and loans associations (VSLA) in Mahela.
1.2	Are there any additional training needs to improve the VSLA?	A: and Y: Of the two, the more successful was VSLA as they are accumulating funds.
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	A: and Y: Mangrove restoration was not successful owing to extensive herbivory by goats, sheep and crabs.
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	A: and Y: They requested for financial assistance to purchase fencing materials.
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	A: and Y: There is 1 VSLA group with 42 members and weekly contribution of 5000 Le. Loans were given out with 20% interest for members to support fish mongering and petty trading.
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	A: and Y: Respondents indicated that although alternative livelihoods were very important to them WA BICC had hitherto not started any such initiative in their community. This is an unmet expectation. Three people per group were trained but further training is required on how to prepare business plans.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	
1.2	Are there any additional training needs to improve restoration efforts?	A: and Y: VSLA was rated as good by participants although the startup contribution was low.
2.3	How and why did the community select the mangrove restoration site(s)?	A: and Y: Mangrove restoration (MR) was rated as excellent.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	A: and Y: learnt skills on nursing seeds, soil analysis and M&E of restoration. Participants were unanimous on the need for mangrove restoration rather than allow it to naturally regenerate since encroachers will reconsider their decision once they know the level of effort they put in.
	Does your community make any rules to protect the mangroves?	
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	A: and Y: There is interest in continuing MR, including monitoring growth and replanting beyond the project life cycle as 15-30 people were trained on three separate occasions.
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	A: and Y: Sites for mangrove restoration were selected based on community consultations and also because these places were the most degraded.
	Where and how do you get your mangrove wood today?	

	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	A: and Y: There are rules for protecting mangroves and different penalties apply to indigenes and non-community members.
1.1	Speaking about the embankment , has WA-BICC provided the necessary training and support to help make the embankment successful?	A: We use more mangrove wood was being used than before. Most of these were obtained from distances that are 1.5 hours away. A: and Y: Requested sustainable livelihood opportunities and skills training to enable them have a constant stream of income. They made a request for WA BICC to expand the scope of their activities to embankments in their community. A: and Y: The promise of an embankment by WA BICC is an unmet expectation.

FOCUS GROUP DISCUSSION SUMMARY

Village Name	Kortimoh (Scarcies)	Session Moderator	Frederick/Abdoulaye
Date of FGD	8 th April	Session Translator	Sheka
Start Time	09h45	Number of Participants	15 (all over 30 years old)
End Time	11h18	Male / Female FGD	Male

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Most community members were aware of the overall purpose of the WA BICC project.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village? Which activities are so far the most successful?	A: and Y: Participants used key words such as wildlife conservation, coastal resilience, ecosystem conservation and mangrove restoration to express this awareness. A: and Y: WA BICC has supported <u>three main</u> activities namely mangrove restoration, village savings and loans associations (VSLA) and embankment in Kortimoh. Of the three, the most successful was embankment as the direct impact of tidal waves on their dwellings has reduced drastically.
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	
1.2	Are there any additional training needs to improve the VSLA?	A: and Y: VSLA was the least successful as a result limited self-initiative. There are 10 VSLA groups here. Respondents indicated that although alternative livelihoods were very important to them WA BICC had hitherto not started any such initiative in their community. This is an unmet expectation.
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	A: and Y: Three people per group were trained but further training is required on how to prepare business plans. WA BICC supported the community with VSLA boxes. Contributions and savings are group-specific. One group of 20 members contributes 10000 Le weekly. Another group of 20 members
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	

1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	contributes 10,000 Le per week. Typically 400,000 Le is given as loan with 50,000 Le interest repayable in 2 months.
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	Y: Used loans for petty trading and school fees A: Used it to support their farms.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	A: and Y: VSLA was rated as fair by participants.
1.2	Are there any additional training needs to improve restoration efforts?	A: and Y: Mangrove restoration (MR) and embankment were rated as good. A: and Y: Although 20 people were trained, it appears they still lack the skill to monitor the growth of mangroves.
2.3	How and why did the community select the mangrove restoration site(s)?	A: and Y: Participants were unanimous on the need for mangrove restoration rather than allow it to naturally regenerate since the latter takes too long to occur.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	A: and Y: There is interest in continuing MR, including monitoring growth and replanting beyond the project life cycle although they current lack the skill for doing so.
	Does your community make any rules to protect the mangroves?	A: and Y: Site for mangrove restoration was selected because the fact that there were no past land tenure disputes on the land. Three sites have so far been planted.
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	A: and Y: Although there are rules for protecting mangroves (fines up to 500,000 Le) enforcement is weak. They requested sustainable livelihood opportunities and skills training to enable them have a constant stream of income.
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	A: and Y: They made a request for WA BICC to expand the scope of their activities to cover agriculture and fisheries management.

FOCUS GROUP DISCUSSION SUMMARY

Village Name	Kafunka (SLRE)	Session Moderator	Frederick/Abdoulaye
Date of FGD	7 th April 2019	Session Translator	Sheka
Start Time	12h55	Number of Participants	15 (5<30 years; 10>30 years)
End Time	14h58	Male / Female FGD	Male

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Most community members were aware of the overall purpose of the WA BICC project.

	Is this project similar to or different than other programs that have assisted your community?	A: and Y: Participants used key words such as combating climate change, flood prevention, mangrove restoration and sustainable harvesting of mangrove species to express this awareness.
1.1	How has WA-BICC supported community activities in this village?	A: and Y: WA BICC has supported two main activities namely mangrove restoration and village savings and loans associations (VSLA) in Kafunka.
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	A: and Y: Respondents indicated that although alternative livelihoods were very important to them WA BICC had hitherto not given any attention to it. This is an unmet expectation.
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	A: and Y: They indicated that both VSLA and MR were successful owing to periodic monitoring and evaluation and that WA BICC has largely succeeded due to transparency, honesty and reliability.
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	A: and Y: Three people per group were trained but further training is required on how to prepare business and investment plans. WA BICC supported the community with VSLA boxes and 3 million Le has accrued. Two million is at bank but they are unable to access it due to technical/registration issues. 1 million in safe box. About 48 people contribute a paltry 5000 Le monthly.
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	Y: Used loans for petty trading and school fees A: Used it to support their farms. Typically 100,000 Le is given as loan with 12% interest repayable in 3 months. VSLA was rated as fair by both adult males and young males.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	
1.2	Are there any additional training needs to improve restoration efforts?	A: and Y: Mangrove restoration (MR) was rated as good A: and Y: Nurseries failed in this community.
2.3	How and why did the community select the mangrove restoration site(s)?	
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	A: and Y: They lack skills to monitor the growth of mangroves. Participants were unanimous on the need for mangrove restoration rather than allow it to naturally regenerate since the latter takes too long to occur. There is interest in continuing MR, including monitoring growth and replanting beyond the project life cycle although they current lack the skill for doing so. Site selection for mangrove restoration was based community consultation on the most degraded area in the community.
	Does your community make any rules to protect the mangroves?	
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	A: and Y: Although there are rules for protecting mangroves (fines up to 50,000 Le) enforcement is weak. A: and Y: The community uses more mangrove wood now for cooking and smoking fish. They requested sustainable livelihood opportunities and skills training to enable them have a constant stream of income.
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	
		A: and Y: They made a request for WA BICC to expand the scope of their activities to cover agricultural inputs.

FOCUS GROUP DISCUSSION SUMMARY

Village Name	Deep Eye Water (SLRE)	Session Moderator	Frederick
Date of FGD	6 th April 2019	Session Translator	Sheka
Start Time	16h45	Number of Participants	15 (6 <30 years; 9 >30 years)
End Time	17h55	Male / Female FGD	Male

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Most community members were aware of the overall purpose of the WA BICC project. A: and Y: Participants used key words such as fish/biodiversity conservation and mangrove restoration to express this awareness.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	A: and Y: WA BICC has supported two main activities namely mangrove restoration and village savings and loans associations (VSLA) in Deep Eye Water. Respondents indicated that although alternative livelihoods were very important to them WA BICC had hitherto not given any attention to it. This is an unmet expectation.
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	A: and Y: Mentioned that WHH is similar in many ways to WA BICC although it focused exclusively on forests and created livelihood opportunities for them unlike WA BICC. They said that only 3 members out of 70 people were trained at Kychom.
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	A: and Y: They needed training on how to prepare business plans since most community members are not knowledgeable and confident about the operations of saving/loan schemes.
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	A: and Y: WA BICC supported the community with VSLA boxes and this has yielded 7 million Le so far.
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	Y: They need loans to expand their brick-making business and purchase motorbikes
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	A: They intend to use the loans to furnish their carpentry shops with tools.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	A: and Y: VSLA was rated as good by both groups.
1.2	Are there any additional training needs to improve restoration efforts?	A: and Y: Mangrove restoration (MR) was rated as excellent by both groups. WA BICC gave 45 members 5.5 million Le to share as part of the mangrove restoration and provided planting and safety materials to support MR.
2.3	How and why did the community select the mangrove restoration site(s)?	A: and Y: Participants were unanimous on the need for mangrove restoration rather than allow it to naturally regenerate since the latter takes too long to occur. There is interest in continuing MR,

	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	including monitoring growth and replanting beyond the project life cycle.
	Does your community make any rules to protect the mangroves?	A: and Y: Rice-mangrove integration was considered good as it served to protect fields from high tidal waves and mangrove provides manure and prevents debris from reaching the fields.
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	A: and Y: Ownership of land in the community is not always clear. Land and land tenure as well as political issues recur in the community, which were a source of frustration for a section of the respondents.
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	A: and Y: Site selection for mangrove restoration was based on where fish enter the estuary for breeding. Two trainings were organized by WA BICC. Although there are rules for protecting mangroves (fines up to 500,000 Le) but enforcement is weak.
	Where and how do you get your mangrove wood today?	A: and Y: The community uses less mangrove wood than in the past and obtains this from the Port Loko District.
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	A: and Y: They requested sustainable livelihood opportunities and skills training to enable them have a constant stream of income.

FOCUS GROUP DISCUSSION SUMMARY

Village Name	Bonthe (BSRE)	Session Moderator	Frederick/Abdoulaye
Date of FGD	13 th April 2019	Session Translator	Charles
Start Time	14h05	Number of Participants	14 (7<30 years; 7>30 years)
End Time	15h13	Male / Female FGD	Male

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	<i>Most community members were aware of the overall purpose of the WA BICC project.</i>
	Is this project similar to or different than other programs that have assisted your community?	Y: Participants used key words such as erosion control, flood mitigation and mangrove restoration to express this awareness.
1.1	How has WA-BICC supported community activities in this village?	A: They used key words such as environmental protection and disaster prevention
	Which activities are so far the most successful?	A and Y: WA BICC has supported two main activities namely mangrove restoration and village savings and loans associations (VSLA).
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	A: VSLA more successful
1.2	Are there any additional training needs to improve the VSLA?	Y: Mangrove restoration more successful
	What types of livelihood activities will the loans support?	

	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	A: and Y: Respondents indicated that although alternative livelihoods were very important to them WA BICC had hitherto not given any attention to it. This is an unmet expectation.
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	A: and Y: VSLA loans used to buy fishing nets, petty trading A: Land use conflict is imminent as the local council has unilaterally taken over a mangrove restoration site for development.
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	There are 4 VSLA groups involved in the FGD (Nyandio, Bongoma, Bonthe Central, Bonthe Municipal).
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	Y: Thirty people were trained; 3 per group for the VSLA.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	A: and Y: received MR training at York Island. We received safety apparel e.g., boots as well as tools for mangrove restoration
1.2	Are there any additional training needs to improve restoration efforts?	A: Benefits of healthy mangroves—building construction, oyster breeding, erosion control
2.3	How and why did the community select the mangrove restoration site(s)?	Y: Benefits of healthy mangroves—erosion control, wind breaks, temperature regulation
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	A and Y: Mangrove restoration better than natural regeneration as the latter is slower and may occur at undesirable location
	Does your community make any rules to protect the mangroves?	A: and Y: Rice-mangrove integration is beneficial/sustainable A: and Y: community consultation was done to select the locations for mangrove planting
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	A: and Y: We have rules that protect the mangroves from being cut
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	A: and Y: We use less mangrove wood than the prior to WA BICC era A: and Y: WA BICC will achieve its target
	Where and how do you get your mangrove wood today?	Y: VSLA has made me more responsible in terms of the need to save money
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	A: and Y: Microfinance initiatives to assist us with fishing nets, canoes and boats

FOCUS GROUP DISCUSSION SUMMARY

Village Name	Samu (Yawri)	Session Moderator	Frederick/Abdoulaye
Date of FGD	11 th April 2019	Session Translator	Charles
Start Time	11h32	Number of Participants	15 (6<30 years; 9>30 years)

End Time	12h50	Male / Female FGD	Male
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EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Most community members were aware of the overall purpose of the WA BICC project.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village? Which activities are so far the most successful?	A: and Y: Participants used key words such as flood mitigation, environmental protection and mangrove restoration to express this awareness.
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	A: and Y: WA BICC has supported two main activities namely mangrove restoration and village savings and loans associations (VSLA) in Samu.
1.2	Are there any additional training needs to improve the VSLA?	A: and Y: Respondents indicated that although alternative livelihoods were very important to them WA BICC had hitherto not given any attention to it. This is an unmet expectation.
	What types of livelihood activities will the loans support?	A: and Y: They suggested that MR was successful owing to periodic monitoring and evaluation.
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	A: and Y: Fifteen people were trained thrice but further training is required on how to prepare business plans. WA BICC supported the community with VSLA boxes and monthly savings of 20000 Le are contributed by 29 members. About 1.5 million saved so far.
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	Y: Used loans for petty trading and school fees
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	A: Used it to support their farms. Typically 200,000 Le is given as loan with 10% interest repayable in 2 months.
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	A: and Y: VSLA was rated as excellent by both adult males and young males.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	A: and Y: Mangrove restoration (MR) was rated as good by both the youth and adults.
1.2	Are there any additional training needs to improve restoration efforts?	A: and Y: Participants were unanimous on the need for mangrove restoration rather than allow it to naturally regenerate since the latter takes too long to occur.
2.3	How and why did the community select the mangrove restoration site(s)?	A: and Y: There is interest in continuing MR, including monitoring growth and replanting beyond the project life cycle although they current lack the skill for doing so. Site selection for mangrove restoration was not systematic and based on trial and error. Although there are rules for protecting mangroves (fines up to 50,000 Le) enforcement is weak. The community uses mangrove wood for building construction, cooking and smoking fish. No rice-mangrove integration in this community.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	
	Does your community make any rules to protect the mangroves?	
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	A: and Y: They requested sustainable livelihood opportunities and skills training to enable them have a constant stream of income.
	How would you rate the overall success of the mangrove restoration	

	activity with WA-BICC support? [poor, fair, good, excellent]	A: and Y: They made a request for WA BICC to expand the scope of their activities to cover health facilities, schools and good drinking water.
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FOCUS GROUP DISCUSSION SUMMARY

Village Name	Mamamki (SLRE)	Session Moderator	Frederick/Abdoulaye
Date of FGD	7 th April 2019	Session Translator	Sheka
Start Time	09h22	Number of Participants	15 (8<30 years; 7>30 years)
End Time	11h00	Male / Female FGD	Male

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Most community members were aware of the overall purpose of the WA BICC project.
	Is this project similar to or different than other programs that have assisted your community?	A: and Y: Participants used key words such as climate adaptation and mangrove restoration to express this awareness.
1.1	How has WA-BICC supported community activities in this village?	A: and Y: WA BICC has supported two main activities namely mangrove restoration and village savings and loans associations (VSLA) in Mamamki. Respondents indicated that although alternative livelihoods were very important to them WA BICC had hitherto not given any attention to it. This is an unmet expectation. A: Mentioned that government brought the Chinese to construct cold rooms for them to preserve fish. A: and Y: They suggested that both VSLA and MR were successful owing to periodic monitoring and evaluation and that WA BICC has largely succeeded due to transparency, honesty and reliability. A: and Y: Three people per group were trained but further training is required on how to prepare business plans. A: and Y: WA BICC supported the community with VSLA boxes and weekly savings of 2000 Le are contributed by 31 members. Y: Used loans for petty trading and school fees A: Used it to support their farms. Typically 100,000 Le is given as loan with 20% interest repayable in 3 months. VSLA was rated as excellent by both adult males and young males. A: and Y: Mangrove restoration (MR) was rated as excellent by both the youth and adults.
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	
1.2	Are there any additional training needs to improve restoration efforts?	

2.3	How and why did the community select the mangrove restoration site(s)?	A: and Y: Nurseries failed in this community. They lost about 10,000 polythene bags as the roots penetrated the soil and made uprooting very difficult. Now they practice direct planting. They lack skills to monitor the growth of mangroves. A: and Y: Participants were unanimous on the need for mangrove restoration rather than allow it to naturally regenerate since the latter takes too long to occur. There is interest in continuing MR, including monitoring growth and replanting beyond the project life cycle although they current lack the skill for doing so. A: and Y: Site selection for mangrove restoration was based on the location where wind direction landwards was highest. Although there are rules for protecting mangroves (fines up to 500,000 Le) enforcement is weak. The community uses inland wood and not mangroves for cooking and smoking fish. Rice farms were inland not at the shoreline. A: and Y: They requested sustainable livelihood opportunities and skills training to enable them have a constant stream of income. They made a request for WA BICC to expand the scope of their activities to cover health facilities, schools and good drinking water.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	
	Does your community make any rules to protect the mangroves?	
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	

FOCUS GROUP DISCUSSION SUMMARY

Village Name	Shengebull (Yawri)	Session Moderator	Frederick/Abdoulaye
Date of FGD	11 th April 2019	Session Translator	Charles
Start Time	15h08	Number of Participants	13(1<30 years; 12>30 years)
End Time	16h35	Male / Female FGD	Male

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Most community members were aware of the overall purpose of the WA BICC project. A: and Y: Participants used key words such as flood prevention, erosion control and mangrove restoration to express this awareness.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	A: and Y: WA BICC has supported two main activities namely mangrove restoration and village savings and loans associations (VSLA) in Shengebull.
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	Respondents indicated that although alternative livelihoods were very important to them WA BICC had hitherto not given any attention to it. This is an unmet expectation. A: and Y: They suggested that VSLA was more successful owing to the involvement of most community members and regular
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	

	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	contributions. Twenty-five people trained only once so further training is required on how to prepare business plans. WA BICC supported the community with VSLA boxes. The community received 5 million Le from WA BICC as part of MR and this served as startup contribution for their VSLA. This reflects self-initiative and trust among the community.
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	A: and Y: There are 5 VSLA groups of 40, 45, 68, 55 and 32 members, respectively. Individuals belong to multiple groups. Each of these groups has operated for 1 year 3 months. Monthly savings of 20000 Le are contributed by members. Whereas the youth used loans for petty trading and school fees adults used it to support their farms.
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	A: and Y: VSLA was rated as good by both adult males and young males likewise MR. Participants were unanimous on the need for mangrove restoration rather than allow it to naturally regenerate since the latter takes too long to occur.
1.2	Are there any additional training needs to improve restoration efforts?	
2.3	How and why did the community select the mangrove restoration site(s)?	A: and Y: There is interest in continuing MR, including monitoring growth and replanting beyond the project life cycle although they current lack the skill for doing so.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	
	Does your community make any rules to protect the mangroves?	A: and Y: Site selection for mangrove restoration was based on the location where wind direction landwards was highest. There are rules for protecting mangroves where cutting is prohibited 1 mile between the river and bush. A 50000 le fine applies to those who infringe on this regulation. It is unclear if any individual has previously been sanctioned. A: and Y: The community uses less mangrove wood for cooking and smoking fish as well as building construction. They requested sustainable livelihood opportunities and skills training to enable them have a constant stream of income. They made a request for WA BICC to expand the scope of their activities to cover improved cook stoves.

FOCUS GROUP DISCUSSION SUMMARY

Village Name	Tombo (Yawri)	Session Moderator	Frederick/Abdoulaye
Date of FGD	6 th April 2019	Session Translator	Sheka
Start Time	13h02	Number of Participants	14 (4 <30 years; 10 >30 years)
End Time	14h17	Female/Male FGD	Male

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Most community members were aware of the overall purpose of the WA BICC project.

	Is this project similar to or different than other programs that have assisted your community?	A: Sustainability is the overall purpose Y: Biodiversity conservation, carbon sequestration; climate change adaptation; sustainability, mangrove loss reduction, storm surge reduction were used to indicate the overall purpose. A: and Y: WA BICC has supported two main activities namely mangrove restoration and village savings and loans associations (VSLA) in Tombo. A: and Y: WA BICC is similar to Wetlands International did in Tombo A: and Y: Respondents indicated that although alternative livelihoods were very important to them WA BICC had hitherto not given any attention to it. They said that they needed training on how to prepare business plans and add value to the products they sell and alternative livelihoods including carpentry, driving and computer skills in order to shift their dependence on mangrove to complementary income sources. A: and Y: WA BICC supported the community with VSLA boxes and this enabled women to receive loans for fish mongering, preservation and processing. A: VSLA was rated fair Y: VSLA was rated good A: Mangrove restoration (MR) was rated very poor Y: Mangrove restoration was rated poor. These ratings appear inconsistent with the positive descriptive of the two activities by respondents. A: WA BICC provided us with seeds/propagules for MR Y: We received no training nor seeds from WA BICC Y: We need 2-3 day training to learn the process needed for successful and sustainable restoration A: and Y: Participants were unanimous on the need for mangrove restoration rather than allow it to naturally regenerate since the latter takes too long to occur. A: and Y: There is interest in continuing MR, including monitoring growth and replanting beyond the project life cycle. Ownership of land in the community is not always clear. Land and land tenure as well as political issues recur in the community, which were a source of frustration for a section of the respondents.
1.1	How has WA-BICC supported community activities in this village?	
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	
1.2	Are there any additional training needs to improve restoration efforts?	
2.3	How and why did the community select the mangrove restoration site(s)?	
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	
	Does your community make any rules to protect the mangroves?	
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	
	Where and how do you get your mangrove wood today?	
	How would you rate the overall success of the mangrove restoration	

	activity with WA-BICC support? [poor, fair, good, excellent]	A: and Y: Site selection for mangrove restoration was based on where fish enter the estuary for breeding. Twenty-five community members were trained by WA BICC. The youth and adults have 3 million and 10 million Le as target by for their VSLA activities. Although there are rules for protecting mangroves enforcement is weak. A: and Y: The community uses less mangrove wood than in the past and obtains this from as far as the Momaya District. A: and Y: They requested cold rooms for fish storage to forestall/reduce the use of mangrove wood to preserve fish.
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FOCUS GROUP DISCUSSION SUMMARY

Village Name	Yagoi (BSRE)	Session Moderator	Frederick/Abdoulaye
Date of FGD	12 th April 2019	Session Translator	Charles
Start Time	14h28	Number of Participants	15 (10<30 years; 5>30 years)
End Time	16h25	Male / Female FGD	Male

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	Most community members were aware of the overall purpose of the WA BICC project. A: and Y: Participants used key words such as habitat protection, environmental protection and mangrove restoration to express this awareness. A: and Y: WA BICC has supported two main activities namely mangrove restoration and village savings and loans associations (VSLA) in Yagoi. A: The RAP SL program on manatee, crocodile, and sea turtle conservation had a similar focus as WA BICC. A: and Y: Respondents indicated that although alternative livelihoods were very important to them WA BICC had hitherto not given any attention to it. This is an unmet expectation. A: and Y: They suggested that both VSLA was more successful because of the money element whereas participants from Keiga averred that MR was more successful as their VSLAs originated from the MR initiative. A: and Y: Three people were trained but they received no financial support. WA BICC supported the community with VSLA boxes and monthly savings of 20000 Le are contributed by 33 members of which 19 are women. Typically 100,000 Le is given as loan with 10% interest repayable in 1 month. Maximum
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	
	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	

	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	loan was 600,000 Le. Women were given priority in loan acquisition.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	A: and Y: VSLA was rated as good by both adult males and young males.
1.2	Are there any additional training needs to improve restoration efforts?	A: and Y: Mangrove restoration (MR) was rated as good by both the youth and adults. Nurseries failed in this community.
2.3	How and why did the community select the mangrove restoration site(s)?	A: and Y: Participants were unanimous on the need for mangrove restoration rather than allow it to naturally regenerate since the latter takes too long to occur. Y: There is interest in continuing VSLA beyond the project life cycle. Site selection for mangrove restoration was based on available land and where wind speed was highest. Although there are rules for protecting mangroves (fines up to 500,000 Le) enforcement is weak.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	
	Does your community make any rules to protect the mangroves?	A: and Y: They requested sustainable livelihood opportunities and skills training to enable them have a constant stream of income. They made a request for WA BICC to expand the scope of their activities to cover agriculture (seeds, fertilizer) since it is the predominant livelihood in the community.

FOCUS GROUP DISCUSSION SUMMARY

Village Name	Saseyek (Scarcies)	Session Moderator	Frederick/Abdoulaye
Date of FGD	9 th April 2019	Session Translator	Sheka
Start Time	13h26	Number of Participants	14 (all above 30 years)
End Time	14h25	Male / Female FGD	Male

EQ	QUESTION	RESPONSE SUMMARY
2.1	What is the overall purpose of the WA-BICC project?	By far, Saseyek is the most vulnerable of the communities that the team visited. The encroachment of tidal waves and susceptibility to flooding was marked. Most community members were aware of the overall purpose of the WA BICC project.
	Is this project similar to or different than other programs that have assisted your community?	
1.1	How has WA-BICC supported community activities in this village?	A: and Y: Participants used key words such as coastal resilience and mangrove restoration to express this awareness. A: The Ministry of Fisheries project on marine resource management (AFCOD) initiated in the community in 1992-1994 had a similar focus as the WA BICC project.
	Which activities are so far the most successful?	
1.1	Speaking about VSLA , what training and support has WA-BICC provided to help make the VSLA successful?	A: and Y: WA BICC has supported two main activities namely mangrove restoration and village savings and loans associations (VSLA) in Saseyek. Of the two, the more successful was VSLA as they are accumulating funds. Mangrove restoration was not
1.2	Are there any additional training needs to improve the VSLA?	
	What types of livelihood activities will the loans support?	

	Has WA-BICC encouraged or supported any particular kind of livelihood activities?	successful owing to extensive herbivory by goats, sheep and crabs. They requested for financial assistance to purchase fencing materials.
	How would you rate the overall success of the VSLA activity with WA-BICC support? [poor, fair, good, excellent]	A: and Y: There are 2 VSLA groups with 16 and 14 members, respectively. No loans have been disbursed yet. Respondents indicated that although alternative livelihoods were very important to them WA BICC had hitherto not started any such initiative in their community. This is an unmet expectation.
1.1	Speaking about mangroves , what benefits does the community receive from healthy mangroves?	A: and Y: Three people per group were trained but further training is required on how to prepare business plans.
	In your community, is it necessary to restore mangroves that have been lost, or will they grow back naturally?	A: and Y: VSLA was rated as fair by participants as the startup contribution was low.
	Has WA-BICC provided the necessary training and support to help make restoration efforts successful?	A: and Y: Mangrove restoration (MR) was rated as fair.
1.2	Are there any additional training needs to improve restoration efforts?	A: and Y: They learnt skills on nursing seeds and how to restore mangroves. Participants were unanimous on the need for mangrove restoration rather than allow it to naturally regenerate since in the case of the latter it may grow far from the community or in an unwanted location. There is interest in continuing MR, including monitoring growth and replanting beyond the project life cycle.
2.3	How and why did the community select the mangrove restoration site(s)?	A: and Y: Two sites for mangrove restoration were selected based on community consultations with WA BICC subsequent to soil suitability assessment.
	As a rice farmer, will mangrove restoration along the shoreline help sustain your production and profit?	A: and Y: Rice-mangrove integration is supported here because mangrove reduces the speed of the water to paddy fields and provides shade for rice. There are rules for protecting mangroves and penalty of 100,000 Le applies to infringements.
	Does your community make any rules to protect the mangroves?	Y: Community members indicated that they use more mangrove wood now than before but
1.4	Did the WA-BICC project help to change any of the rules, and if so is there full support for the rules?	A: the chief disputed this and said fish catch had dwindled and so wood used in preserving fish had correspondingly reduced compared to the past. Most of these were obtained from distances that are 1.5 hours away.
	Does your community use today the same, more, or less mangrove wood than before the WA-BICC project started?	A: and Y: They requested sustainable livelihood opportunities and skills training to enable them have a constant stream of income. They made a request for WA BICC to expand the scope of their activities to embankments in their community.
	Where and how do you get your mangrove wood today?	
	How would you rate the overall success of the mangrove restoration activity with WA-BICC support? [poor, fair, good, excellent]	
1.5	Has the WA-BICC project encouraged and supported women and youth to become involved in activities?	

SUMMARY OF FOCUS GROUP DISCUSSIONS DISAGGREGATED BY AGE AND GENDER

Perception of Overall Purpose of WA BICC, Nature and Scope of activities and Lessons Learned	
Adult Males (men 30 years or older)	Adult Females (women 30 years or older)
• Wildlife conservation; coastal resilience, mangrove restoration; environmental protection; disaster prevention; erosion and flood control; sustainability • Land use conflict arising from tenure issues persist • Mangrove restoration site selection based on fish entry point to estuary for breeding; absence of land use/tenure conflicts • Rice-mangrove integration is good and advantageous • Alternative livelihoods is important • Microfinance scheme is required to assist with the purchase of fishing nets, boats, canoes, carpentry tools, etc. • Inputs such as seeds and fertilizer are required to support agriculture	• Biodiversity conservation; mangrove restoration • WA BICC supported them with equipment, tools and training • Use VSLA loans for petty trading, fish mongering, cooking utensils • WA BICC program expectations were met • mangroves are cut for salt making • Collecting propagules is very hard • Communities are more united through WA BICC activities • Delay in delivering assistance for mangrove restoration is frustrating • Our traditional cook stoves (banda) still use fuel wood • Fish stocks are still declining • More bags are needed for embankment • Women have equal opportunity to participate in activities • Providing potable drinking water is important
Youth Males (men less than 30 years)	Youth Females (women less than 30 years)
• Storm surge reduction; carbon storage; climate adaptation; habitat protection; biodiversity conservation • Need loans to expand business: brick-making, motorbikes • Although rules for mangrove conservation exist enforcement is weak • We need improved cook stoves • WA BICC should expand scope of activities to cover agricultural inputs • Need health facilities, schools, good drinking water	• Mangrove protects against wind and wave, erosion and flooding; mangroves serve as habitat for fish and other animals; mangrove elevate the land • WA BICC trained us in nursery and transplanting techniques • WA BICC trained us in book keeping, business start-up and how to operate the savings box • Women have equal opportunity to participate in WA BICC • Only few and same people invited for training by WA BICC • Criteria for selecting participants for training are not transparent • More skills (re)training are required

ANNEX 9: FINDINGS, CONCLUSIONS, RECOMMENDATIONS (FCR) TABLE

Findings	Conclusions	Recommendations
Objective I To evaluate progress toward meeting activity objectives		
1.1 To what extent are communities adopting the core WA BICC activities, and what are their perceived achievements to date? What evidence is there for community self-initiative, investment (time, labor, money), and engagement (consultation, decision-making, partnership) in achievements to date? What do individuals say about the achievements to-date of the core WA BICC activities? Are they generally positive and prideful about them? Do they think more should have been accomplished by now? Reasons for achievement or non-achievement? How is the quality, effectiveness, and suitability of the different activities perceived by beneficiaries within selected sites? Do beneficiaries identify any strengths or weaknesses of the core activities based on technical merits of design, quality, or effectiveness?		
• The program established or strengthened more than 75 Village Savings and Loan Associations (VSLAs) • The program developed or adapted training materials on topics such as financial management, leadership, and gender for VLSA community organizations • Support was provided for VSLAs with emphasis on registration of farmers associations and existing VSLAs • An assessment of the VSLAs was conducted and 55% of respondents indicated that loan recovery rate of 52% was very good. • 60% of the 78 VSLA groups reported having a constitution and bylaws governing their groups • 68% of 2,597 VLSA members are female • VSLA loans are going mostly for petty trading, fish mongering, household goods, school fees, etc.	• Involvement of local and national actors is critical to community ownership of WA BICC led initiatives, processes and outcomes as well as long term sustainability of conservation activities • Given the endemic poverty in the SLCLC, the VSLA and its associated enterprises has the potential to reduce poverty and by extension reduce persistent dependence on mangroves as solid fuel • The program focus on VSLA to the exclusion of tangible support or encouragement for alternative or supplemental forms of livelihoods is a missed opportunity • Despite the high number of female members, the proportion of women in decision-making positions in the VLSAs is not clear • The lack of criteria of any kind for how VSLA loan money can be used allows the potential for unintended consequences (e.g., illegal fishing nets) and a missed opportunity for encouraging positive livelihoods such as conservation enterprises • The reported loan recovery rate of 52% cannot be said to be a strong indication of success	• Given that default in loan repayment is typically high in low income settings as the SLCLC, there is the need to strengthen the mechanisms of loan retrieval and incentivize individuals and groups who repay on time as a means to motivate others to follow suit • The program should conduct refresher training on all aspects of the VSLA; the trainings should be conducted in each village and allow for any interested new members to attend • VSLA bylaws should be evaluated and mechanisms considered for allowing new members to join a VSLA group at any time without be subject to exorbitant contribution amounts • The program should conduct a programmatic review/assessment by a senior level technical and management team; the team should visit each of the 26 target communities for the purpose of listening to community frustrations and reaching agreement with each community on what the program will

• Some VSLA loans have been used to purchase illegal (small-mesh) fishing nets • Several VSLA members expressed frustration that only a select few had been allowed to attend training, which was conducted at a remote location • None of the VSLAs appear to have mechanisms which would allow new members to join (without paying the full allotment that others have already contributed) • Mangrove Restoration Committees (MRCs) have been established in every community; volunteers work in mangrove nurseries and in transplanting • 57 individuals from the Bonthe Nature Club were actively involved restoring degraded mangrove areas in FY17 • A high percentage of mangrove nurseries failed entirely or partially, due to a combination of factors (poor site selection, animal herbivory, delayed re-visit from program staff and thus lost interest by volunteers) • A high percentage of transplantation sites have also failed for similar reasons • The program reports that 10ha of mangroves have been restored to-date • There is palpable frustration in many communities over expectations not met regarding mangrove restoration	• The absence of mechanisms to allow new members to join the VSLAs is a significant shortcoming of the approach • Improved understanding of the value and many important benefits of mangroves is an important component of coastal resiliency • Establishment of community mangrove nursery should not be considered in all contexts and for all purposes • There are many factors that must be considered in site selection, species selection, and during transplantation and follow-up monitoring; there can be no delays in the required steps • The frustrations felt by MRCs and their volunteers over not receiving promised incentive funding or equipment is symptomatic of a lack of true 'ownership' by the communities of the importance of doing the restoration work in the first place; incentive funds should not be the primary reason that volunteers participate • Mangrove cutting will likely continue in unabated fashion and at either the same or increasing rate until the open access nature of the resource has been curtailed; this will require tenure over the resource (either by communities or possibly by individuals) • The program has missed an important opportunity to help reduce demand for mangrove wood by not moving quickly and systematically on a program to introduce more efficient use of wood (e.g., improved fish smoking ovens, cook stoves, etc.) • Restoration sites must have a clearly stated objective that is of interest to the community; the community must be fully invested in the restoration work for the non-monetary benefits that will be received in the medium and longer-term	provide and what is expected of each community for the remainder of the program • Mangrove restoration work should continue in only those sites where there is a clear objective established and for which the community is fully engaged and self-interested in completing the restoration work; the use of incentive funds as cash for labor should be re-considered for the potential the practice has to instill mistrust and conflict, and the potential it has to undermine real community support for and ownership of the restoration work • No additional work should be undertaken on mangrove nurseries; only direct seeding of mangroves during the rainy season (June/July/August) should be undertaken • The program should make every effort to ensure that all restoration work for the remainder of the program is successful; that will require close technical oversight and assistance in site selection • Monitor closely the success or failure of the 2 embankments to evaluate the degree of physical protection provided to the community; have the engineer responsible for design to re-visit and evaluate adequacy and any modifications needed
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work and the promised incentive funding to volunteers • Several communities have given up on their nursery and/or restoration sites because they have not received the promised incentive funds • Communities have been told by program staff that they should approach mangrove restoration “as a business”; but the business case for such a claim is not supportable in practice or understood by community members • Mangrove wood use continues unabated today, although cutting has been pushed farther afield; it remains an ‘open access’ resource, and demand for mangrove wood does not appear to have been reduced by any significant amount (and in fact appears to be increasing in areas where fish landings are growing (Yeliboya) • Embankment activities at the two target communities are well received; there is strong support for the new protection, although some concerns that repairs and maintenance will be an ongoing process • The embankments benefit some 5250 people in the two communities • The Kortimoh community is expecting more program assistance and incentive funding to allow completion of their embankment • The community at Hangin Site is attempting to emulate the low-cost embankment design prototyped at	• Embankments that use low-cost and locally available materials can play an important role in coastal resilience • Design considerations remain paramount and replication and scale-up will still require site-specific engineering consultation • Low cost embankments may not be the most appropriate technique in all cases • The Hangin Site embankment is exposed to extremely high wave energy and may require different methodology	
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Momaya; they are doing this at their own expense and without program support		
1.2 To what extent is WA BICC succeeding in building the capacity of local communities to participate and take ownership of activities? How do beneficiaries within local communities rate themselves on improved knowledge, skills, and attitudes (KSA) as a result of WA BICC activities? How does WA BICC identify and target capacity-building needs for local communities? (Is it demand-driven or supply-driven, top-down or bottom-up, or a mix?) What additional C-B needs do the communities say they need?		
• 191 community members (135 men and 56 women) were trained on "Community land and resources use mapping and planning" • 413 people (276 men and 137 women) were trained on "mangrove seeds and propagule identification and establishment of nurseries for mangrove restoration" • 59 local leaders (48 men and 11 women) members of the Traditional Chiefs Network were trained on the sustainable management of coastal resources • Six community-level workshops were implemented where more than 308 participants attended from 28 villages within the four coastal sites • A total of five clustered community-level Ecosystem Mangrove Restoration (EMR) training workshops - involving 24 communities - were attended by 414 participants, of which 33% were women, including twelve from government institutions • Twenty-four communities established mangrove nurseries and over 51,800 propagules/seeds of	• It is clear that the program has designed and implemented valuable training and other capacity-building for stakeholders at all levels – regional, national, and local • In particular, there appears to have been strong growth in knowledge related to the values and benefits from healthy mangrove ecosystems and the importance of the unique challenges of coastal community resilience • For those attending, the trainings have been universally well received and appreciated, with high marks given to program staff for the overall organization, logistics, and content of the trainings • For those not attending at the community level, there are lingering frustrations at having been left out of trainings (e.g., for VSLA members and/or MRC members at the community level) • It is unclear if any individuals were trained multiple times or each individual was restricted to only one training or not. For instance, did some individuals benefit from both land resource mapping and mangrove seed identification? • Therefore, it is difficult to isolate the effect of single training on behavior change from the effect of multiple trainings • The initiation and management of enterprises by communities is critical to making them	• Efforts are needed to assess the number and distribution of successful and unsuccessful enterprises across the SLCLC, and to co-develop with the private sector strategies to streamline/improve the operations of the enterprises • The program should consider how best to provide capacity-building for supporting institutions, and training for local communities, to begin the diversification and scaling-up of alternative and supplemental livelihoods • The program should consider, in concert with an appropriate national ministry, to convene a "coastal enterprise incubation workshop" focused on identifying and incentivizing private sector opportunities in rural coastal communities • The program should consider ways to utilize VSLAs in the adoption and expansion of appropriate technologies; for example, could the VSLAs be utilized as a conduit to provide subsidized improved cook stoves and/or fish smoking ovens to their members

white and red mangrove species were planted • 480 (330 males, 150 females) community stakeholders were mobilized to increase their awareness in climate change impact mitigation and coastal resilience in communities living in the Sierra Leone Complex Landscape • 68 (47 males, 21 females) coastal community farmers in the SLCLC were mobilized to increase their awareness in the integration of mangroves into rice farming • The program conducted a user profile and information gaps assessment of climate information services and decision-support systems in West Africa and conducted capacity building for key regional and national institutions • A draft Knowledge, Attitudes, and Behavior document was developed for WA BICC target audience • A 24-episode radio drama series on coastal issues and solutions has been prepared to promote education and behavior change for listeners in the coastal area; it will launch in May 2019	independent, resourceful, and building their capacity and entrepreneurial skills beyond life of project • There is strong latent interest and desire for training and skills-building related to business development and management • There is strong interest and desire for training related to improved fish smoking ovens, for not only cost-saving but also for improved health impacts	• Building partnerships and identifying private sector opportunities should be undertaken in concert with strengthening the governance and policy framework to ensure there is regulatory, financial, technical, and political support and appropriate incentives for private sector engagement.
I.3 To what extent is WA BICC succeeding in building the capacity of government authorities and other organizations to effectively support, manage, monitor and sustain the activities? What KSA do partner authorities and organizations feel they have gained that have improved their ability to perform their duties and functions? How does WA BICC identify and target capacity-building needs for partner authorities and organizations? What additional C-B needs do the authorities/organizations say they need?		
• Several government institutions in SL are involved in the program, including MAFFS, NPAA, EPA, MFMR, Land and Country Planning,	• Training and institutional strengthening for both regional and national institutions is central to the overall success and sustainability of WA BICC	• CCNRMN is an important platform for shared learning on mangrove conservation and restoration within and across intervention communities, and an

Local Governance and Rural Development, and Meteorological Agency • Regional training has been provided to both regional and national institutions on such topics as climate information services, vulnerability assessment, organizational capacity, and carbon content analysis of forests and mangroves • Efforts have been made to include policy makers in regional training to directly enhance practice-policy linkages and uptake • Training was provided to meteorological services organizations related to the production and management of relevant climate information • The program established the Coastal Chiefdoms Natural Resources Management Network (CCNRMN) • CCNRM includes 38 individuals from national institutions, local councils and 22 chiefdoms spanning the SLCLC • An organizational assessment and capacity strengthening was provided for the CCNRM • The CCNRM is strongly supported as a necessary coordination/communication platform for coastal communities • It is not clear to what extent the program has plans for continuation of the CCNRM or to ensure its sustainability; the Network appears to be dormant •	• CCNRMN is an important platform for shared learning on mangrove conservation and restoration within and across intervention communities, and an important communication platform relating to weather or emergency events • The total number of trainings, number of people trained, the organizations from which participants were drawn, and how trainees were selected is unclear • Science-policy dialogue will likely be enhanced when policymakers and practitioners are trained together • Organizational capacity assessment is important and should be institutionalized as a process to be updated at regular intervals; but follow-up with findings and efforts to fill key gaps is equally important • Additional training is expressed by all national institutional partners; there is a strong desire for more technical training in all related disciplines	important communication platform relating to weather or emergency events • Pre/post assessment of trainee knowledge and skills is needed to ascertain impact of training • Follow-up assessment and other efforts to track the usefulness and influence of practitioner training on trainees and their institutions would be desirable • The program should re-assess its findings from the organizational capacity assessments conducted for key institutional partners and consider how best to close the feedback and information gap that exists
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● The program trained 61 members of the CCNRMN on sustainable ecosystem management, and over 400 community members from 24 communities on ecosystem mangrove restoration (EMR) to increase resilience to climate change ● The program assisted the regional Program on Coastal and Marine Areas (PRCM) in co-sponsoring a learning exchange day for practitioners, policymakers, and researchers working on mangrove management ● Staff from three institutions – NPAA and the Universities of Njalla and Fourah Bay –were trained and have increased capacity on conducting Climate Change Vulnerability Assessments ● Staff from a few SL ministries indicated that the program conducted an organizational capacity assessment early in the program, but then did not follow-up with findings or any capacity-building of related to their specific institution		
1.4 To what extent are WA BICC efforts leading to the development and implementation of mangrove management plans at the local level? Is the process and timeline to develop mangrove management plans understood and supported by key stakeholders? Has indigenous knowledge and local practice been incorporated? Have any of the plans been adopted or has the implementation of any actions begun? Do the management plans have support, or are key stakeholders expressing any concerns? If so, what concerns and how are they addressed?		

• The program has begun laying the groundwork for community co-management of mangrove resources through its various education campaigns and trainings for those involved in mangrove restoration work; communities today have improved knowledge of the value of and ecosystem services provided by healthy mangrove forests • For example, over 1,000 (1183) community members have participated in awareness-raising media events in the four coastal areas of the SLCLC • At the national level, the program has worked to consolidate and elucidate the various policies, strategies, plans, and laws related to the coastal zone, including mangrove forests; the institutional framework for these pieces of the governance framework is fragmented and there is much confusion and some conflict (turf battles) as a result • The program is working to help shape a more harmonized governance framework through coordination of a stakeholder process to complete a Climate Change Adaptation Plan (CCAP) for the coast • Given enough time in remaining months, the program aims to assist NPAA with the development of a Co-Management Plan for the coastal region, within which there will be a chapter on mangrove management; ostensibly the chapter will be modeled on the issues and	• The governance framework for coastal resources management and coastal resilience is fragmented and will require concerted efforts and resources to convene key national MDAs to harmonize the various strategies, policies, laws, and plans • Implementation and enforcement capacities differ across communities and regions of the SLCLC (and across MDAs); there is need to constantly monitor the effectiveness of rules and by-laws • Public education and awareness is critical; but it is well documented that high levels of awareness does not necessarily translate into behavioral change (value-action gap; knowledge-action gap) • The radio drama series is a good opportunity to incorporate local and indigenous knowledge regarding coastal issues, challenges, and solutions • It may be necessary to document the best practices and shared learning experiences of CSMCs for potential scaling-up to other areas in the SLCLC	• The program should place high priority on its assistance to NPAA in completion of the Co-Management Plan with its chapter on mangrove management; this offers a critical window of opportunity that has the potential to be a key piece in the governance framework for coastal Sierra Leone • The program should consider handing-off its role in and support for the CCAP process. UNDP is well positioned to take the lead on this. WA BICC will need to re-focus its attention and energies on other issues needing closure, and the support for the NPAA-led CMP should be given high priority. • The program should place continuing and increasing emphasis on behavioral change and communications, and include a learning agenda to identify what behavioral changes are taking place and to address factors that inhibit transition of awareness to behavioral change • The program should continue to improve the link between on-the-ground implementation and informed decision-making by making full use of research and documentation of information generated by local level stakeholders, with emphasis on traditional knowledge of conservation measures • The program should explore and expand the scope of innovative co-curricular activities, such as nature clubs, outdoor education, street theatre, eco-farming, and eco-business to provide students with opportunities to obtain first-hand mangrove conservation
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management approaches related to the Bonthe-Sherbro mangrove forests • The SLRE is a Ramsar site, and will be a primary focus of an initial Mangrove Conservation Plan (MCP); the SLRE MCP will include mapping, zoning, and validation of decisions, along with the development of rules and by-laws for mangrove resource use; it is not clear what role the program will play or if there will be time to complete the SLRE plan before end of program • Conservation Site Management Committees (CSMCs) comprising representatives from the District Forestry Office, Fisheries Office, paramount chiefs, section heads, township chiefs, women and youth leaders, and teacher representatives are in place • CSMCs ensure that the planned mangrove restoration activities are aligned with the MCP and support sustainable livelihood measures in Core Zones of the SLRE MCP • The MCP currently focuses on only gardening and tourism. There are plans to diversify and update the MCP to address climate change resilience • Steps are underway to promote awareness of the MCP and integrate other activities, including mangrove restoration, rice-mangrove agro-silviculture, and embankment construction • Two communities are involved with Agro-silviculture (integrating		knowledge, experience, and skills in school as well as out of school • The program should explore partnership with the Imam community to enlist their leadership role for an environmental challenge; the issue of solid waste management and marine debris would be an excellent start; it is a challenge that must be tackled and one that would benefit from a public campaign effort
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mangroves into rice farming) in the Bonthe-Sherbro River Estuary • The community needs assessment identified natural and traditional adaptation practices and defense mechanisms used by the communities		
1.5 How effective is WA BICC in promoting diversification and equity in coastal resilience activities? To what degree has WA BICC achieved female participation and inclusiveness across activities? Do participating women feel they are gaining concrete benefits from the project? What benefits are they excited about? To what degree has WA BICC achieved participation and inclusiveness of other groups (youth, indigenous people)? Do these groups feel they are gaining concrete benefits from the project? What benefits are they excited about?		
• The program developed a Gender and Social Inclusion Strategy, and provided training for WA BICC staff on how to integrate gender in their respective work streams • The program developed gender-disaggregated baselines, laying the foundation for monitoring and evaluation in WA BICC field sites • Gender and social inclusion issues were incorporated into analyses, including in coastal adaptation approaches and policy analysis • The program provided guidance on gender integration to organizations applying for small grants • Women comprise a significant percentage of participants in all field activities, including training, VSLA activities, mangrove restoration, and embankment work • Youth (under age 30; male and female) are also well represented, although it is unclear whether the	• It is important to ensure that program activities do not encourage tokenism (diversity without inclusion) • It is unclear whether there was any thorough gender study before the interventions commenced to evaluate root causes of gender inequities in access to natural resources in the communities in order to systematically address it as part of the intervention • Increasing number of women participants in programs is insufficient if the deep-seated societal and cultural underpinnings of inequality persists (how social structure/institutions constrain women's agency/decision-making) • It is important for the program to ascertain the long-term impact in regard to women's increased ability to take charge of their own lives, and to take collective action to solve problems • Ensuring that women gain some benefits from development programs and projects is not necessarily the same as making real progress towards equality. This requires particular types of benefits, in addition to sustainability of	• Consider the creation of a pan-West African network of women active in the natural resources sector and in coastal regions to improve the program's visibility of women in this sector and establish a platform for the exchange of best practices • Include explicit responsibilities for implementing gender equality objectives and strategies into job descriptions, scope of services documents and terms of reference for all personnel through every stage of the program/project cycle • Focus more on supporting activities designed and owned by female and male advocates for human rights and gender equality in SL. This builds an enabling political and social environment for progress and sustainability at the micro-level in individual development activities, as well as at the macro-level • Scale-up or replicate activities and strategies that have demonstrated equality of participation and benefits,

program purposefully targeted the inclusion of youth ● Most women in the communities visited for the evaluation had only positive things to say about how they have been included in the program; in a couple communities, women feel that they must always “sit in the back and let the men have the last word” ● It is unclear if/how women were consulted on the 'problem' the interventions are to solve and the specific way in which they were involved in development of the 'solution' ● It appears that even where gender analysis was undertaken during design, it was often of a general nature, not linked to the activities to be implemented, to the expected results, or to overall social, poverty or sustainability analysis	benefits, which in turn depends greatly on local context, and the capacity of partner agencies and communities to sustain positive outcomes. ● In practice, the local cultural, institutional and policy context of interventions is a more important determinant of whether women benefit, and whether benefits will be sustained, than any specific actions to address gender issues during design or implementation	and sustainable progress towards equality and human rights for women ● Engage men and women equitably in gender analysis and gender sensitization trainings to ensure high quality female participation in future mangrove restoration and management ● The proportion of community members and sub-groups involved in the WA BICC activities should be monitored periodically to ensure that vulnerable groups particularly women remain equitably represented in both the activities and resource allocation decision-making processes
Objective 2 To evaluate the continued validity of activity design, approaches, and assumptions		
2.1 How valid are the Theory of Change, assumptions, and approaches that underlie WA BICC efforts as perceived by key stakeholders? How well do key stakeholders understand the overall purpose, theory-of-change, and assumptions that underlie the WA BICC activities? What are the merits and shortcomings of the strategic approach of WA BICC activities as perceived by key stakeholders? Do stakeholders mention any innovations that are of particular interest?		

• There are several implicit assumptions inherent in the activities, outputs and outcomes of the TOC • For instance, planting mangroves in degraded areas, as an activity, implicitly assumes that permission for planting is given by landowners • Seedlings planted/ha/yr is an output that assumes that mature seedlings are not removed by people or damaged by storms or animals • Restored areas of mangrove ecosystems, as an outcome, assumes sufficient seedlings are established and survive to deliver adaptation or ecosystem services • Reduced exposure of coastal communities to storm surges, as an outcome, assumes local biophysical conditions mean mangroves, by themselves, are an effective barrier to storm surges	• It appears that the linkages in the TOC are simplistic and reductionist • In reality, the processes of moving through different steps of the program cycle occur with a series of feedbacks and interactions between different activities and outcomes • Simplistic and reductionist linkages between activity and outputs in the TOC may give rise to unintended/adverse intervention outcomes and unpleasant surprises	• The program should reevaluate the program TOC and update it based on program experience • Clarify dependencies, feedback loops, assumptions, and overall timing into linear results chains • An update of the program TOC is best done through a learning event or other multi-stakeholder process. Visioning of the outputs and outcomes should involve the full suite of key and primary stakeholders at all levels in order to elicit better intervention outcomes and ownership of the program purpose and objectives
2.2 How have site selection criteria and contextual factors served to either support or detract from the successful implementation of WA BICC activities? What are the merits and shortcomings of the site selection criteria used to select target communities and mangrove restoration sites? Were any important contextual factors missing from the site selection criteria? Have any particular successes or failures of WA BICC site-based activities been strongly influenced by contextual factors of any kind?		
• The program visited thirty-one communities in the four regions and a total of 63 locations were evaluated, mapped and characterized • Detailed land cover maps were prepared using satellite images to establish mangrove cover baselines and to understand rate of loss • Contextual factors for site selection were identified, but it is unclear to what extent they were actually utilized for site selection	• The KAP survey, seasonal calendar of activities, stakeholder mapping and resource utilization assessment jointly improved the program's understanding of the socioeconomic dynamics; informed decisions to invest in increasing coastal resilience in the landscape; and facilitated planning of field activities and engagement with communities • Determinants of the success of mangrove restoration are myriad—hydrologic regime (which controls survivorship, growth rate, and distribution of mangrove species), zonation (emanating from environmental tolerance and	• A constraint to successful implementation of mangrove restoration is an incomplete understanding of the ability of a clear-cut, degraded wetland to recover, and of the success rates of mangrove restoration; is necessary to bridge this knowledge gap • Aside from the biophysical conditions that must be met, the governance setting around the restoration activities is also critical for success. Future programming should place strong emphasis on community-wide education

• The CCVA and options analysis were important steps in understanding vulnerabilities and community priorities, but it appears that the CCVA was completed after sites were already selected • There are national level challenges that influence success and sustainability; these include limited financial resources for key institutions and CSOs to recruit and retain quality staff; gaps and overlaps in policies and legal authorities related to coastal resources management; staff turnover and unfilled critical positions; turf battles among MDAs; etc. • There are clearly logistical challenges too, that include language, cultural, and communication barriers; and physical access to remote sites, especially during rainy season • Knowledge, Attitudes and Practices (KAP) survey, seasonal calendar of activities, resource utilization assessment were carried out	physiological preferences of individual mangrove species), soil and substrates, salinity, tidal fluctuation and wave energy, propagule availability and nursery technique, ecological knowledge and community participation, and monitoring • Even before the hydrologic regime is considered it is important to consider the size and extent of drainage basin, extent and area of mangroves at the downslope end of the basin, topography and bathymetry of the mangrove areas, hypsometric characteristics to calculate the current tidal prism of the mangrove areas, rates of terrestrial input of water, sediment, and nutrients, as well as climatic water balance • It is not clear how many of the foregoing factors were considered in site selection and how each was weighted in the selection scheme	and involvement (not just committees), the use of pilot sites that will be given every opportunity for a successful demonstration effect, and adaptive management processes and learning-by-doing approaches
2.3 How well does WA BICC address the particular drivers of mangrove loss and degradation? How well does WA BICC incorporate understanding of biophysical, socio-cultural, economic and other factors in addressing mangrove loss and degradation? How well does WA BICC incorporate analysis of climate vulnerability?		

● The CCVA identified rates and extent of mangrove cover loss for not only the coastline, but also for buffers 2.5km and 5km inland; the analysis indicates higher rates of loss farther inland, which would indicate that, if mangrove protection was the principal objective, more efforts should be focused on the upland land conversions to agricultural land ● The CCVA identified unregulated cutting of mangroves for wood and land conversion for rice cultivation as clear drivers of mangrove loss ● A draft climate change adaptation plan (CCAP) has been prepared and socialized with stakeholders in a validation workshop; a final version of the CCAP is being prepared ● The program prepared a mangrove cover change map from 1990 to 2016 and a baseline for carbon stocks for the SLCLC. Results indicate that Sierra Leone has been losing 1% of its mangrove forest per year since 1990 ● The program developed and tested a rapid CCVA methodology ● More than 350 stakeholders were engaged in an options analysis workshop series in December 2016 based on the initial findings of the VA	● From a systems perspective, it is obvious that planting mangrove seedlings in isolation of constantly engaging communities on the persistent drivers of mangrove loss and degradation is counterproductive and unsustainable	● A nuanced understanding of mangrove-dependent subsistence economies and related poverty traps in the SLCLC is warranted ● The program should undertake an economic study of the mangrove “sector”, with attention to the political economy of mangrove wood use, the volumes/weights of wood use, the sources and end-uses of mangrove wood, and the valuation tradeoffs between an intact health mangrove forest and its conversion to other uses (e.g., low value salt-making) ● A nuanced understanding of the bi-directional linkages between mangrove ecological dynamics on the one hand, and the constellation of anthropogenic drivers of mangrove change, on the other, is required ● Additional research is needed to build successful business models around mangrove restoration, including the precursor requirement of land tenure ● There is a need to combine the technological, economic and social knowledge on mangrove restoration/embankment, to make it more successful
2.4 How well are WA BICC activities managed and coordinated to achieve objectives? How effective is the collaboration and coordination between implementing partners and other key stakeholders in contributing to activity objectives? Do implementing partners have the staff, expertise, and capacity to design, implement, and achieve program objectives as perceived by stakeholders?		

• The MDAs involved in the program are generally pleased and appreciative of the focus and scope of the program, and believe that WABICC staff have been very capable and well organized with every multi-stakeholder event or training that they sponsor • A couple of the MDAs expressed that, early in the program, WABICC staff moved too quickly and out in front of the national MDAs who should have taken the lead on certain issues • The same MDAs expressed that, although the program completed organizational capacity assessments of their organization, the program did not return with findings or any offers to assist with strengthening the organization (as had been explained they would) • Communication and coordination was greatly enhanced with creation of the CCNRMN and the WhatsApp communication platform	• Most of the usual issues that undermine effective collaboration were not discernible during project document review. Such issues include limited vision or failure to inspire, lack of clear purpose or inconsistent understanding of purpose, competition between partners for the lead or domination by one partner, unequal and/or unacceptable balance of power and control • Others include lack support from organizations with decision-making power in the partnership, key stakeholders missing from the partnership, lack of commitment and unwilling participants, differences in philosophies or work styles, inadequate understanding of roles and responsibilities, hidden agendas, failure to communicate, failure to learn, lack of evaluation or monitoring systems, financial and time commitments outweighing potential benefits	• Future programming should strive to create mechanisms that involve all relevant stakeholders as partners, not merely recipients, in the process of generating (and owning) information for decision-making • Future program implementation should spend more time at the outset clarifying the purpose, objectives, assumptions, approaches, and expected outputs and outcomes for all key stakeholders to understand and be able to speak clearly about • It should also be made clear which of the several MDAs is intended to be the principal program partner or POC for a given issue, so as to avoid misunderstanding or mistrust as can easily emerge with turf battles
Objective 3 To evaluate the likelihood of activity goals to be achieved and sustained		
3.1 What perceptions do stakeholders have regarding the prospect for activities to achieve impact at sufficient scale to achieve intended results? Is WA BICC on track to achieve its mangrove conservation and restoration goals? If not, what is needed to improve that prospect? Is the proper scale of the challenge being adequately addressed? Is WA BICC on track to achieve its goals with respect to coastal erosion and flooding? If not, what is needed to improve that prospect? Is WA BICC on track to achieve its goals on livelihoods activities (<i>Village Savings and Loans Associations (VSLA)</i>, <i>Climate Smart Agriculture (CSA)</i>, <i>Improved Fish Smoking</i>, <i>salt extracting</i>, <i>Awareness Raising</i> etc.)? If not, what is needed to improve that prospect?		

● In most of the AVPs and Annual Reports the indicators for measuring progress and effectiveness are clearly delineated, but are not specific to activities in the SLCLC ● The multi-year/ year-on-years targets (cumulative) are seldom met. In many cases, far less than 50% of the targets were met even though the project had reached midterm; again, it is not clear how much of this is attributable to activities in the SLCLC ● There is insufficient information or analysis available for national level stakeholders to have an informed opinion about the question of 'achieving impact at sufficient scale'; it is very early in the country's coastal efforts and this program is a demonstration and learning opportunity	● The program will not achieve a degree of mangrove restoration that is significant at scale; that is, the annual rate of loss of mangrove tree cover is more than 1000ha, and the program has restored, at best 10ha, or about .01% of this areal extent ● The full extent of coastal erosion is not readily known, at least not in terms of miles, rates, and locations of eroding coastline; the two embankment activities are really intended to be a pilot-test of a low-cost technology involving locally available materials ● The program will not achieve quantifiable gains in livelihood opportunities or benefits, as such information is not being tracked nor was a baseline developed; that said, the VSLAs are an important (necessary but not sufficient) step towards achieving gains in supplemental or alternative livelihoods	● Future programming should strive to elucidate more clearly the intentions of the program and its expected outputs and outcomes; while this program was not designed to "achieve impact at sufficient scale", it still could have used the opportunity to help decision-makers understand what is needed to achieve impact at scale. ● For example, a thorough analysis of mangrove wood utilization and the economic values and tradeoffs underway with the current status quo, could be an important legacy achievement of WA BICC (and still could be)
3.2 What activities and outcomes are likely to be sustained and why? By project end and for each of the core WA BICC activities, will the necessary enabling conditions (policy, legal/regulatory, institutional, financial, social capital, etc.) be in place and sufficient to sustain activities and outcomes?		
● The program has prepared a draft CCAP and socialized it with key national level stakeholders in a validation workshop; the CCAP includes a proposed management/governance framework that attempts to clarify relationships between the various strategies, policies, laws, and institutions involved in coastal sector governance and resilience	● Responsibility for developing, coordinating, and implementing SL's coastal and marine environment policies is understandably dispersed among several agencies (MAFFS, FD, EPA, NPAA, MLGRD, MEST, Ministry of Lands, MMR, MLCPE, MFMR) ● This overlapping mandate is a recipe for conflict and inefficiency ● Proliferation of policies is good to the extent that they are harmonized and clear responsibilities for their implementation are	● The program should give high priority to working with NPAA to complete the Co-Management Plan with specific details on mangrove management and conservation; there is urgency in developing and socializing a model process for sustainable mangrove wood harvesting, and presumably this will be part of the Co-Management Plan ● Riparian zone buffer management is still evolving; a national draft policy could be developed. Actual implementation of

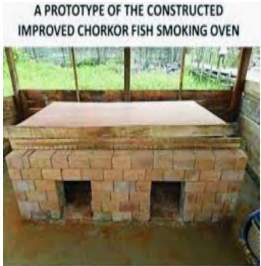
• The national framework in SL has about 17 level policy instruments that are relevant to the management of the coastal and marine environment • In addition, SL is signatory to about 10 International and Regional Agreements and Conventions • The NPAA appears to be committed and ready to proceed with development of the Co-Management Plan and to submit it to the Parliament and President for adoption/approval; they are very interested to have WA BICC support to complete this process • The NPAA wishes to include a budget request along with the Co-Management Plan; otherwise, it is not clear what kind of financial support will be available from GoSL to continue/sustain efforts towards coastal resilience • At the community level, the core activities are supported by community committees for each activity: mangrove restoration, VSLA, and embankments • The VSLAs appear to be the most energized and with self-interested members; the MRCs appear to be mainly interested in the incentive funds that have been promised for their labor	assigned to ensure accountability and effectiveness • WA BICC is playing an important role in helping to consolidated and harmonize the various policies and authorities • Improvement in transparency of coastal land and resource use and tenure would improve the investment climate and user incentives for responsible long-term land management • Coordination and responsibility-sharing between MDAs relative to enforcement and monitoring of environmental compliance could be improved; EPA appears to carry the responsibility of most environmental compliance, but has limited capacity for field monitoring and enforcement • Of the core activities at the community level, VSLAs appear to be most likely to be sustained post-program	such policy will require interaction with local and traditional governance authorities • National and regional level coastal development plans should include adaptation strategies in response to projected sea-level rise (e.g., relocation of transportation, housing, and business zones) and mitigation measures to slow coastal erosion (e.g., mangrove zones, sand-mining restrictions) • The program should undertake a focused SLR study for Sierra Leone, that includes time-series study of erosion rates, and mapping of SLR scenarios; SLR should be a central topic dealt with in the CCAP and emerging mangrove management planning efforts
Objective 4 To identify lessons learned and recommend actions for improving performance		
4.1 What are the key lessons learned and best practices that should inform the continuation and sustainability of mangrove restoration and livelihood activities in the SLCLC? Are there recommendations to be made with respect to: activity design; implementation strategies		

or approaches; adaptive management; communication/coordination with partner organizations; technical matters; meeting targets; exit strategy and sustainability; etc.		
• Mangrove restoration should not be seen as the primary focus of future programming; natural regeneration will occur given that biophysical factors are protected or restored; restoration will most likely be the best option in only limited circumstances • Mangrove nurseries are not needed; direct seeding during the rainy season is the best (cheapest and most successful) restoration technique; species selection is an important factor, as is the control of animal herbivory • Secured land tenure has significant potential to allow for meaningful resource stewardship, sustainable use, and profitable utilization of mangrove wood; conversely, when land tenure is not secure there can be no 'business case' for mangrove restoration • RMI has potential for scale-up, but the practice of mangrove forest conversion to rice farming is a questionable practice	• Determinants of success of mangrove restoration are myriad • Protection and/or restoration of natural biophysical factors should allow for natural regeneration in most cases • Mangrove restoration without control over or efforts to reduce the demand for mangrove wood is an unsustainable practice • Coastal systems are dynamic and inter-connected with other ecosystems, both upland and marine. A 'systems approach' is critical to understanding the full suite of drivers of change • Training opportunities should be made available for all interested community members and conducted within the community. • The factors determining success or failure of embankment construction are highly site-specific. A qualified coastal engineer should be brought in to evaluate any proposed new construction. • Providing cash incentive for work/time has the potential to create mistrust and conflict. • SLR is a climate change impact that cannot be avoided; it is essential that proper analysis be included as part of any coastal resilience efforts, including mangrove management and embankment protection • Alternative and supplemental livelihoods are an essential element and should be seen as part of the 'systems thinking' needed to achieve coastal resilience	• The development and completion of the proposed CMP should be given high priority for the remainder of WA BICC • SLR analysis and scenario mapping should be incorporated into the policy and planning process for both the CCAP and CMP • An economic analysis of the 'mangrove sector' could be an important source of information for policy makers and elected leaders • Steps should be taken to identify the major players involved in the mangrove wood 'sector', and incentivize them to be part of efforts to develop and socialize sustainable mangrove wood harvest regulations • The CCNRMN should be reconvened and re-energized to ensure its sustainability • The WABICC management team should visit all 26 target communities to evaluate remaining tasks to bring closure on expectations • Conduct VSLA refresher training • Hand-off the task of completing the CCAP to UNDP; focus on other issues for remainder of program • Convene a private sector coastal enterprise opportunity workshop • Understand and develop plan to tackle the land and resource tenure issue in coastal Sierra Leone

ANNEX 10: POVERTY REDUCTION AND ENERGY FOR MANGROVE CONSERVATION

Energy consumption				Energy reduction				
Technology	Model	Uses	Products	(%)	Technology	Model	Benefits	Contact
Traditional stoves		cooking bakery	Oysters shellfish meals	40	Improved stoves		Environment, social and economic benefits	Westwind Energy Limited 1, Bishop Drive Off Regent Road Lumley, Freetown Tel: +23278405405 or +23278521521 Email:info@westwindenergy.sl
Traditional ovens		smoking	fish		Low PAH improved fish smoking stove		Low Polycyclic Aromatic Hydrocarbon PAH and very low rate of wood used	USAID/Ghana SFMP CRC-GSO University of Rhode Island 220 South Ferry Rd. Narragansett, RI 02882 USA , el: 401-874-6224 Fax: 401-874-6920 Email: info@crc.uri.edu

Traditional parpaing oven		cooking requires very large amount of mangrove wood	fish	90	Modern parpaing oven		Cooking smoking fish, shrimp, shell Very low rate of wood used	Mr Momar YacintheDiop Fish Technologist Cit� RST, N� 144 ThiaroyeAzur Dakar, S�n�gal Tel : +221338511490 or +221775367942 Email : momaryacinthe@yahoo.fr
Traditional parpaing oven		cooking	fish	90	Modern Altona oven	 	Very low rate of wood used, uniformly smoked products	
					Oven FTT		Very low level of benzo pyrene, PAHs on smoked products but is costly, thus limiting its large scale dissemination	

				>80	Chorkor oven		Low constr. Costs and long life (4 to 8 years), Large capacity of fish, High quality and uniformity of product, less smoking time and energy consumption	
Traditional oysters cooking		cooking on hearth with a lot of mangrove wood	oyster	99	Modern cooking of the oysters		Using solar energy to heat the cooking liquid to 90°C., then bake with the gas to finish	
Drying		on traditional clays	fish	99	Solar drying		Use of solar energy to dry fish, shells, and shrimp	
Shellfish processing		cooking on hearth with a lot of mangrove wood and drying	arch oyster and murex	99	Value-added by marinating		With a bowl of arches exploited in a traditional way, one collects two bags of dried arches sold at 0.8USD each With the same basin using the pickling technique, we have 12 jars of	

							products sold for 1.7USD a jar.	
Traditional packaging and storage		Significant losses between producer and consumer are attributed to handling, distribution, packaging and storage problems.	Processed fish and shellfish	99	Modern packaging and storage		Various packaging techniques respond to the various issues raised by the distribution of fish - hygiene, conservation, recovery.	
Traditional site		smoking cooking salting fermenting	fish shrimp shellfish	98	Modern site		Converted fish and shellfish processing site: -Adequate infrastructure and equipment. -Better quality of products -Possible use of solar energy for water and electricity supply	Mr Momar YacintheDiop Fish Technologist Cité RST, N°144 ThiaroyeAzur Dakar, Sénégal Tel : +221338511490 or +221775367942 Email : momaryacinthe@yahoo.fr

NBI: **ECREEE (ECOWAS Centre for Renewable Energy and Energy Efficiency)**, is supported by a number of ECOWAS Member States, by a number of development partners, including GIZ (the German International Cooperation). They take the lead in the West Africa Clean Cooking Alliance (WACCA). They operate the ECOWAS Renewable Energy Facility (EREF) and have considerable experience supporting improved household energy programs in West Africa. ECREEE participated actively in the 28th October 2013 MoE/RECP/EUEI PDF workshop and committed to providing short-term support for a number of activities set out in the roadmap. ECREEE and the GoSL, within the framework of the West African Clean Cooking Alliance (WACCA) and the ECOWAS Initiative on Gender Mainstreaming in Energy Access (ECOW-GEN), have agreed a draft collaborative program to:

- Support the establishment of Cooking Energy Stakeholder Group for Sierra Leone;
- Develop a framework Cooking Energy Action Plan for Sierra Leone;
- Organize a Cooking Energy Forum and Exhibition in Sierra Leone.

NB2: **UNDP's four-year (2012-2016) Poverty Reduction and Energy Program** provides support both for energy enterprise development as well as for piloting energy technologies such as rice husk gasification (for electricity), pilot briquetting of biomass residues (as a substitute for charcoal), and energy awareness. It is working with the Global Environment Facility (GEF), under the Sustainable Energy for All (SE4ALL), to put in place a large program that will address improved charcoal production, improved stoves, public awareness and education, among other activities.⁴⁹

NB3: Although traditional smoked fish has been part of African menu for a long time, results from literature revealed that some of the smoked fish were of good quality standards. However, previous studies have revealed that traditionally smoked fish products from Africa may pose high level of potential risk due to the presence of high amount of carcinogenic PAHs, microbial contamination and the presence of aflatoxins; highly toxic compounds in the traditionally smoked fish products. This may pose high risks both chemical and microbiological to the consumers of smoked fish. Therefore, there is need for adequate process and quality control and regulatory monitoring of the product to safeguard the health of the consumers. **S. A. O. Adeyeye & O. B. Oyewole (2016) An Overview of Traditional Fish Smoking In Africa, Journal of Culinary Science & Technology, 14:3, 198-215, DOI:10.1080/15428052.2015.1102785 To link to this article: <http://dx.doi.org/10.1080/15428052.2015.1102785>**

NB4: IFSS_12

Energy efficiency has to be the main and urgent action to take. The main driver of mangrove depletion is fish smoking activity. It's good to take this subject of energy efficiency seriously. "Unlike the traditional smoking ovens which are inefficient in capacity and fuel usage, produce poor-quality smoked fish and cause significant post-harvest loss, the Chorkor oven is easy to use, uses up to 80% less fuel, has high fish smoking capacity, supplies a uniform and better quality product that attracts higher prices, is faster and healthier to use and reduces the risk of smoke inhalation and burns. Other advantages of the Chorkor oven are as follows:

- It has the capacity of smoking as much as 200kg of fish
- It saves up to 50% wood used by traditional method
- Conserves heat within and reduces risk of fire outbreak
- It is safe and fast compared to the traditional metal drum smoking kiln
- Fish product of the Chorkor oven are bright, golden brown with longer shelf life than the fish product of the traditional metal drum smoking kiln
- It smokes in lesser number of hours compared to the traditional metal drum smoking kiln"

_cf fishery and energy in adjames

Although the advantages of the Chorkor smoker are obvious to the fish processors, some are not able to invest because of a lack of working capital. More money is required to invest in the purchase of fresh fish to fill the Chorkor smoker, since it has greater capacity than the traditional ovens.

_cf improved fish smoking: Ghana in adjames

The five fish smoking stoves tested by SNV in Ghana are described below based on data provided by SNV and from the literature:

- Chorkor
- Morrison
- Open Source
- Divine
- FAO Thiaroye Technology (FTT)

Most of the improved fish smoking stoves developed in the past 45 years have been designed to reduce fuel consumption and to ease operating process by reducing smoke and heat released in to the working environment. Recent studies by SNV have shown that some of these energy efficiency improvements produce fish with even higher levels of PAHs (**polycyclic aromatic hydrocarbons**), most likely due to the higher processing temperature. A newly developed fish dryer, the FTT, produces smoked fish with very low levels of PAHs but is however costly, thus limiting its large scale dissemination.

NB5: Unlike the traditional smoking ovens which are inefficient in capacity and fuel usage, produce poor-quality smoked fish and cause significant post-harvest loss, the Chorkor oven is easy to use, uses up to 80% less fuel, has high fish smoking capacity, supplies a uniform and better quality product that attracts higher prices, is faster and healthier to use and reduces the risk of smoke inhalation and burns. Other advantages of the Chorkor oven are as follows:

- It has the capacity of smoking as much as 200kg of fish
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- It is safe and fast compared to the traditional metal drum smoking kiln
- Fish product of the Chorkor oven are bright, golden brown with longer shelf life than the fish product of the traditional metal drum smoking kiln
- It smokes in lesser number of hours compared to the traditional metal drum smoking kiln

<https://pindfoundation.org/project/mechanical-adjustable-harvester/>

ANNEX II: WABICC'S RESPONSES TO COMMENTS ON THE EVALUATION REPORT

1. Did WABICC, as part of their approach, inform communities to “approach mangrove as a business”? If so, what did this approach consist of?

The Landscape Manager (Zebedee) did advise community members in some of the communities in January 2019 when the lead consultant for the performance evaluation (Richard Volk) was on his reconnaissance visit. Mr. Volk and Arthur Chinsman-Williams (Landscape Mangrove Specialist) will attest that this advice was in response to a repeated request from community members asking for the program to give them startup money for their VSLA to enable them to start offering loans. In response, Zebedee urged community members to view mangrove planting as a business from where they could generate money to support their VSLA startup. He encouraged community members to actively engage in mangrove planting activities, and in return WA BiCC will assess their mangrove planting and compensate them according to their efforts. That way, the compensation/incentive could help the VSLA with start-up money while at the same time, mangroves would have been planted. In this scenario, the communities' responsibilities and contributions were to source the wildlings, propagules or seedlings, prepare the planting site, plant the trees and monitor the plans for establishment before WA BiCC would return to assess. Please note that the WA BiCC later took this same message to other communities that were not visited by Mr. Volk during his reconnaissance visit. As a result of this incentive-based approach, rather than direct payment for work as was the prior approach) twelve out of twenty-four communities (50%) engaged in mangrove planting this year.

2. Did WABICC explicitly discourage mangrove nurseries? Or maintaining new nurseries initiated by the communities? If so, at which period/year in program implementation?

WA BiCC is a learning program and when we started intensive work in the landscape in 2017, we had an experimental plot in Bonthe where we undertook trials with a series of vegetative propagating materials. After our experience with the nurseries in the first year, we observed that nurseries were time-consuming, expensive and could not produce all the seedlings needed to cover the area we first mapped for restoration in 2017, which was 117 ha. Most of the communities' initial plantations were a combination of plants from the nurseries and wildlings. When we initially encouraged and supported nursery establishment, we provided nursery materials, polythene bags and monitoring by community facilitators. The practice of setting up nurseries was discontinued towards the end of 2017 because of the reliance on direct support of WA BiCC did not foster community initiative or sustainability and it was time-consuming (considering our life span) and expensive. Some communities continued to move ahead with new nurseries or direct planting of propagules/wildling without explicit WA BiCC support, which was encouraged because this was based on direct community initiative and the use of this technology (harvesting wildlings or propagules for use in nurseries or direct out-planting) in restoration is a best practice globally. Those communities that have continued establishing new nurseries or undertaking direct out planting of propagules without WA BiCC support provided an excellent opportunity for the assessment team to have tried to understand why. A brief on this 'organic uptake' by village champions is available for reference.

3. Has WA BiCC revised its ToC and what approach is deployed in the revision of the ToC.

To answer this question, it is important to know where the ToC comes from. The WA BiCC ToC is derived from USAID/WA ToC, so the overall ToC has not changed as it is drawn directly from USAID/West Africa's 5-year (2015-2020) Regional Development Cooperation Strategy (RDCS). WA BiCC is funded by 3 USAID earmarks, or funding streams: Adaptation (and in WA BiCC's case specifically for coastal adaptation under which the Sierra Leone Landscape work was primarily funded), Sustainable Landscapes and Biodiversity. USAID mandates that all

Biodiversity Funds are subject to the development of a ToC. However, it was decided by USAID and WA BiCC that ToCs would also be developed for the other 2 WA BiCC Components (Coastal Adaptation and Sustainable Landscapes funded) so the lessons would be comparable across the program and the information generated over the life of WA BiCC on the value of TOCs for adaptation and Sustainable Landscapes funding, in addition to Biodiversity, would be a contribution to the Agency's programming considerations when it came to the use of ToCs for program design and implementation.

The first Component 2 (coastal adaptation/SLCLCL work) ToC was developed with core regional and subcontracting partners during the first planning and validation meeting in 2015. The ToC was extensively revised during the FY17 work planning cycle led by Foundations of Success, which had been a main partner of USAID/Washington's Measuring Impacts Project (see attached workshop report). All ToCs were again revised in 2018 in accordance with the adaptation management concept as we were increasingly gaining a better understanding of our geographical and socio-economic context. The revisions were done during work planning events. One of the key challenges with understanding the Component 2 ToC is that the evaluation team did not question any WA BiCC staffs on the background of its initial construction and subsequent modification²³. Many assumptions were made but there is a much detailed and complex background to the Component 2 ToC with additional details that hopefully the attached report might provide if it was not a source document.

4. Was WABICC aware/ did WABICC encourage MRCs to initiate mangrove restoration at new sites? If yes, how were these new sites selected?

Before WA BiCC started planting mangroves in 2017, a systematic assessment of degraded areas in the communities was undertaken during clustered community meetings. After this exercise, community to community mapping and consultations were conducted and ground truthing done. During the ground truthing exercise, some of the sites proposed by the communities were disqualified because they did not meet some of the specific selection criteria. During this exercise, we sought to understand the original causes of mangrove degradation and land ownership/land tenure systems and dynamics. Based on the tenure arrangements findings we decided to approach restoration either via community planting groups or agri-silviculture. As at the time of the evaluation, we had planted ten hectares out of the initially planned 117. This low number of ha planted indicates that there was no way we could have explicitly asked for the MRCs to initiate mangrove planting in new sites. For communities like Yagoi, Keiga and Bopu, we did no mapping; hence you will notice that the practice there is limited to rice/mangrove integration. In Bonthe, the MRC did go on to look for a new site without out guidance because the restored site was destroyed by factors beyond the community or WA BiCC control.

²³ See Annex 12 for an email request from the evaluation team

ANNEX 12: THEORY OF CHANGE FOR SLCLC

10/9/2019

Gmail - Theory of Change for SLCLC



Richard Volk <rvoik4505@gmail.com>

Theory of Change for SLCLC

Richard Volk <rvoik4505@gmail.com>

Sun, Mar 17, 2019 at 2:22 PM

To: "Njisuh, Zebedee" <Zebedee.njisuh@wabicc.org>

Cc: Frederick Ato Armah <farmah@ucc.edu.gh>, Abdoulaye DIAME <abdoulayediamewaame@gmail.com>, Richard Volk <rvoik4505@gmail.com>

Hi Zebedee -- I trust you are doing well. I have a quick question. Which of these two TOCs is the one that presently governs Component 2? Are they both utilized, or is the second one an "evolution" of the first one? Did the evolution occur through some stakeholder process (e.g., workshop)?

Just trying to figure out how these relate to each other, and if one is more familiar to most stakeholders. -- Thanks for any clarification you can provide. -- Richard

figure 1:

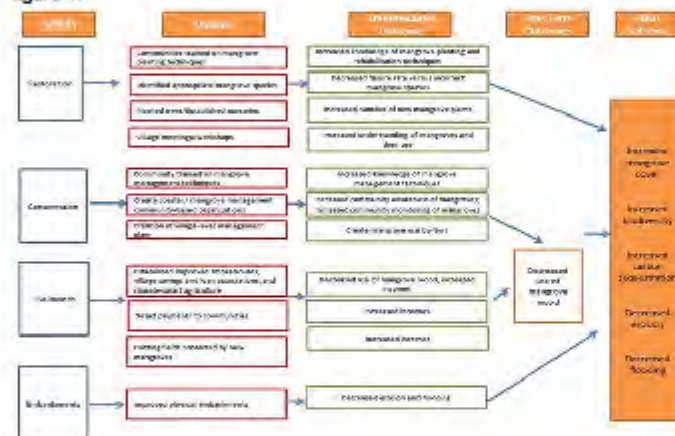


figure 2

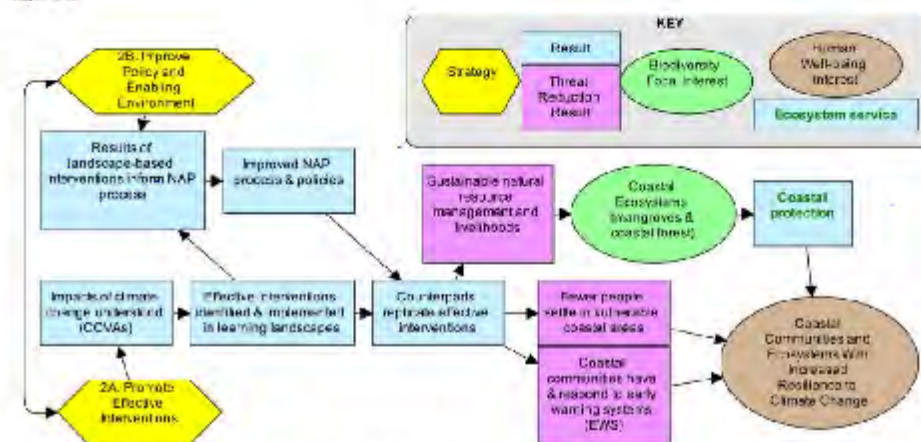


Figure 4: Component 2 Theory of Change

<https://mail.google.com/mail/u/0/?ik=0a7c89af3&view=pt&search=all&permmsgid=msg-a%3A2039131368927963881&siml=msg-a%3A203913136...> 1/2

ANNEX 13: CONFLICT OF INTEREST DISCLOSURES

Name	Richard Volk
Title	Consultant
Organization	Self-employed
Evaluation Position?	☒ Team Leader ☐ Team member
Evaluation Award Number (contract or other instrument)	
USAID Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	WA-BICC Implemented by Tetra Tech
I have real or potential conflicts of interest to disclose.	☐ Yes ☒ No
If yes answered above, I disclose the following facts: <i>Real or potential conflicts of interest may include, but are not limited to:</i> 1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.	

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	
Date	11-19-2018

Name	Abdoulaye DIAME
Title	Coastal Ecosystem and Mangrove Expert (With Evaluation Experience)
Organization	Consultant
Evaluation Position?	☐ Team member
Evaluation Award Number (contract or other instrument)	
USAID Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	
I have real or potential conflicts of interest to disclose.	☐ No
If yes answered above, I disclose the following facts: <i>Real or potential conflicts of interest may include, but are not limited to:</i> 1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.	

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	
Date	November 16 th 2018

Disclosure of Conflict of Interest for USAID Evaluation Team Members

Name	Frederick Ato ARMAH
-------------	---------------------

Title	Quantitative and Qualitative Research/Evaluation Expert of the West Africa Biodiversity and Climate Change (WABICC) Evaluation
Organization	Consultant
Evaluation Position?	☐ Team member
Evaluation Award Number (contract or other instrument)	ASSESSCA-FY-19-E005
USAID Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	
I have real or potential conflicts of interest to disclose.	☐ No
If yes answered above, I disclose the following facts: <i>Real or potential conflicts of interest may include, but are not limited to:</i> 7. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 8. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 9. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 10. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 11. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 12. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.	

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	
Date	November 23 2018

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