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# WOMEN SHELLFISHERS AND FOOD SECURITY PROJECT

## Implementation Plan and Monitoring Evaluation and Learning Plan

October 8, 2020

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URI-CRC	<a href="http://www.crc.uri.edu">http://www.crc.uri.edu</a>
URI-DNFS	<a href="https://web.uri.edu/nfs/">https://web.uri.edu/nfs/</a>

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## ACRONYMS

AFR-BAA	Africa Broad Agency Announcement
CCM	Centre for Coastal Management
CRC	Coastal Resources Center
COVID-19	Coronavirus Disease of 2019
FANTA	Food and Nutrition Technical Assistance Project
FFQ	Food Frequency Questionnaire
ECOWAS	Economic Community of West African States
GDP	Gross Domestic Product
GIS	Geographic Information Systems
HFIAS	Household Food Insecurity Access Scale
ICRAF	World Agroforestry
MEL	Monitoring, Evaluation and Learning
NRM	Natural Resources Management
PIRS	Performance Indicator Reference Sheet
RDA	Recommended Dietary Allowance
SFMP	USAID/Ghana Sustainable Fisheries Management Project
TRY	TRY Oyster Women's Association
UCC	University of Cape Coast
UG	University of Ghana
URI	University of Rhode Island
USAID	United States Agency for International Development
WaBICC	West Africa Biodiversity and Climate Change program
WACA	West African Coastal Areas Management Program

# 1. OBJECTIVE OF THIS DOCUMENT

This document provides a basic Monitoring, Evaluation and Learning (MEL) Plan for this research project and an Implementation Plan that details project activities, tasks and milestones to be completed by each partner over the period of performance of the project and links them to the corresponding output and outcome indicators in the MEL Plan.

# 2. PROJECT SUMMARY

In August 2020, USAID awarded the University of Rhode Island the Women Shellfishers and Food Security project. With USAID, URI co-created the project in partnership with the University of Cape Coast (UCC) in Ghana, the University of Ghana (UG), TRY Oyster Women's Association in The Gambia, and World Agroforestry (ICRAF).

This project addresses the need for greater attention to food security for women shellfishers and their families while improving biodiversity conservation of the ecosystems on which their livelihoods depend. More robust models, tools, approaches and processes are needed to enable and promote these sustainable food systems and natural resource management in coastal West Africa. The project will strengthen the evidence base, increase awareness, and equip stakeholders to adapt and apply successful approaches in areas of high potential for replication and scale-up in the eleven coastal West African countries from Senegal to Nigeria. It will draw on successful cases of a rights-based, ecosystem-based, participatory co-management approach to shellfish management by women in mangrove ecosystems in The Gambia and Ghana developed with USAID assistance. Knowledge and experience generated through the project will open up opportunities for improvement and broader application of these promising approaches in West Africa through three key project components:

- 1) **Conduct the first-ever participatory regional assessment** of the situation, unmet needs, and promising approaches to shellfish co-management led by women across the eleven countries and the scope and scale of the potential sectoral and cross-sectoral benefits.
- 2) **Elaborate and test elements of models based on existing approaches through site-based research in The Gambia and Ghana** to strengthen the evidence base for successful elements of the model. The project will conduct six technical studies covering the field research to document linkages in a Theory of Change and conceptual results chain between women's shellfish co-management and livelihoods, mangrove conservation, and nutrition. It will examine existing elements in the approach that are not well documented, and that could enhance the approach if they are better understood. It will document both sectoral and cross-sectoral findings.
- 3) **Foster a community of practice around the development and dissemination of a toolkit** on a rights-based, ecosystem-based, participatory co-management of shellfish by women in mangrove ecosystems in West Africa with and for community, national, and regional level stakeholders. This component consists of two activities; toolkit development and its' dissemination. The toolkit will

integrate findings from the participatory regional assessment and site-based research. Building on those components, the toolkit development and dissemination will build a community of practice and provide capacity development support for 37 stakeholder institutions in West Africa. It will provide the first practical guide for the design and implementation of women's shellfish co-management in West Africa, supported by a network of practice, among other elements such as policy briefs and case studies.

## 2.1 Goal

The project goal is to foster the adoption and scaling-up of an integrated approach to conservation of mangrove and estuarine ecosystems in West Africa that provides cross-sectoral benefits in terms of gender equality and women's empowerment, economic development, household food resiliency and nutritional benefits for women of reproductive age. Objectives and Expected Outcomes are summarized in Table 1 of the Monitoring, Evaluation and Learning (MEL) Plan Section of this document.

## 2.2 Theory of Change

The theory of change, that is the main subject of this project, describes the interrelationship between women's empowerment, sustainable shellfisheries management, and cross-sectoral linkages to community-based mangrove conservation, local food system livelihoods, and nutrition of shellfishing households. The project will empirically examine these relationships and test hypotheses inherent in the following general conceptual theory of change statement:

IF women's shellfish livelihoods in coastal mangrove and estuarine ecosystems in The Gambia and Ghana are improved through gender and nutrition sensitive co-management and linkages made to community based forest management in the land/seascape, THEN mangrove and estuarine biodiversity will be improved, AND IF approaches for sustainable food producing livelihoods within the coastal mangrove land/seascape contribute to a nutritionally balanced local food supply, THEN household resilience, sustainable food systems, and nutrition will improve.

The interrelationships and cross-sectoral linkages of the theory of change are depicted in Figure 1 in Annex 1. The model is based on practitioner experiences and qualitative evidence of these interrelationships and stitches together several sector-based models into a broader integrated theory. No in-depth empirical studies have provided a solid evidence base of this theory. While co-management of mangroves and small-scale fisheries have each been shown individually to be effective at improving sustainable management of these resource systems and are well documented in the existing knowledge base, our research activities will look more closely at the connections between fisheries management and resource tenure with mangrove conservation. The research will further broaden the basic community-based resource management aspects of the model and examine connections to coastal food systems and nutritional wellbeing of women shellfish harvesters and their families. This component of the model is less well proven and where the



evidence base is weak or non-existent. Testing these cross-sectoral linkages empirically is a main focus of the site-based comparative research across six sites, three each in The Gambia and Ghana, (see Activity 2).

The theory of change will be further broken down into several testable and interlinked hypotheses as illustrated below.

- Gender sensitive governance that promotes co-management and tenure rights and empowered women that manage shellfisheries sustainably improves conservation of mangroves.
- Improved and gender equitable management of shellfisheries and mangroves increases shellfish yields and availability of this nutrient rich food protein, which increases shellfish consumption and contributes to improved household nutrition and income of those engaged in shellfishing.
- High consumption of shellfish contributes to lower prevalence of anemia in women of reproductive age and is shown as a main contributor compared to other factors such as malaria or hookworms.
- Enriching landscapes around mangrove-shellfish estuaries systems with complementary food and nutrition sources reduces the extractive pressure on the mangroves thereby improving its health which subsequently boosts the productivity of the shellfishery having direct impact on household food security.

## 2.3 Activities

### **Activity 1: Participatory Regional Assessment of the Shellfisheries in 11 Countries from Senegal to Nigeria using Local Academic, Government and Shellfish Community Contacts (UCC Lead)**

The project will leverage institutional linkages of URI, UCC, UG, ICRAF, and TRY, collaborate with the on-going USAID/Senegal Dekkal Geej fisheries project, USAID/Ghana Sustainable Fisheries Management Project (SFMP), and capitalize on networks and lessons learned of the USAID/WA WaBICC project, to provide a comprehensive participatory regional assessment for 11 West African countries (Senegal, The Gambia, Guinea-Bissau, Guinea, Sierra Leone, Liberia, Cote d'Ivoire, Ghana, Togo, Benin, and Nigeria). The project will engage with regional institutions such as the Abidjan Convention, ECOWAS, and the African Women Fish Processors and Traders Network ([AWFishNET](#)) in this exercise. We will assess the regional scale and scope of existing shellfisheries and shellfish-based livelihoods occurring in the region's mangrove ecosystems. The total hectares and health of mangroves, threats to mangrove ecosystems, protected status, governance arrangements, enabling environment, and their socio-economic context will also be summarized. The state of knowledge on this issue varies widely in the 11 countries. Reiterating the fact that annual catch and culture statistics of important bivalves such as oysters and cockles, which are found within mangrove and estuarine systems, are completely missing from official data sources for many coastal West African countries, this makes it impossible to value the contribution to national GDPs.

Information on the status of estuarine fisheries and women's shellfishing livelihoods are often not available or known. A consolidated region-wide perspective has never been compiled and is needed to draw the attention of governments of the region and the ECOWAS to the nearly unrecognized but potentially economically significant livelihoods of vulnerable groups in coastal areas. The assessment will also help identify gaps in information and suggest ways those gaps could be filled, for instance, through better data gathering by fisheries departments.

UCC will lead this activity in consolidating existing secondary information and local knowledge through engagement of academic, government, and shellfishing community institutional contacts in each country. Literature review, remote key informant interviews and meetings, and in-person or field visits (only as appropriate) will be the modalities.

Blended sensitization workshops consisting of two separate workshops will be organized in each country. The first will comprise an online meeting with focal in-country resource persons to communicate project objectives and review methodology for the country assessments. The second, to be coordinated by the in-country experts, will target local shellfishers and mangrove users. Workshop participants will aim for gender balance among participants and will address approaches for conducting the studies that provide insights into the gender dimensions of the system dynamics. These actors represent the network of stakeholders who will benefit from the project and are able to act on opportunities to scale up across the region.

At least one virtual workshop will be held with participants from regional institutions and each country to review and provide input on the final assessment. As part of the final assessment, we will inform USAID on potential targets that could be delivered for at least 10 selected USAID standard Agriculture, Biodiversity, Gender, and Nutrition outcome indicators in each of the countries and region-wide if approaches were scaled up.

### **COVID-19 Mitigation and Adaptation Measures**

Mitigation measures for implementation of this activity in accordance with safety standards to prevent the spread of COVID-19 are described in the COVID-19 Implementation Plan (Appendix 1 of the Program Description) and personal protective supplies have been included in the project budget accordingly.

If international travel from the US or within West Africa is suspended, this activity can still be implemented remotely through outreach to national and regional level stakeholders. If local travel or in-person gatherings are prohibited in any of the 11 countries, implementation of this activity will be compromised. The quality of information gathered and the effective networking with community level actors anticipated will be difficult to fully achieve under these conditions. The activity could be achieved and improved/supplemented when local travel restrictions are lifted. If no travel or

meetings are allowed, then the in-country reports will have to rely on secondary data and telephone key informant interviews only.

## **Activity 2: Elaborate and test elements of models based on identified approaches through site-based research in The Gambia and Ghana (URI, UCC, ICRAF, UG Leads)**

### **Sub Activity 2a: Participatory assessment of threats and drivers of mangrove ecosystem degradation and preferred restoration options. (ICRAF Lead)**

In the six selected study sites, we will identify the main mangrove conversion threats and drivers and other land use practices within the adjacent landscapes through analysis and interpretation of secondary data sources and with the engagement of local communities. Assessments will identify endogenous and exogenous factors to the community and the community-managed mangrove area when distilling underlying conditions that led to documentation of positive or negative outcomes. Then detailed typologies for the factors will be developed and presented to communities for prioritization depending on their relative impacts on the ecosystem. This will help to screen the main factors (threats and drivers) to develop management interventions using existing knowledge bases from past projects in the areas. Three cross-sectional transects across the land-seascapes will be laid out to document activity profiles that lead to mangrove exploitation. Sex-disaggregated participatory analysis of threats and drivers of mangrove and landscape degradation will be accomplished. In each land/seascape, four community consultation and participatory assessments will be conducted. For each of the meetings, male and female extension workers will lead the discussions in local languages for the male and female groups respectively. For this purpose, also, we have scientists from both genders specifically working on the field activities and consultation and validation meetings.

To understand the spatial-temporal changes in the state of the mangrove ecosystem, the project will collate local ecological knowledge and site-specific changes in land cover and land use types to contextualize the GIS data trends. This will complement the temporal imagery data from Sentinel and Landsat 7 and 8 satellites. Using the results from these processes and data from literature in the region and other regional biomass models, carbon stocks estimates for the landscapes will be made. Data on trends in mangrove health and existing conditions will also feed into the cross-sectoral multivariate analysis.

### **Sub Activity 2b: Developing a sustainable land/seascape collaborative vision (ICRAF Lead)**

Building on *Activity 2a*, we will identify where there are opportunities in the land/seascape for sustainable resources management. Using a cross-sectional transect (transects that cut across the landscape connecting it to the seascape) through each landscape, we will identify areas of weakness in the landscapes (unsustainable practices) and options for improvement (introduction of sustainable practices). This may, for example, involve identifying management interventions that could be adopted or scaled within the landscape based on biophysical, social, and cultural suitability. The

visioning also identifies who should do what, when and how. The visioning incorporates issues of shellfishing, coastal resources uses and in the agricultural areas about the food systems. There are specific areas where women are very prominent, such as in the shellfishing, and there are areas where men are more active, such as in the agricultural activities in the landscapes. The vision exercise pulls these different activities together to achieve and increase complementarity. Gender equality will be addressed by identifying socially and culturally acceptable roles and responsibilities and assigning them to the actors (i.e. men or women) who could best address them. To capture this effectively, selection of participants for the consultation and validation meetings will be done recognizing existing social, wealth and ethnic differences in the society to ensure inclusivity beyond gender issues.

The vision development will be based on the biophysical characteristics of the landscapes, the capacities of the key stakeholders in the land-seascape and how much return it could potentially generate from a livelihood perspective and ensuring reduction of pressure on the mangrove ecosystems. This can only be possible if the social capital among the communities and or stakeholders is strong. The vision development therefore will be based on the 4R's principle/ tool ([Meyers 2005](#)) capturing the rights, responsibilities, returns and relationships that exist. This also needs to be built to reduce externalities to the ecosystem and enhance complementarity and synergies among activities of various stakeholders. The inputs required to achieve the perceived 'better state' as described in the vision will be examined. At the end of the project each site will have a land-seascape vision that local partners or other government agencies can use to improve the state of the land/seascape.

Activity 2a, 2b and 2c essentially work together to expand the mangrove management model into a broader land and seascape approach to natural resource management, biodiversity conservation and food and nutrition security. It provides an opportunity to test tools and apply them in a combined and holistic manner.

#### **Sub-Activity 2c: Integrated land/seascape food and nutrition complementarity profile using agricultural biodiversity and wild foods and feeds. (ICRAF Lead)**

A participatory screening of agricultural biodiversity and wild food and feed categories in each field site will be conducted. For each of the prioritized species, their contribution to food and nutrition security at the landscape level will be assessed based on existing production potential, including land availability for planting, and the respective nutrient content. Using production potential and seasonality, a food and nutrition portfolio for the land-seascapes in each country will be established. For wild tree species with high food and nutrition value, a domestication strategy will be developed for further piloting by other interested parties. Cross-sectional transects will be used to sample the current tree species abundance which contribute to the food and nutritional needs of local communities. Based on this, ICRAF will specifically develop; (1) A food and nutritional portfolio for

selected landscapes in The Gambia and Ghana; and; (2) domestication strategies for high food and nutritional value wild tree species for each country. For the high value food and nutritional species, appropriate agroforestry interventions will also be designed as a protocol for integrating the identified wild food and feed species into the landscapes. Depending on the preferences of the community, which could be influenced by numerous factors among which land availability, land suitability, etc. are key, this could be individual or communal interventions. The underlying premise is if such high value wild food and feed tree species become part of the food systems, the livelihoods and household resilience of local communities improve and pressure on mangrove ecosystems will decrease hence boosting sustainability of shell fishing and household resilience.

The food and nutrition portfolios (or Nutritious Food Portfolios) are context-specific recommendations for producing and consuming a greater diversity of nutrient-rich foods to address seasonal food harvest gaps, and micronutrient gaps in local diets. They consist of a variety of indigenous and exotic trees and crops including fruits, vegetables, pulses and staples. The portfolios are co-developed with communities taking into consideration socio-ecological dynamics of food production including seasonal availability, food security, and food consumption. They are further informed and validated with communities taking into consideration their needs and priorities for producing food for home consumption and income generation. The portfolios matter in our research because they are an approach to ensuring that agricultural and wild biodiversity are prioritized as part of a solution for promoting greater diversity of nutritious foods in local production systems and diets.

**Sub-Activity 2d: Analysis of shellfisheries and associated bio-physical parameters of the estuaries. (UCC Lead, UG and URI participation)**

UCC will document the current status of the shellfisheries and number of shellfishers (disaggregated by sex). UCC will conduct participatory shellfish stock assessments looking at stock sizes and maturity levels (size at maturity) and determine trends of exploitation. We will assess water quality parameters, including physicochemical parameters, heavy metal content (mercury) and microbial levels, (i.e. E. coli). Sites will be ranked by high, medium, and low levels of exploitation, pressure and fishery health. Participatory assessments will also document governance and other socio-economic variables to be used in the cross-sectoral multivariate analysis.

Analysis by the University of Ghana and URI will also quantify the benefits of oyster consumption. This will include an oyster consumption questionnaire that captures what percent of the Recommended Dietary Allowance (RDA) for iron and zinc is met by oyster consumption in these communities or a food frequency questionnaire (FFQ) that captures all sources of zinc and iron in the women's diet to determine what percent of their total iron and zinc consumption is coming from oysters. Quantification or estimates of economic value will be conducted for the shellfish

harvested, as well as percent sold for cash income versus household consumption. This will be factored into measures of household resilience and will be assessed by UCC.

#### **Sub-Activity 2e: Anemia research. (UG/URI Lead)**

The URI Department of Nutrition and Food Science and University of Ghana will lead the assessment of food security and anemia prevalence across the six field sites. Food security will be measured using the Household Food Insecurity Access Scale (HFIAS), a questionnaire developed by the Food and Nutrition Technical Assistance (FANTA) II project that covers nine experiences of food insecurity over the past four weeks. Consumption of animal source foods (including oysters/shellfish) will be assessed by using a food frequency questionnaire. Anemia will be assessed using portable HemoCue devices to measure the hemoglobin concentration of women on site using one drop of blood obtained by finger prick. This technique is an inexpensive and excellent method for rapidly measuring hemoglobin in a small amount of blood in the field setting. It does not measure other blood indices that may be related to anemia (i.e. malaria). We will use questionnaire interview data to investigate what background factors might be related to anemia in our sample (i.e., exposure to indoor smoke and morbidity). At each of the six sites we will collect food insecurity and anemia data from 200 women (1200 total), giving an effect size of 0.3 (given 80 percent power and 0.05 level of significance) for cross site comparisons. The effect size indicates the magnitude of the difference between groups while taking into account the variability in the measurement. In statistics, it is generally accepted that effect sizes less than 0.2 are more likely to be trivial differences, while an effect size of 0.8 is viewed as a large magnitude of difference. Thus, with an effect size of 0.3, we do not require a large magnitude of difference between groups to obtain significance, but we also have ensured that we are not identifying very small differences, which are unlikely to have real world implications, as significant. Data from these parameters will also feed into the multivariate analysis.

#### **Sub -Activity 2f: Coordinate TOC review, data gathering, and multivariate analysis. (UCC/URI Lead: ICRAF, TRY, UG participation)**

URI, ICRAF, Univ. of Ghana and UCC will coordinate a multivariate and qualitative analysis of the dataset from the six sites to test the hypotheses stated previously. Data collection on all variables will use [Kobotoolbox](#) which is a free cloud-based platform that allows field data collection from smart phones and tablets with uploads via cellular networks. The database and survey forms can be accessed from any location and use multiple language forms as necessary. Data will be analyzed using statistical packages such as SPSS and using a variety of tests depending on data type. Survey data will be supplemented with qualitative information based on local knowledge and secondary information. The write up of the findings will include discussion of potential confounding variables behind statistical correlations and qualitative relationships, or if no confounding variables are found. As part of documentation of the evidence base, we will summarize knowledge and cross-sectoral

connections relative to the various parts of the Theory of Change as to whether that evidence is weak, moderate or strong, and extent to which our research findings have improved it or not, or if findings are counter to hypothesized assertions. The analysis will be summarized in a report and a journal manuscript drafted and submitted for peer review and publication. Results of the study will be disseminated to the network of stakeholders involved in the regional assessment and the in-depth field work. For results related to nutrition and health, results will be shared with local health authorities who will be engaged from the beginning of the process, throughout, and when findings are known, for guidance on the best method for sharing information with the community members. This would include potential benefits of shellfish consumption for a healthy diet and any identified risk due to heavy metal contamination or high levels of E. coli as an indicator of potential human pathogens.

### **COVID-19 Mitigation and Adaptation Measures.**

Mitigation measures for implementation of Activity 2 and sub-activities 2a to 2f in accordance with safety standards to prevent the spread of COVID-19 are described in the COVID-19 Implementation Plan (Appendix 1 of the Program Description) and personal protective supplies have been included in the project budget accordingly.

If international travel from the US is suspended, this activity can still be implemented remotely by partners. If travel within West Africa is suspended, site-based research could still be conducted through increased reliance on country-based partners and short-term technical assistants supervised remotely by the originally planned partner staff. If local travel or in-person meetings and gatherings are prohibited in Ghana or The Gambia, implementation of this activity and its sub-activities will be compromised and will be delayed.

### **Activity 3: Foster a community of practice around a Toolkit and Establish a Development Committee and a Group of Reviewers from among Stakeholders in 11 Countries (UCC/URI Lead: ICRAF, TRY, UG participation)**

URI will work with key stakeholders across the region to develop a Toolkit presenting a rights-based, ecosystem-based, livelihoods, participatory and gender-equitable co-management approach to managing shellfisheries and associated mangrove ecosystems in West Africa. The toolkit will be based on existing case experience and new knowledge resulting from the regional assessment, and site-based research. It will synthesize existing knowledge on tested approaches and expected benefits in an easy to use format. The Toolkit will provide accessible guidance for women harvesters and other stakeholders on implementation and sustainability of the approach including the importance of networking, learning and adapting. The Toolkit will be developed by engaging women shellfishers, academics, the private sector, and government actors in action learning. We will mirror the [West Africa Coastal Areas Management Program \(WACA\)](#) approach to establishing a regional network of countries/institutions, including those mentioned in Activity 1, that can assist in the

sustainability and the scale up of this investment given that there are no known regional bodies currently engaged in this kind of integrated natural resources management (NRM) and related food systems approach in West Africa. Building this network into existing ones may not attract the needed attention, impact and visibility as this seeks to highlight conservation and sustainable production of food resources integrated in NRM. A special vehicle may be needed to drive this agenda and this project will strengthen the enabling conditions for a nascent region-wide community of practice with this focus. This is very critical for the region's blue economy moving into the future. Field testing of the toolkit will precede finalization and dissemination. The involvement of stakeholders in all the project activities is designed to foster a regional community of practice that we envision will continue beyond the end of the project

#### **COVID-19 Mitigation and Adaptation Measures.**

Mitigation measures for implementation of this activity in accordance with safety standards to prevent the spread of COVID-19 are described in the COVID-19 Implementation Plan (Appendix 1 of the Program Description) and personal protective supplies have been included in the project budget accordingly.

If international travel from the United States is suspended, this activity can still be implemented remotely by partners. If travel within West Africa is suspended but did not significantly affect the implementation of Activities 1 and 2 that inform the content and community-based stakeholder networks for toolkit development, then this activity could still be conducted.

#### **Activity 4: Toolkit and Participatory Regional Assessment Dissemination (UCC/URI Lead: ICRAF, TRY, UG participation)**

The toolkit will be disseminated through outreach and training of trainers for scale up and conducted in local languages. Documents will be produced in easily printable electronic form and include a how to guide, briefs on the socio-ecological benefits expected and other simple educational guides and aides on mangrove and shellfish biology and ecology. Materials will be made available on multiple websites of institutional partners and USAID platforms. The training of trainer's workshop will be a two-step process of sessions within each country and a regional virtual on-line event (one for anglophones and one for francophones). More than 74 individuals from 37 local level, national, and regional stakeholder institutions (including resource users, government, academia, regional institutions, and development partners) from 11 coastal countries will benefit from outreach. These activities will ensure that information created is used and enhance ability to scale up to other locations or at a regional scale.

A stakeholder engagement and dissemination plan (milestone 3) developed in the start-up phase will specify and map activities, actors and timelines that engage key stakeholders from the beginning as integral developers of project outputs, as primary end users, and as drivers of dissemination of project results and products to wider audiences and foster sustainability.



### COVID-19 Mitigation and Adaptation Measures:

Mitigation measures for implementation of Activity 4 in accordance with safety standards to prevent the spread of COVID-19 are described in the COVID-19 Implementation Plan Appendix 1 and personal protective supplies have been included in the project budget accordingly.

If international travel from the US is suspended, this activity can still be implemented remotely by partners. If travel within West Africa is suspended, site-based research could still be conducted through increased reliance on country-based short-term technical assistants supervised remotely by the originally planned partner staff. If local travel or in-person gatherings are prohibited in Ghana or The Gambia, implementation of this activity and its sub-activities will be compromised. The toolkit however could still be disseminated through online media and virtual workshops or training of trainers conducted online.

## 3. MONITORING EVALUATION AND LEARNING PLAN

The Tables in this section detail expected outcomes and indicators of achievement, summarize performance indicators, and present a performance indicator tracking table with indicator targets over the two-year project period.

In the Program Description, the project identifies some key questions and challenges to be addressed by the Theory of Change that will be tested in the site-based research. These constitute the project's focus for Learning Questions as follows:

The University of Rhode Island (URI) and partners propose to address the challenge identified in the AFR BAA under **Area of Interest #2: Regional dimensions of the nexus of sustainable NRM and food systems** concerning the need for tools, approaches, and processes to enable and promote regional sustainable food systems and NRM. The project will also address **Area of Interest #1: Sustainable NRM and Food Systems** concerning cross-sectoral integration and synergies between food production systems and the environment.

Key Question 1: What is the extent of socio-ecological benefits provided by empowering women shellfish harvesters to co-manage estuarine shellfisheries as a means to conserve mangrove ecosystems in coastal West Africa? By co-management, we mean the sharing of decision making between resource users and government authorities over the goals of management, choice of management actions as to how resources will be managed sustainably, who can harvest and defining the resources and areas where user rights are provided.

Key Question 2: Can the basic and well proven model linking shellfish management and mangrove conservation be expanded into a more integrated approach that provides cross sectoral benefits within the coastal mangrove seascape and adjacent landscape for sustainable food production and a

nutritionally balanced food supply that contributes to improved nutritional wellbeing of this marginalized group?

Key Question 3: What is the potential for women's shellfish co-management to provide an entry point for integration with community-based forestry management approaches demonstrated in the region in order to better address some of the key threats of mangrove degradation and the gender dynamics of those threats.

The project's comprehensive approach to addressing these questions integrates concerns over the differential levels of access to, and utilization of natural resources (shellfisheries and mangroves) by vulnerable groups (marginalized women shellfish harvesters) and will articulate the implications of these dynamics for promoting cross-sectoral programming towards USAID goals of sustainable NRM and broad-based economic growth in coastal communities. Learning question results will be shared and disseminated as part of the Activity 3: Community of Practice and Toolkit Development and Activity 4: Dissemination activities

### 3.1 Expected Outcomes and Indicators of Achievement

The following table provides details of the project’s expected outcomes and indicators of achievement as well as targets in relation to the project objectives and related activities.

*Table 1: Expected outcomes and related indicators in relation to project objectives and activities*

Activities	Expected Outcomes	Indicators
Key Objective 1: A stronger evidence base for the potential of replicating an ecosystem-based approach to shellfish co-management in the region.		
Activity 1: Participatory Regional Assessment	The evidence-base for empowerment of women in shellfish livelihoods as a driver of mangrove conservation and resulting food security and nutrition outcomes is strengthened.	Output Indicator 1: Number of research results documented and available (1 of 7 Special Studies (Resources for Missions) AFR/SD Custom Indicator STIR-1-UAF: Participatory Regional Assessment Report)
Key Objective 2: A stronger evidence base for the existing and enhanced model.		
<p>Activity 2: Elaborate and test elements of models</p> <p>Sub Activity 2a: Participatory assessment of threats and drivers of mangrove ecosystem degradation and preferred restoration options.</p> <p>Sub Activity 2b: Developing a sustainable land/seascape collaborative vision.</p> <p>Sub-Activity 2c: Integrated land/seascape food and nutrition profile.</p> <p>Sub-Activity 2d: Analysis of shellfisheries and associated bio-physical parameters of the estuaries.</p> <p>Sub-Activity 2e: Anemia</p>	<p>The evidence-base for empowerment of women in shellfish livelihoods as a driver of mangrove conservation and resulting food security and nutrition outcomes is strengthened.</p> <p>The strength of the association between natural resources management, food security, and anemia within the mangrove-shellfish land/seascape linked socio-ecological system is measured. Local, national, and regional stakeholders (e.g. resource users, government, academia, regional institutions, and development partners.) in West Africa are better sensitized, equipped, and networked to invest in opportunities to apply good practices for:</p> <ul style="list-style-type: none"> <li>- empowering women to apply sustainable shellfish and forestry management approaches that address drivers of deforestation and their gender dynamics.</li> <li>- integrated land/seascape food production livelihood approaches for improved nutritional well-being that may be impacted by resource</li> </ul>	<p>Outcome Indicator 1: Research hypotheses (as noted in the Theory of Change section) or alternative findings are validated by research results.</p> <p>Output Indicator 1: Number of research results documented and available (6 of 7 Special Studies (Resources for Missions) AFR/SD Custom Indicator STIR-1-UAF):</p> <ol style="list-style-type: none"> <li>1. Analysis of threats and drivers and restoration options</li> <li>2. Sustainable land/seascape collaborative vision</li> <li>3. Land-seascape food and nutrition profile</li> <li>4. Analysis of shellfishery</li> <li>5. Anemia research</li> <li>6. TOC multivariate analysis</li> </ol>

Activities	Expected Outcomes	Indicators
<p>research. Sub-Activity 2f: TOC and multivariate analysis.</p>	<p>management measures. Nutrition sensitive approaches to livelihoods and co-management decision-making based on piloted approaches for nutritional gaps analysis and food production development are demonstrated. (e.g. understanding of how natural resource management measures such as closed fishing seasons might impact food security/dietary diversity/consumption of animal source foods (e.g. oysters/shellfish) and anemia prevalence of women oyster harvesters and ways this could be mitigated).  Linkages between women's shellfish co-management and community-based forestry management approaches in the mangrove land/seascape to reduce gender-based livelihoods conflicts are identified (e.g. conflicts between women shellfish harvesters wanting to protect mangroves for the oyster fishery while men cut mangroves for fuel wood or other income and livelihood needs).</p>	
<p>Key Objective 3: Accessible (user friendly) tools and an enabled community of practice across West Africa.</p>		
<p>Activity 3: Foster a community of practice around a Toolkit and Establish a Development Committee and a Group of Reviewers from among Stakeholders in 11 Countries  Activity 4: Toolkit and Participatory Regional Assessment dissemination</p>	<p>Cross sectoral linkages that produce win-win synergies are confirmed (or not), documented and disseminated widely to promote scale up.  Local, national, and regional stakeholders (e.g. resource users, government, academia, regional institutions, and development partners.) in West Africa are better sensitized, equipped, and networked to invest in opportunities to apply good practices for:  - empowering women to apply sustainable</p>	<p>Outcome Indicator 2: Shellfish and mangrove stakeholders (percent female): - Have increased awareness of the basic concepts embodied in the theory of change, - Have tools to design interventions to achieve TOC intended outcomes, - Are networked regionally, and - Some identify plans or resources to pursue opportunities for scale up.  Output Indicator 2: Number of people trained in sustainable natural resources management and/or biodiversity conservation as a result of USG assistance (USAID Standard Indicator EG.10.2-4)</p>

Activities	Expected Outcomes	Indicators
	<p>shellfish and forestry management approaches that address drivers of deforestation and their gender dynamics.</p> <ul style="list-style-type: none"> <li>- integrated land/seascape food production livelihood approaches for improved nutritional well-being that may be impacted by resource management measures.</li> </ul>	<p>Output Indicator 3: Number of Toolkits produced (1)</p> <ul style="list-style-type: none"> <li>- 1 Toolkit for stakeholders documenting best practices, and cross-sectoral linkages by highlighting opportunities and approaches for women to co-manage shellfisheries, increase mangrove conservation and improve nutrition based on the research results (Activity 2) and the participatory regional assessment (Activity 1).</li> </ul> <p>Output Indicator 4: Number of Dissemination Activities (17+) with gender disaggregation of participants (% female):</p> <ul style="list-style-type: none"> <li>- 11 country level key stakeholder meetings (1 in each country) to disseminate at the country level the final participatory regional assessment.</li> <li>- 1 Region-wide stakeholder meetings to disseminate the final regional assessment.</li> <li>- 1 Region-wide Theory of Change Research findings stakeholder workshop.</li> <li>- 1 Training of Trainers workshop on the Toolkit.</li> <li>- Number of on-line platforms where the toolkit, participatory regional assessment and research findings are posted and/or discussed.</li> <li>- 2 peer reviewed journal articles submitted for publication in peer reviewed journals</li> </ul> <p>Output Indicator 5: Number of institutions receiving capacity development support (AFR/SD Custom Indicator CBLD-9-UAF). Support includes engagement in project research and toolkit development and dissemination activities (disaggregated by type of institution)</p> <ul style="list-style-type: none"> <li>- Consolidated list and evidence of participation in a networked community of practice to include a minimum of 37 organizations (3 organizations per country X 11 countries + 4 regional organizations).</li> </ul> <p>Output Indicator 6: Number of host country higher education institutions receiving capacity development support with USG assistance (AFR/SD Custom Indicator ES.2-1). A subset of Output Indicator 5 (One of the 3 organizations per country X 11 countries = 11).</p>

*Table 2: Performance Indicator Summary*

Indicator	Definition	Outcome/ Output	Data Disaggregation	Data Source
Key Objective 1: A stronger evidence base for the potential of replicating an ecosystem-based approach to shellfish co-management in the region.				
Number of research results documented and available (AFR/SD Custom Indicator STIR-1-UAF: Special Studies (Resources for Missions))	This output indicator captures annually the number of publications resulting from USAID Africa Bureau support to research and implementation programs. This indicator is NOT cumulative and captures only new publications not reported previously. Under this objective the Participatory Regional Assessment Report will be counted.	Output	None	Publications URI Milestone 7
Key Objective 2: A stronger evidence base for the existing and enhanced model.				
Research hypotheses or alternative findings are validated by research results.	This indicator will be achieved if research findings are produced that either validate the research hypotheses or validate alternative findings. The research hypothesis as noted in the Theory of Change section of the Project Description of the award is the benchmark against which research findings will be assessed to make this determination.	Outcome	None	Publications URI Milestone 11
Number of research results documented and available (AFR/SD Custom Indicator STIR-1-UAF: Special Studies (Resources for Missions))	This output indicator captures annually the number of publications resulting from USAID Africa Bureau support to research and implementation programs. This indicator is NOT cumulative and captures only new publications not reported previously. Under this objective the following reports will be counted. <ul style="list-style-type: none"> <li>• Analysis of threats and drivers and restoration options</li> <li>• Sustainable land/seascape collaborative vision</li> <li>• Land-seascape food and nutrition profile</li> <li>• Analysis of shellfishery</li> <li>• Anemia research</li> <li>• TOC multivariate analysis</li> </ul>	Output	None	Publications URI Milestones 10 and 11
Key Objective 3: Accessible (user friendly) tools and an enabled community of practice across West Africa.				
Number of shellfish and mangrove stakeholders that: <ul style="list-style-type: none"> <li>• Have increased awareness of the basic concepts embodied in the theory of change,</li> <li>• Have tools to design interventions to achieve TOC intended outcomes,</li> </ul>	Shellfish and mangrove stakeholders include individuals who are resource users and value chain actors, or members of academic, government, NGO or West Africa Regional organizations involved in the sector.  Increased awareness of the basic concepts embodied in the TOC is as measured by an increase in a baseline and end of project survey score for each individual.  Have tools means that the toolkit, participatory regional assessment report and technical research results are available to them.	Outcome	Sex male/female and percent female	Workshop reports and participant lists. Pre and post surveys URI Milestone 12

Indicator	Definition	Outcome/ Output	Data Disaggregation	Data Source
<ul style="list-style-type: none"> <li>Are networked regionally, and</li> <li>Some identify plans or resources to pursue opportunities for scale up.</li> </ul>	<p>Networked regionally means they are on one or more electronic platforms set up or used by the project for knowledge sharing of project results. Identification of plans or resources for scale up will be as documented by the final survey.</p>			
<p>Number of people trained in sustainable natural resources management and/or biodiversity conservation as a result of USG assistance (USAID Standard Indicator EG.10.2-4)</p>	<p>Number of people who have successfully completed a training course. Successful completion requires that trainees meet the completion requirements. Training courses are sessions in which participants are educated according to a defined curriculum and set learning objectives. The transfer of this knowledge, skills or aptitudes may occur through long-term academic programs, long-term or short-term technical courses, non-academic seminars, workshops, verifiable online courses, or courses in the field. Sessions that could be informative or educational, such as meetings, but do not have a defined curriculum or learning objectives are not counted as training. Sustainable natural resources management is defined as managing natural resources in ways that maintain their long-term viability and preserve their potential to meet the needs of present and future generations. Biodiversity conservation refers to direct and indirect actions (including sustainable natural resources management) with the goal of conserving biodiversity in ways that maintain their long-term viability and preserve their potential to meet the needs of present and future generations. Support from the USG: This indicator counts training hours that were delivered in full or in part as a result of USG assistance.</p>	Output	<p>Sex male/Female Conservation law compliance category: -wildlife trafficking -illegal logging and associated trade -illegal, unreported and unregulated fishing</p>	Attendance records and training reports
<p>Number of Toolkits produced</p>	<p>This means URI Milestone 12, a Toolkit for stakeholders documenting best practices and cross-sectoral linkages by highlighting opportunities and approaches for women to co-manage shellfisheries, increase mangrove conservation and improve nutrition based on the research results (Activity 2) and the participatory regional assessment (Activity 1). The Final Toolkit represents the completion of Activity 3 following country and regional stakeholder input and engagement as developers and as the target audience for the final toolkit. It will include a portfolio of user-friendly documents and tools to equip stakeholders for practical application of the improved evidence base for effective approaches documented by this project. It may also include a series of Concept Note type briefs highlighting specific opportunities identified in the region for scale-up of these approaches.</p>	Output	None	URI Milestone 12

Indicator	Definition	Outcome/ Output	Data Disaggregation	Data Source
Number of Dissemination Activities	<p>Number of Dissemination Activities will include:</p> <ul style="list-style-type: none"> <li>● Country level key stakeholder meetings (1 in each country) to disseminate at the country level the final participatory regional assessment.</li> <li>● A region wide stakeholder meeting to disseminate the final regional assessment.</li> <li>● A region-wide Theory of Change Research findings stakeholder workshop.</li> <li>● A Training of Trainers workshop on the Toolkit.</li> <li>● Number of on-line platforms where the toolkit, participatory regional assessment and research findings are posted and/or discussed.</li> <li>● Peer reviewed journal articles submitted for publication in peer reviewed journal</li> </ul>	Output	Sex Male/female and percent female	Workshop and event reports and participant lists List of on-line platforms where project products are posted Evidence of peer reviewed journal article submission
Number of institutions receiving capacity development support (AFR/SD Custom Indicator CBLD-9-UAF).	<p>This custom indicator tracks the number of institutions receiving capacity development support from Africa Regional. Institutions here will be defined as external (a non-governmental organization, private sector entity, or public institutions, including Public International Organizations (PIOs)). External institutions/organizations should be counted (not individual components or departments). For example, if working with multiple departments within a single university, the university should be counted as a whole, not as individual departments.</p> <p>In the context of this project, capacity development support includes project activities that address an organization's self-identified need to improve technical capacity to design and implement or support design and implementation of women's shellfish and food security initiatives. These activities include but are not limited to Training of Trainers for the Toolkit.</p>	Output	Type of organization (project designated not USAID); 1. Resource user; Academia; Government; NGO 2. National; WA Regional; International	Workshop reports and participant lists Pre and post surveys Data from community of practice platforms
Number of host country higher education institutions receiving capacity development support with USG assistance (AFR/SD Custom Indicator ES.2-1)	<p>A "higher education institution" (HEI) is an organization that provides educational opportunities that build on secondary education, providing learning activities in specialized fields. It aims at learning at a high level of complexity and specialization. Higher education includes what is commonly understood as academic education but also includes advanced vocational or professional education that is not part of general or technical secondary education. This may include public or private universities, colleges, community colleges, academically-affiliated research institutes, and post-secondary training institutes, including teacher training institutes.</p>	Output	Number of public HEIs  Number of private HEIs	Workshop reports and participant lists Pre and post surveys Data from community of practice platforms



Indicator	Definition	Outcome/ Output	Data Disaggregation	Data Source
	<p>"Host country institution" refers to institutions receiving capacity development support. Institutions providing support should not be counted here. The institution should be counted (not individual components or departments). For example, if an activity is working with multiple departments within a single university, the university should be counted as a whole, not as individual departments.</p> <p>"Capacity" is the ability of people, organizations and society as a whole to manage their affairs successfully.</p> <p>"Capacity development support" is comprised of a range of activities, interventions, processes, and approaches that may include, but are not limited to institutional partnerships, professional development, training, coaching, technical assistance, participatory assessments, process mapping and improvement, etc. These may be focused on a range of specific topics, including but not limited to human resources, management and administration, instruction, research, technology transfer, translation of knowledge, infrastructure, fund raising, etc.</p> <p>A list of higher education institutions receiving support should be reported in the narrative associated with this indicator.</p>			

Table 3: Performance Indicator Tracking Table

Indicator	Base -line	Year 1			Year 2			LOP			Comments
		Target	Actual	% target v. actual	Target	Actual	% target v. actual	Target	Actual	% target v. actual	
Number of research results documented and available (AFR/SD Custom Indicator STIR-1-UAF: Special Studies (Resources for Missions))	0	1			6			7			1 Participatory Regional Assessment 5 Technical Reports 1 Consolidated Multivariate TOC Report
Research hypotheses or alternative findings are validated by research results.	0	0			Tracked			Tracked			Will be tracked but no target
Number of shellfish and mangrove stakeholders that: <ul style="list-style-type: none"> <li>• Have increased awareness of the basic concepts embodied in the theory of change,</li> <li>• Have tools to design interventions to achieve TOC intended outcomes,</li> <li>• Are networked regionally, and</li> <li>• Some identify plans or resources to pursue opportunities for scale up.</li> </ul>	0	0			74			74			6 per country x 11 countries + 4 regional institutions with 2 pax each = 8 (i.e., 2 people per organization from the 37 institutions)
Number of people trained in sustainable natural resources management and/or biodiversity conservation as a result of USG assistance (USAID Standard Indicator EG.10.2-4)	0	0			74			74			6 per country x 11 countries + 4 regional institutions with 2 pax each = 8 (i.e., 2 people per organization from the 37 institutions)
Number of Toolkits produced	0				1			1			
Number of Dissemination Activities	0	0			17+			17+			11 country level key stakeholder meetings (1 in each country) to disseminate

Indicator	Base -line	Year 1			Year 2			LOP			Comments
		Target	Actual	% target v. actual	Target	Actual	% target v. actual	Target	Actual	% target v. actual	
											<p>at the country level the final participatory regional assessment.</p> <p>1 Region-wide stakeholder meetings to disseminate the final regional assessment.</p> <p>1 Region-wide Theory of Change Research findings stakeholder workshop.</p> <p>1 Training of Trainers workshop on the Toolkit.</p> <p>Number of on-line platforms where the toolkit, participatory regional assessment and research findings are posted and/or discussed.</p> <p>2 peer reviewed journal articles submitted for publication in peer reviewed journals</p>
Number of institutions receiving capacity development support (AFR/SD Custom Indicator CBLD-9-UAF).	0	0			37			37			3 institutions per country X 11 countries + 4 regional institutions
Number of host country higher education institutions receiving capacity development support with USG assistance (AFR/SD Custom Indicator ES.2-1)	0	0			11			11			1 institution per country X 11 countries

## 4. IMPLEMENTATION PLAN

The table below shows the timeline of activities by quarter and month (September 15, 2020 to September 14, 2022). Items in blue refer to milestones.

*Table 4: Activities by quarter and month and by partner.*

Activities	Output (Product/ Report)	Result Target per MEL Plan	Responsible Person	Q1			Q2			Q3			Q4			Q5			Q6			Q7			Q8					
				1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
<b>Start Up</b>				X	X	X																								
Put Sub-awards in place	4 executed Sub-awards		URI Brian	X																										
Sub-awards period of performance 10/1/2020-08/14/2022	UCC Sub-award		UCC Denis	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	UG Sub-award		UG Seth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	ICRAF Sub-award		ICRAF Lalisa	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	TRY Sub-award		TRY Fatou	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Develop and submit Project Implementation Plan w/MEL	IP w/MEL submitted		URI Brian	X																										
Partners contribution to IP w/MEL Confirmed	UCC IP/MEL contribution document		UCC Denis	X																										
	UG IP/MEL contribution document		UG Seth	X																										
	ICRAF IP/MEL contribution document		ICRAF Lalisa	X																										
	TRY IP/MEL		TRY	X																										

Activities	Output (Product/ Report)	Result Target per MEL Plan	Responsible Person	Q1			Q2			Q3			Q4			Q5			Q6			Q7			Q8		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	contribution document		Fatou																								
Prepare and submit IRB packages to IRBs	URI IRB packages submitted		URI Brian Brie		X																						
	URI IRB approvals		URI Brian Brie			X																					
	UCC IRB packages submitted		UCC Denis		X																						
	UCC IRB approvals		UCC Denis			X																					
	UG IRB packages submitted		UG Seth		X																						
	UG IRB approvals		UG Seth					X																			
	ICRAF IRB??																										
Site selection The Gambia & Ghana	6 Sites selected. Site selection report		UCC Denis URI Brian		X																						
	Desktop review for potential sites (The Gambia and Ghana)		UCC Denis URI Brian	X																							
	Set criteria for selection of ecosystems		UCC Denis URI Brian	X																							
	Engage with TRY Oyster/ Partners on the selection of sites		UCC Denis URI Brian	X																							
	Field trip to identify suitable shellfish/mangrove ecosystems		UCC Denis URI Brian	X																							

Activities	Output (Product/ Report)	Result Target per MEL Plan	Responsible Person	Q1			Q2			Q3			Q4			Q5			Q6			Q7			Q8		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	(Gambia/Ghana)																										
Partners contribution to site selection	UG site selection contribution document		UG Seth URI Brie		X																						
	ICRAF site selection contribution document		ICRAF Lalisa		X																						
	TRY site selection contribution document		TRY Fatou		X																						
	Finalize and submit 6-site selection Report		UCC Denis URI Brian		X																						
Develop and submit stakeholder engagement and dissemination plan	Stakeholder engagement and dissemination plan submitted		URI Brian Brie			X																					
Partners contribution to stakeholder engagement and dissemination plan	UCC contribution document		UCC Denis			X																					
	UG contribution document		UG Seth			X																					
	ICRAF contribution document		ICRAF Lalisa			X																					
	TRY contribution document		TRY Fatou			X																					
<b>Activity 1: Participatory regional assessment</b>		Output Indicator 1: Number of research results documented and available (1 of 7 Special Studies STIR-1-UAF)	UCC Denis			X	X	X	X	X	X	X	X	X	X												

Activities	Output (Product/ Report)	Result Target per MEL Plan	Responsible Person	Q1			Q2			Q3			Q4			Q5			Q6			Q7			Q8		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Develop Literature Review Outline and Assignments	Report template		UCC Denis	X																							
Conduct Literature Review	Literature Review Report	Contributes to Special Study for Activity 1	UCC Denis		X	X																					
Draft scope of work for in-country participatory shellfishers/mangrove assessment	SOW (with timelines and detailed budget)	Contributes to Special Study for Activity 1	UCC Denis		X																						
Identify in-country focal persons (FP) for participatory assessment (PA) (ACECoR/WACA network and project partners)	List of Focal Persons		UCC Denis		X																						
Preliminary discussions signing of contract for engagement in-country FP			UCC Denis			X																					
Organize online inception meeting with in-country FP			UCC Denis			X																					
Identify minimum of 37 organizations (1 Resource user, 1 academia, 1 government per country and 4 Regional) as key	List of organizations and at least 2 points of contact for each	Contributes to 37 institutions receive capacity development support; and 74 shellfish and mangrove stakeholders that: -Have increased awareness of the basic concepts embodied in the theory of	UCC Denis and in-country FP			X	X																				

Activities	Output (Product/Report)	Result Target per MEL Plan	Responsible Person	Q1			Q2			Q3			Q4			Q5			Q6			Q7			Q8		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
stakeholder participants in WSFS		change, -Have tools to design interventions to achieve TOC intended outcomes, -Are networked regionally, -Some identify plans or resources to pursue opportunities for scale up.																									
Conduct individual and organizational Pre and Post surveys	Organization survey baseline and end of project reports Individual survey baseline and end of project reports	Contributes to the previous 2 indicators across all project Activities.	UCC Denis and In-country FP				X	X																		X	X
Conduct in-county PAs-workshops, site visits, etc.			UCC In-country FP				X	X																			
Report on in-country PAs to UCC/CCM	Weekly briefs, Final reports		Coordinate d by UCC country liaisons				X	X																			
Submit Draft Assessment Report	Draft Assessment Report	Contributes to Special Study for Activity 1	UCC Denis																								
Engage external assessors			UCC Denis											X													
Conduct report review/assessment			UCC Denis												X												
Revise Assessment Report	Revised Assessment Report		UCC Denis												X	X											
Submit Final Assessment Report	Final Assessment Report	1 Special Study	UCC Denis																								



Activities	Output (Product/ Report)	Result Target per MEL Plan	Responsible Person	Q1			Q2			Q3			Q4			Q5			Q6			Q7			Q8		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Partner contribution to Activity 1	TRY contribution report		TRY Fatou		X	X		X	X					X	X												
Partner contribution to Activity 1 (review)	Comments		URI, UG, ICRAF		X			X						X													
<i>Activity 2: Site based research in The Gambia and Ghana</i>		Outcome Indicator 1: Research hypotheses (as per TOC) or alternative findings are validated by research results. Output Indicator 1: Number of research results documented and available (6 of 7 special reports)						X	X		X	X		X	X		X	X		X	X		X	X		X	X
TRY contributes to Activities 2 a, b, c, d, e, facilitating community entry and organization for data collection in The Gambia.	TRY Progress Reports on contributions		TRY Fatou		X	X		X	X		X	X		X	X		X	X		X	X		X	X		X	X
<u>2a: Analysis of drivers and restoration options</u>	Field data collection/databases	Contributes to Special Study for Activity 2a.	ICRAF Lalisa					X	X		X	X		X	X		X	X									
Review literature on drivers of mangrove ecosystem changes and potential threats	Literature review report		ICRAF Lalisa					X	X		X	X															
Spatio-temporal	Draft maps		ICRAF						X		X	X		X	X												

Activities	Output (Product/ Report)	Result Target per MEL Plan	Responsible Person	Q1			Q2			Q3			Q4			Q5			Q6			Q7			Q8											
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
analysis of mangrove ecosystems changes over time and estimate carbon stocks			Lalisa																																	
Ground truthing data collection for the spatial analysis	Field data		ICRAF Lalisa							X	X	X	X	X																						
Participatory specification of mangrove health indicators for shellfishing	Draft indicator sets based on local ecological knowledge		ICRAF Lalisa										X	X	X	X	X																			
Prepare progress report	Technical Progress reports		ICRAF Lalisa					X				X																								
Conduct data analysis			ICRAF Lalisa										X	X	X																					
Submit draft and final Activity 2a Technical Reports	Draft and final Activity 2a Technical Reports	1 Special Study	ICRAF Lalisa													X											X									
Partner contribution to Activity 2a (review)	Comments		URI, UG, UCC, TRY												X												X									
<u>2b: Sustainable land/seascape collaborative vision (field data collection)</u>	Field data collection/databases	Contributes to Special Study for Activity 2b.	ICRAF Lalisa				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Field data collection on practice inventory in the land-	Field data collection/databases	.	ICRAF Lalisa							X	X	X	X																							

Activities	Output (Product/ Report)	Result Target per MEL Plan	Responsible Person	Q1			Q2			Q3			Q4			Q5			Q6			Q7			Q8												
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24										
seascapes using cross-sectional transects in six land-seascapes for landscape vision designs																																					
Consultations meetings with selected members of communities in the landscapes	Focus group discussions and consultation reports	.	ICRAF Lalisa							X	X	X	X	X	X																						
Validation meetings with members of the community	Focus group discussions and validation reports	.	ICRAF Lalisa											X	X	X	X	X	X																		
Prepare progress report	Technical Progress report		ICRAF Lalisa										X																								
Conduct data analysis			ICRAF Lalisa																X	X	X	X	X														
Submit draft and final Activity 2b Technical Reports	Draft and final Activity 2b Technical Reports	1 Special Study	ICRAF Lalisa																			X							X								
Partner contribution to Activity 2b (review)	Comments		URI, UG, UCC, TRY																X				X														
<u>2c: Land-seascape food and nutrition profile (data collection in field)</u>	Field data collection/databases	Contributes to Special Study for Activity 2c	ICRAF Lalisa				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
Participatory screening of agricultural biodiversity and	Database of priority species list	.	ICRAF Lalisa							X	X	X	X	X																							

Activities	Output (Product/ Report)	Result Target per MEL Plan	Responsible Person	Q1			Q2			Q3			Q4			Q5			Q6			Q7			Q8				
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
valuable wild food and feed categories in each field site																													
Assessment of contributions to food and nutrition security at landscape level and development of food and nutritional portfolio	Data on landscape level food and nutrition profile		ICRAF Lalisa							X	X	X	X	X															
Develop domestication strategy for further piloting by other interested parties	A brief localized strategy for the domestication of priority species		ICRAF Lalisa										X	X	X	X													
Develop protocol for integrating prioritized wild food and feed species into the landscapes	Intervention protocols for prioritized species		ICRAF Lalisa														X	X	X	X									
Prepare progress report	Technical Progress report		ICRAF Lalisa								X																		
Conduct data analysis			ICRAF Lalisa															X	X	X	X	X							
Submit draft and final Activity 2c Technical Reports	Draft and final Activity 2c Technical Reports	1 Special Study	ICRAF Lalisa																		X		X						
Partner contribution to	Comments		URI, UG, UCC, TRY																	X		X							

Activities	Output (Product/ Report)	Result Target per MEL Plan	Responsible Person	Q1			Q2			Q3			Q4			Q5			Q6			Q7			Q8			
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Activity 2c (review)																												
<u>2d: Analysis of shellfishery and estuary bio-physical parameters</u>	Field data collection/databases	Contributes to Special Study for Activity 2d	UCC Denis				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
Develop experimental design, methodology and research plan	Research plan (UCC internal)		UCC Denis				X	X																				
Conduct monthly field campaigns and laboratory data collection (shellfish biological data and hydrographic assessments)	Field and laboratory research data/database		UCC Denis						X	X	X	X	X	X	X	X	X	X	X	X	X							
Conduct quarterly field campaigns for heavy metal and microbial load in estuaries and shellfish	Field and laboratory research data/database		UCC Denis					X			X		X		X		X											
Conduct data analysis and monthly/ bimonthly research progress briefs	Research Progress Brief (UCC internal)		UCC Denis				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
Prepare progress report	Technical Progress report		UCC Denis								X																	

Activities	Output (Product/Report)	Result Target per MEL Plan	Responsible Person	Q1			Q2			Q3			Q4			Q5			Q6			Q7			Q8													
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
Conduct data analysis			UCC Denis										X	X	X	X	X	X	X	X	X	X																
Submit draft and final Activity 2d Technical Reports	Draft and final Activity 2d Technical Reports	1 Special Study	UCC Denis																				X															
Partner contribution to Activity 2d (review)	Comments		URI, UG, ICRAF, TRY																			X																
<u>2e: Anemia research</u>	Field data collection/databases	Contributes to Special Study for Activity 2e	UG Seth							X	X	X	X	X	X	X	X	X	X	X	X	X																
Train data collectors in The Gambia			UG Seth							X																												
Collect data in The Gambia			UG Seth								X	X																										
Train data collectors in Ghana			UG Seth									X																										
Collect data in Ghana			UG Seth										X	X																								
Data analysis			UG Seth											X	X	X	X	X	X	X	X	X																
Prepare progress report	Technical Progress report		UG Seth URI Brie				X				X																											
Conduct data analysis			UG Seth URI Brie							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
Submit draft and final Activity 2e Technical Reports	Draft and final Activity 2e Technical Reports	1 Special Study	ICRAF Lalisa												X																							
Partner contribution to Activity 2e (review)	Comments		URI, UCC, ICRAF, TRY												X								X															

Activities	Output (Product/ Report)	Result Target per MEL Plan	Responsible Person	Q1			Q2			Q3			Q4			Q5			Q6			Q7			Q8								
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
<u>2f: Coord. of TOC data gathering, &amp; multivariate analysis</u>	Multi-variate analysis of data	Contributes to Special Study for Activity 2f	UCC Denis URI Brian	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
Set up data frame for data input (Kobotoolbox)			UCC Denis URI Brian																														
Partners contribute to multivariate analysis	UG contribution document		UG Seth																														
	ICRAF contribution document		ICRAF Lalisa																														
	TRY contribution document		TRY Fatou																														
Submit Final consolidated multivariate Report	Final consolidated TOC multivariate report and 5 final technical reports	1 Special Study	UCC Denis URI Brian																														
<b>Activity 3: Develop Toolkit</b>		Output Indicator 3: Number of Toolkits produced (1)	UCC Denis URI Brian													X	X	X	X	X	X	X	X	X	X	X	X						
Toolkit development	Draft and final Toolkit	1 Toolkit	UCC Denis URI Brian													X	X	X	X	X	X	X	X	X	X	X	X						
Partners contribute to Toolkit development	Draft and final Toolkit UG contributions documents		UG Seth URI Brie													X	X	X	X	X	X	X	X	X	X	X	X						
	Draft and final Toolkit ICRAF contributions documents		ICRAF Lalisa													X	X	X	X	X	X	X	X	X	X	X	X						

Activities	Output (Product/ Report)	Result Target per MEL Plan	Responsible Person	Q1			Q2			Q3			Q4			Q5			Q6			Q7			Q8																	
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
	Draft and final Toolkit TRY contributions documents		TRY Fatou																																							
<i>Activity 4: Disseminate Toolkit and Assessment</i>		Outcome Indicator 2: Output Indicator 2: EG.10.2-4 Output Indicator 4 Output Indicator 5: CBLD-9-UAF Output Indicator 6: ES.2-1	UCC Denis URI Brian																																							
Conduct Toolkit TOT in 2 languages	Toolkit TOT Report	37 institutions and 11 higher education institutions receive capacity development support (CBLD-9-UAF and ES.2-1) 74 people trained (EG.10.2-4) Outcome indicator 2	UCC Denis URI Brian																																							
Partners contribute to Toolkit TOT	Virtual session facilitators		TRY Fatou																																							
	Virtual session facilitators		ICRAF Lalisa																																							
	Virtual session facilitators		UG Seth																																							
Conduct 11 country level and 1 regional level meetings to disseminate final regional assessment	11 meeting reports	11 country level key stakeholder meetings and 1 regional to disseminate at the country level the final participatory regional assessment.	UCC Denis																																							
Conduct 1	Meeting Report	1 Region-wide Theory of	UCC																																							





# ANNEX 1 - Theory of Change and Results Chain Framework

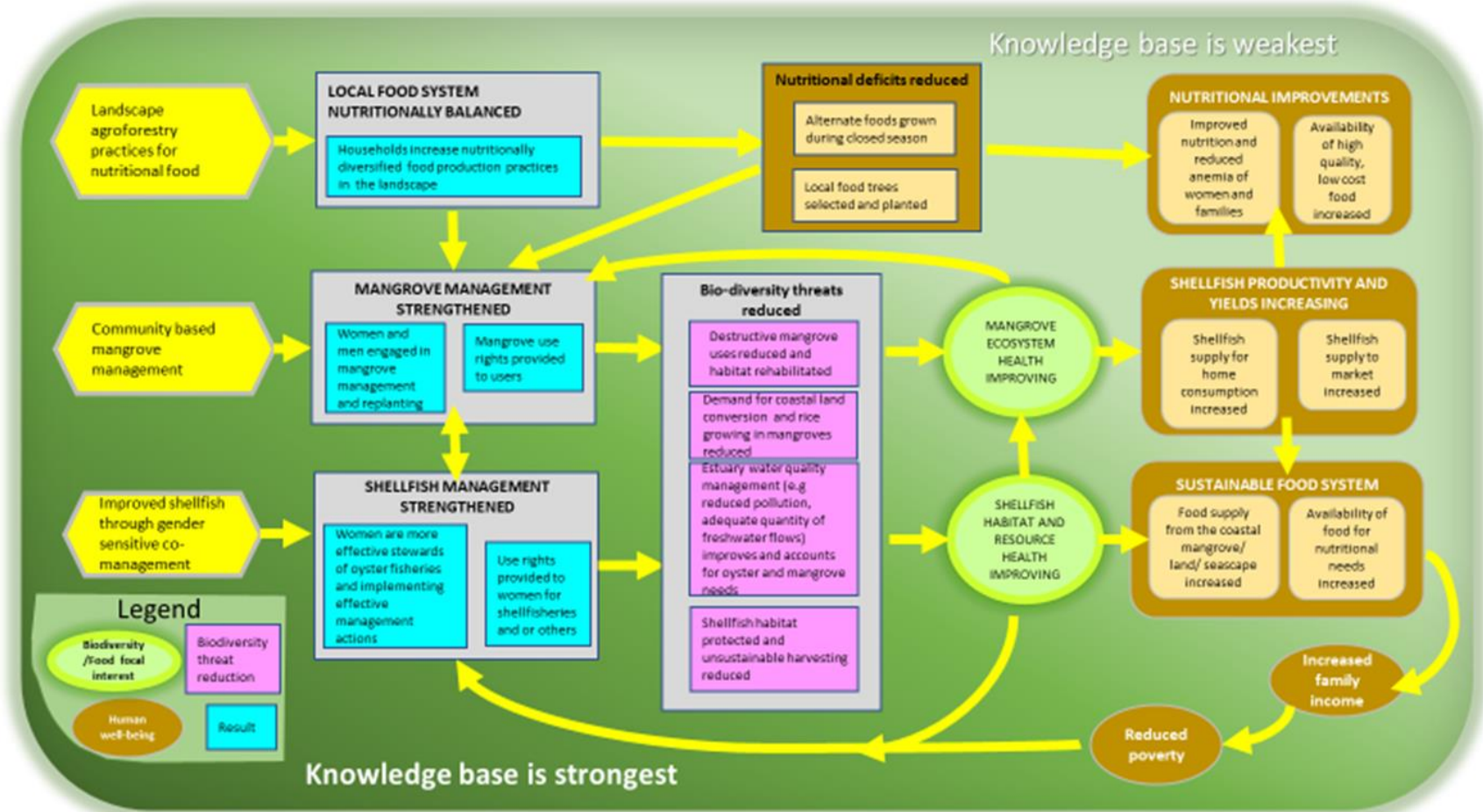


Figure 1: Visualization of the Theory of Change and Results Chain Framework

## ANNEX 2 - Performance Indicator Reference Sheets (PIRS) for USAID Standard Indicators

USAID Performance Indicator Reference Sheet
CDCS/RDCS or other Goal: NA
Development Objective: NA
Intermediate Result: NA
Sub-Intermediate Result: NA
<b>Name of Performance Indicator:</b> Number of research results documented and available (AFR/SD Custom Indicator STIR-1-UAF: Special Studies (Resources for Missions))
Performance Plan and Report Indicator: <b>Foreign Assistance Framework:</b> Indicator Type: Output
PERFORMANCE INDICATOR DESCRIPTION
Precise Definition(s): This output indicator captures annually the number of publications resulting from USAID Africa Bureau support to research and implementation programs. This indicator is NOT cumulative and captures only new publications not reported previously.  For this project, the following reports will be counted. <ul style="list-style-type: none"> <li>● Participatory Regional Assessment</li> <li>● Analysis of threats and drivers and restoration options</li> <li>● Sustainable land/seascape collaborative vision</li> <li>● Land-seascape food and nutrition profile</li> <li>● Analysis of shellfishery</li> <li>● Anemia research</li> <li>● TOC multivariate analysis</li> </ul>
Unit of Measure: Number
Disaggregated by: None
Rationale or Management Utility <i>(optional)</i> :
PLAN FOR DATA COLLECTION BY USAID
Data Source: Publications
<b>Method of Data Acquisition:</b> Collection and tracking of final technical reports
Frequency and Timing of Data Acquisition: Annual
Individual(s) Responsible for Data at USAID:
Individual(s) Responsible for Providing Data to USAID <i>(optional)</i> :
Location of Data Storage <i>(optional)</i> :

DATA QUALITY ISSUES
Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s):
Date of Future Data Quality Assessments (optional):
Known Data Limitations and Significance (optional):
Actions Taken or Planned to Address Data Limitations (optional):

<b>USAID Performance Indicator Reference Sheet</b>
CDCS/RDCS or other Goal: NA
Development Objective: NA
Intermediate Result: NA
Sub-Intermediate Result: NA
<b>Name of Performance Indicator:</b> Number of people trained in sustainable natural resources management and/or biodiversity conservation as a result of USG assistance (USAID Standard Indicator EG.10.2-4)
<b>Performance Plan and Report Indicator:</b> <b>Foreign Assistance Framework:</b> <b>Indicator Type:</b> Output
<b>PERFORMANCE INDICATOR DESCRIPTION</b>
<p><b>Precise Definition(s):</b> Number of people who have successfully completed a training course. Successful completion requires that trainees meet the completion requirements of the structured training program as defined by the program offered.</p> <p>Training courses are sessions in which participants are educated according to a defined curriculum and set learning objectives. The transfer of this knowledge, skills or aptitudes may occur through long-term academic programs, long-term or short-term technical courses, non-academic seminars, workshops, verifiable online courses, or courses in the field. Sessions that could be informative or educational, such as meetings, but do not have a defined curriculum or learning objectives are not counted as training.</p> <p>Sustainable natural resources management is defined as managing natural resources in ways that maintain their long-term viability and preserve their potential to meet the needs of present and future generations.</p> <p>Biodiversity conservation refers to direct and indirect actions (including sustainable natural resources management) with the goal of conserving biodiversity in ways that maintain their long-term viability and preserve their potential to meet the needs of present and future generations.</p> <p>Support from the USG: This indicator counts training hours that were delivered in full or in part as a result of USG assistance. This assistance could include provision of funds to pay teachers,</p>

providing hosting facilities, transportation, specialized equipment/supplies, or other key contributions necessary to ensure training was delivered. This indicator does not automatically count any course for which the USG helped develop the curriculum, but rather focuses on delivery of courses that was made possible through full or partial funding from the USG.

Some known data limitations when using this standard Indicator: In the case of multiple training events, there is a possibility of double counting people trained, and the time extent per person may vary significantly. Attendance records may be incomplete or inaccurate, especially in the case of determining whether a participant completed an entire course. The universe of countries providing this type of training can vary from year to year; thus, trends should not be interpreted from aggregate data. This indicator does not reflect the depth of skills and knowledge conveyed, or whether persons have developed the capacity to act, or taken direct action as a result of the training.

**Unit of Measure:** Number

**Disaggregated by:** Sex (Male/Female)

Conservation law compliance category (wildlife trafficking/illegal logging and associated trade/illegal, unreported and unregulated fishing)

Conservation Law Compliance Disaggregation Definitions:

- Wildlife Trafficking: Number of people trained to better address wildlife trafficking, which is the illegal taking, possession, transport, sale or export of wild animals or animal parts. For this indicator there may be overlap among the number of people trained to address illegal, unreported and unregulated fishing.
- Illegal Logging and associated trade: Number of people trained to better address illegal logging, which is the illegal taking, possession, transport, sale or export of trees or tree products, including trade in products containing illegally obtained wood or paper, as well as unlawful deforestation clear land for another use.
- Illegal, unreported and unregulated (IUU) fishing: Number of people trained to better address illegal, unreported and unregulated fishing, which is the illegal taking, possession, transport, sale or export of aquatic (marine or freshwater) wildlife or wildlife products, as well as failure of fishers to declare fishing catch ("unreported") and failure of governments to create and/or enforce fishing policies ("unregulated"). For this indicator there may be overlap among the number of people trained to address wildlife trafficking.

Note: For all Conservation Compliance Law disaggregates, illegal taking is defined as the harvest, collection or killing of an animal or plant in violation of national law or international conservation and management agreements. Taking is always illegal when the species has protected status in the country of origin. For species in which taking is regulated, it is illegal if done in violation to the corresponding regulation.

**Rationale or Management Utility (optional):** Training indicators account for the expenditure of USG funds to build country capacity. The aggregate may be used to report to Congress and other

stakeholders.

**PLAN FOR DATA COLLECTION BY USAID**

Data Source: Publications

Method of Data Acquisition: Collection and tracking of final technical reports

Frequency and Timing of Data Acquisition: Annual

Individual(s) Responsible for Data at USAID:

Individual(s) Responsible for Providing Data to USAID (*optional*):

Location of Data Storage (*optional*):

**DATA QUALITY ISSUES**

Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s):

Date of Future Data Quality Assessments (*optional*):

Known Data Limitations and Significance (*optional*):

Actions Taken or Planned to Address Data Limitations (*optional*):

USAID Performance Indicator Reference Sheet
CDCS/RDCS or other Goal: NA
Development Objective: NA
Intermediate Result: NA
Sub-Intermediate Result: NA
<b>Name of Performance Indicator:</b> Number of institutions receiving capacity development support (AFR/SD Custom Indicator CBLD-9-UAF).
<b>Performance Plan and Report Indicator:</b> <b>Foreign Assistance Framework:</b> <b>Indicator Type:</b> Output
PERFORMANCE INDICATOR DESCRIPTION
<b>Precise Definition(s):</b> This custom indicator tracks the number of institutions receiving capacity development support from Africa Regional. Institutions here will be defined as external (a non-governmental organization, private sector entity, or public institutions, including Public International Organizations (PIOs)). External institutions/organizations should be counted (not individual components or departments). For example, if working with multiple departments within a single university, the university should be counted as a whole, not as individual departments. In the context of this project, capacity development support includes project activities that address an organization's self-identified need to improve technical capacity to design and implement or support design and implementation of women's shellfish and food security initiatives. These activities include but are not limited to Training of Trainers for the Toolkit.
<b>Unit of Measure:</b> Number
<b>Disaggregated by:</b> Type of organization (project designation): 1. Resource user; Academia; Government; NGO 2. National; WA Regional; International
<b>Rationale or Management Utility</b> ( <i>optional</i> ): Africa Regional supports institutions through technical assistance to improve the knowledge, skills, and/or processes of an institution to function more effectively. This indicator contributes to Africa Regional's development objective to strengthen the capacity of key African institutions and networks to influence the policies and programs of development partners.
PLAN FOR DATA COLLECTION BY USAID
<b>Data Source:</b> Activity reports. Workshop reports and participant lists, Pre and Post surveys on organizational capacity in this technical area. Data from participation in community of practice platforms.
<b>Method of Data Acquisition:</b> Pre and Post survey, collection and tracking of participant lists and workshop reports. Data from electronic platforms used by community of practice.
<b>Frequency and Timing of Data Acquisition:</b> Annual
<b>Individual(s) Responsible for Data at USAID:</b>
<b>Individual(s) Responsible for Providing Data to USAID</b> ( <i>optional</i> ):

Location of Data Storage <i>(optional)</i> :
DATA QUALITY ISSUES
Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s):
Date of Future Data Quality Assessments <i>(optional)</i> :
Known Data Limitations and Significance <i>(optional)</i> :
Actions Taken or Planned to Address Data Limitations <i>(optional)</i> :



USAID Performance Indicator Reference Sheet
CDCS/RDCS or other Goal: NA
Development Objective: NA
Intermediate Result: NA
Sub-Intermediate Result: NA
<b>Name of Performance Indicator:</b> Number of host country higher education institutions receiving capacity development support with USG assistance (AFR/SD Custom Indicator ES.2-1)
<b>Performance Plan and Report Indicator:</b> <b>Foreign Assistance Framework:</b> <b>Indicator Type:</b> Output
PERFORMANCE INDICATOR DESCRIPTION
<p><b>Precise Definition(s):</b></p> <p>A "higher education institution" (HEI) is an organization that provides educational opportunities that build on secondary education, providing learning activities in specialized fields. It aims at learning at a high level of complexity and specialization. Higher education includes what is commonly understood as academic education but also includes advanced vocational or professional education that is not part of general or technical secondary education. This may include public or private universities, colleges, community colleges, academically-affiliated research institutes, and post-secondary training institutes, including teacher training institutes.</p> <p>"Host country institution" refers to institutions receiving capacity development support. Institutions providing support should not be counted here. The institution should be counted (not individual components or departments). For example, if an activity is working with multiple departments within a single university, the university should be counted as a whole, not as individual departments.</p> <p>"Capacity" is the ability of people, organizations and society as a whole to manage their affairs successfully.</p> <p>"Capacity development support" is comprised of a range of activities, interventions, processes, and approaches that may include, but are not limited to institutional partnerships, professional development, training, coaching, technical assistance, participatory assessments, process mapping and improvement, etc. These may be focused on a range of specific topics, including but not limited to human resources, management and administration, instruction, research, technology transfer, translation of knowledge, infrastructure, fund raising, etc.</p> <p>A list of higher education institutions receiving support should be reported in the narrative associated with this indicator.</p>
<b>Unit of Measure:</b> Number
<p><b>Disaggregated by:</b> Number of public HEIs/Number of private HEIs</p> <p>For the purposes of this indicator, the UNESCO/OECD definition of public and private educational institutions will be used. This definition may not be the same as local definitions:</p> <p>Private: Institution that is controlled and managed by a non-governmental organization (e.g. a church, a trade union or a business enterprise, foreign or international agency), or its governing</p>

board consists mostly of members who have not been selected by a public agency.  
 Public: Institution that is controlled and managed directly by a public education authority or agency of the country where it is located or by a government agency directly or by a governing body (council, committee etc.), most of whose members are either appointed by a public authority of the country where it is located or elected by public franchise.  
 The extent to which an institution receives its funding from public or private sources does not determine the classification status of the institution.

**Rationale or Management Utility** (*optional*): Supporting the capacity development of higher education institutions can have ripple effects throughout an education system, the economy, and more. As described in the 2018 USAID Education Policy, building the capacity of higher education institutions can contribute to the advancement of all four priorities of the Policy.

**PLAN FOR DATA COLLECTION BY USAID**

**Data Source:** Activity reports. Workshop reports and participant lists, Pre and Post surveys on organizational capacity in this technical area. Data from participation in community of practice platforms.

**Method of Data Acquisition:** Pre and Post survey, collection and tracking of participant lists and workshop reports. Data from electronic platforms used by community of practice.

**Frequency and Timing of Data Acquisition:** Annual

**Individual(s) Responsible for Data at USAID: Agency:** USAID Bureau and Office: E3/ED  
 POC: Steve Kowal, Division Chief for Policy and Planning, Office of Education, 1-202-712-4001 [skowal@usaid.gov](mailto:skowal@usaid.gov) and Technical POC: Ben Sylla, Senior Education Advisor and Evidence Team Lead, Office of Education, 1-202-216-3212 [bsylla@usaid.gov](mailto:bsylla@usaid.gov)

**Individual(s) Responsible for Providing Data to USAID** (*optional*):

**Location of Data Storage** (*optional*):

**DATA QUALITY ISSUES**

**Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s):**

**Date of Future Data Quality Assessments** (*optional*):

**Known Data Limitations and Significance** (*optional*):

**Actions Taken or Planned to Address Data Limitations** (*optional*):

### ANNEX 3 - Indicator Reporting Forms (as needed due to complexity)

Number of shellfish and mangrove stakeholders that:

- Have increased awareness of the basic theory of change,
- Have tools to design interventions to achieve TOC intended outcomes,
- Are networked regionally, and
- Some identify plans or resources to pursue opportunities for scale up.

Name of reporting WSFS partner		
Name of M&E Coordinator		
Date submitting report		
Signature of M&E Coordinator		
Number of shellfish and mangrove stakeholders that: <ul style="list-style-type: none"> <li>• Have increased awareness of the basic theory of change,</li> <li>• Have tools to design interventions to achieve TOC intended outcomes,</li> <li>• Are networked regionally, and</li> <li>• Some identify plans or resources to pursue opportunities for scale up.</li> </ul>	Male	Female

Detailed data sheet.

Name of individual	Sex		Country	Organization (if any)	Livelihood (if unaffiliated to an organization)	TOC Awareness Survey score		Have tools Survey score		Networked regionally Survey score		Identify plans or resources for scale up Survey score		Total Survey score		E platform name*	E platform name*
	M	F				Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Y/N	Y/N
Total																	
% female																	

\*participation in e-platforms to be verified independently by partner managing the platform and evidence attached. Add additional columns for additional e platforms as needed.

Reviewed by M&E Supervisor: \_\_\_\_\_ Signature\_\_\_\_\_

Number of people trained in sustainable natural resources management and/or biodiversity conservation as a result of USG assistance (USAID Standard Indicator EG.10.2-4)

Name of reporting WSFS partner		
Name of M&E Coordinator		
Date submitting report		
Signature of M&E Coordinator		
Number of people trained in sustainable natural resources management and/or biodiversity conservation as a result of USG assistance (USAID Standard Indicator EG.10.2-4)	Male	Female

Detailed data sheet.

Name of individual	Sex		Country	Organization (if any)	Livelihood (if unaffiliated to an organization)	Conservation law compliance category -Wildlife trafficking -Illegal logging and associated trade -IUU fishing	Toolkit TOT training date	Other training name and date
	M	F						
Total								
Total								
% female								

Reviewed by M&E Supervisor: \_\_\_\_\_ Signature \_\_\_\_\_

### Number of Dissemination Activities

Name of reporting WSFS partner	
Name of M&E Coordinator	
Date submitting report	
Signature of M&E Coordinator	
Number of Dissemination Activities	

Detailed data sheet.

No.	Type of Activity*	Date	Location	Number of participants	Sex M/F
	Total				

\*Types of activities

- Country level key stakeholder meetings (1 per country) to disseminate at the country level the final participatory regional assessment.
- A region wide stakeholder meeting to disseminate the final regional assessment.
- A region-wide Theory of Change Research findings stakeholder workshop.
- A Training of Trainers workshop on the Toolkit.
- On-line platforms where the toolkit, participatory regional assessment and research findings are posted and/or discussed.
- Peer reviewed journal articles submitted for publication in peer reviewed journal

Reviewed by M&E Supervisor:

\_\_\_\_\_ Signature \_\_\_\_\_

Number of institutions receiving capacity development support.

Name of reporting WSFS partner	
Name of M&E Coordinator	
Date submitting report	
Signature of M&E Coordinator	
Number of organizations receiving capacity development support	

Detailed data sheet.

No.	Name of Organization	Type of organization*		Survey Score		E platform name**	E platform name**	No. of Toolkit trainers trained
		Tier 1	Tier 2	Pre	Post	Y/N	Y/N	
	Total							

\* Type of organization:

Tier 1. Resource user; Academia; Government; NGO

Tier 2. National [enter country name]; WA Regional; International

\*\*participation in e-platforms to be verified independently by partner managing the platform and evidence attached. Add additional columns for additional e platforms as needed.

Reviewed by M&E Supervisor:

\_\_\_\_\_ Signature \_\_\_\_\_

Number of host country higher education institutions receiving capacity development support with USG assistance.

Name of reporting WSFS partner	
Name of M&E Coordinator	
Date submitting report	
Signature of M&E Coordinator	
Number of host country higher education institutions receiving capacity development support with USG assistance	

Detailed data sheet.

No.	Name of Organization	Country	Type of organization*		Survey Score		E platform name*	E platform name*	No. of Toolkit trainers trained
			Public	Private	Pre	Post	Y/N	Y/N	
	Total								

\*participation in e-platforms to be verified independently by partner managing the platform and evidence attached. Add additional columns for additional e platforms as needed.

Reviewed by M&E Supervisor:

\_\_\_\_\_  
Signature