Gambia-Senegal Sustainable Fisheries Project

USAID/BaNafaa

Year 4, Quarter 3 Report

April 1 – June 30, 2013

(LWA Associate Award No. 624-A-00-09-00033-00)

A partnership of:

United States Agency for International Development / West Africa
Coastal Resources Center, University of Rhode Island
World Wide Fund for Nature, West Africa Marine Program Office
Department of Fisheries
Ministry of Fisheries and Water Resources, The Gambia

USAID
FROM THE AMERICAN PEOPLE

REPUBLIC OF THE GAMBIA

COASTAL RESOURCES CENTER
University of Rhode Island

WWF

Contact Information

Ousman Drammeh
Project Manager
Gambia-Senegal Sustainable Fisheries Program (USAID/BaNafaa)
Tel: 220-779-68-11
Email: o_drammeh@yahoo.com

Alagie Manjang
National Coordinator
World Wide Fund, The Gambia
Tel: 220-986-69-31
Email: alagie33@hotmail.com

Brian Crawford
Director, International Programs
Coastal Resources Center
University of Rhode Island
Tel: 1-401-874-6225
Fax: 1-401-874-6920
Email: brian@crc.uri.edu

Karen Kent
Project Leader
Coastal Resources Center
University of Rhode Island
Tel: 1-401-874-6630
Fax: 1-401-874-6920
Email: Karen@crc.uri.edu

Kim Kaine
Global Program Coordinator
Coastal Resources Center
University of Rhode Island
Tel: 401-874-6823
Fax: 401-874-6920
Email: kkaine@crc.uri.edu

Georgette Yarboi-Quayson
Administrative Office Technical Representative
U.S. Agency for International Development / West Africa
Tel: 233-244-532913
Email: gyarboi-quayson@usaid.gov

Table of Contents

List of Figures

1. Introduction

The USAID/ BaNafaa project is a five-year regional initiative supported by the American people though the U.S. Agency for International Development (USAID)/West Africa Regional Mission. It is implemented through the University of Rhode Island (URI)-USAID cooperative agreement on Sustainable Coastal Communities and Ecosystems (SUCCESS). The World Wide Fund for Nature West Africa Marine Program Office (WWF-WAMPO) is a regional implementing partner. Local partners include TRY Oyster Women's Association, the National Sole Co-Management Committee (NASCOM), and the Water Resources Laboratory. At the end of Year 2, Water, Sanitation and Hygiene (WASH) and Climate Change funding was added to the award in addition to previous fisheries activities under the biodiversity earmark. URI works with local partners the Trust Agency for Rural Development (TARUD) and The Gambian Agency for Public Works (GAMWORKS) to implement WASH activities and a bilateral Climate Change Vulnerability Assessment was conducted by WWF in Year 3. All project activities are carried out in partnership with the Department of Fisheries (DoFish) and stakeholders in the fisheries sector in The Gambia and Senegal. The focus is on sustainable fisheries management including the shared marine and coastal resources between The Gambia and Senegal. However, most field activities are in The Gambia. The Gambia - Senegal Sustainable Fisheries Project contributes directly to the achievement of the USAID West Africa Regional Office of Environment & Climate Change Response's (ROECCR) Results Framework through contributions to multiple Intermediate Results.

To follow through with the implementation of climate change adaptation measures developed based on the vulnerability assessment and as a result of significant achievements in fisheries co-management, including identified unmet WASH needs at fisheries landing sites, URI developed and submitted a request for a $4,438,523 add-on to the project in July/August 2012. It included climate change adaptation, biodiversity, WASH activities, including a request to extend the end date for 2 years from April 2014 to April 2016.

In the first half of Year 4 (FY13), an external evaluation of the project was conducted The Final Report in February, 2013 concluded that, "Through the mid-term, BaNafaa has achieved significant results, which is a highly commendable accomplishment, given the numerous institutional constraints to fisheries sector development in The Gambia. This evaluation's overarching recommendation is to continue BaNafaa's overall program approach due to its successful results in a challenging environment."

URI anticipated feedback from USAID on its add-on request following the evaluation, but now understands USAID/WA is developing a new Regional Strategy that will set the context for future programming decisions. In light of this, URI now considers that the project will end in April 2014 and is managing activities and budgets accordingly with most field activities except WASH ending in December 2013.

USAID/BaNafaa's approach for the remaining 10 months of the project is to focus primarily on consolidating achievements made and ensuring that measures, systems and procedures already developed are functioning and can be sustained when project assistance ends. Institutionalizing

the adaptive management process around which the two approved co-management plans were designed is a key priority. Continuing to reinforce the capacity of the government and civil society co-management institutions responsible for implementation of the two plans is central to all Year 4 activities. This includes accompanying them to lead and implement with the project in a decidedly less proactive role.

This report describes progress made in Quarter 3 of Year 4 (April 1 – June 30, 2013).

1.1 Background

In West Africa, an estimated 1.5 million tons of fish are harvested annually from the region's waters, with a gross retail value of US$1.5 billion. In The Gambia and Senegal artisanal fisheries make up a majority of the fisheries landings and contribute significantly to income generation and local food security for coastal communities and for many communities inland where fish are traded. Some 200,000 people in the Gambia and 600,000 in Senegal are directly or indirectly employed in the fishing sector. Seafood products are a leading export of the region and generate as much as 20% of the gross value of exports. While the majority of seafood exports are destined for European Union (EU) markets, a growing volume of trade goes to the U.S. and other countries in the region.

Fish provides the main source of animal protein for the average rural family in the sub-region, where annual fish consumption can be as much as 25kg per capita. In many rural areas, fishing serves as a "social safety net" when farming turns unproductive due to depleted soil, drought, disease, or other factors.

In addition to direct socioeconomic benefits derived from fishing, a well-managed sector can benefit other aspects of the region's economy and quality-of-life. This includes a growing tourism sector and a number of globally and regionally significant natural heritage areas. With annual tourist arrivals surpassing 120,000 in The Gambia and 400,000 in Senegal, a growing number of tourists are taking advantage of the countries' ecologically significant reserves, parks, and protected areas—most of which have direct links to the fate of well-managed fisheries. These include but are not limited to the Sine-Saloum Delta Biosphere Reserve in Senegal and in The Gambia the Niumi National Park, the Baobolon Wetland Reserve, and the Tanbi Wetland Complex—all are designated Ramsar sites and contain globally significant wetlands.

The Gambia's fisheries sector operates under the authority and responsibility of the Minister of Fisheries and Water Resources, through the Department of Fisheries (DoFish). The policy, legal and management framework for fisheries in The Gambia is provided by the 2007 Fisheries Act and the 2008 Fisheries Regulations. A draft Fisheries Management Plan for shrimp, sardinella and sole fish was prepared in 2009. The Fisheries Act mandates a Fishery Advisory Committee and Community Fisheries Centers as the institutional structure for inclusive oversight of the sector and also allows for decentralized fisheries co-management. The policy objectives of the fisheries sector as articulated in policy documents include:

- Rational and long-term utilization of the marine and inland fisheries resources
- Improving nutritional standards of the population
- Increasing employment opportunities in the sector
- Increasing foreign exchange earnings
- Increasing and expanding the participation of Gambians in the fisheries sector
- Improving the institutional capacity and legal framework for the management of the fisheries sector

The policy objectives of the fisheries sector are linked to key national development objectives that include: increased food self-sufficiency and security; a healthy population and enhanced employment opportunities for nationals; increased revenue generation and foreign exchange earnings; and the attainment of national social and economic development. They are designed to support key national development objectives as outlined in the Poverty Reduction Strategy Paper and The Gambia Incorporated Vision 2020, which are blueprints for national development and eradication of poverty.

For additional context see Appendix C of the USAID/BaNafaa Year 4 Workplan.

1.2 Program Goal and Key Results

The goal of the USAID/ BaNafaa Project is to support the Government of The Gambia in achieving its fisheries development objectives by contributing to the following vision:

Artisanal fisheries and coastal ecosystems in The Gambia and selected stocks shared with Senegal are being managed more sustainably, incorporating significant participation of fisherfolk in decision-making, and attaining improved economic benefits for both men and women involved in the market value chain.

USAID/BaNafaa builds on the on-going efforts of the Department of Fisheries in The Gambia, working with community fisheries centers and their management committees to improve fisherfolk involvement in the management of fisheries resources. More specifically, to further the development and implementation of the fisheries co-management plans for sole and for cockles and oysters. Sole is an important export commodity so this involves partnerships with export processing businesses as well. This is also a shared stock with Senegal. As gender equity is another important aspect of the project, USAID/BaNafaa is benefiting both men and women in the fisheries sector by also working with oyster harvesters—a women-dominated fishery whose importance is often under-recognized.

Key Results for the USAID/BaNafaa Project:

- IR 1: Strategies to increase social and economic benefits to artisanal fishing communities, and otherwise create incentives for a sustainable fisheries agenda in the WAMER identified, tested and applied
- IR 2: Institutional capacity strengthened at all levels of governance to implement an ecosystem-based, co-management approach to sustainable fisheries, and to prevent overfishing
- IR 3: Nursery areas and spawning areas for critical life stages of commercially important species and for associated marine turtles and mammals are protected
- IR 4: Change unsustainable and destructive marine resource use practices that threaten improved biodiversity conservation in the West Africa Marine Ecoregion

Project Strategies

- A participatory co-management approach that engages fisherfolk in decision-making.
- An ecosystem-based approach that looks not only at the fish, but protection of critical habitats and reduction of fishery impacts on threatened marine species
- Mainstreaming gender dimensions that provide opportunities for both men and women to benefit economically and participate in decision-making.
- A threats-based approach to coastal and marine biodiversity conservation.

Geographic Scope. The Project concentrates on the marine and coastal resources and fisheries stocks shared among the Casamance, the Gambia River and Saloum Delta region—an area of regional biodiversity significance (see Figure 1). The majority of on-the-ground activities occur in The Gambia, where USAID/BaNafaa focuses on the artisanal nearshore fisheries along the Atlantic coastline and the estuarine and mangrove dominated portions of The Gambia River. A sister project in Senegal, the Wula Nafaa project, is working on fisheries management in the

Saloum Delta and Casamance River. Together, these two USAID-supported initiatives are expected to have a significant impact on improved management of this biodiversity-rich area.

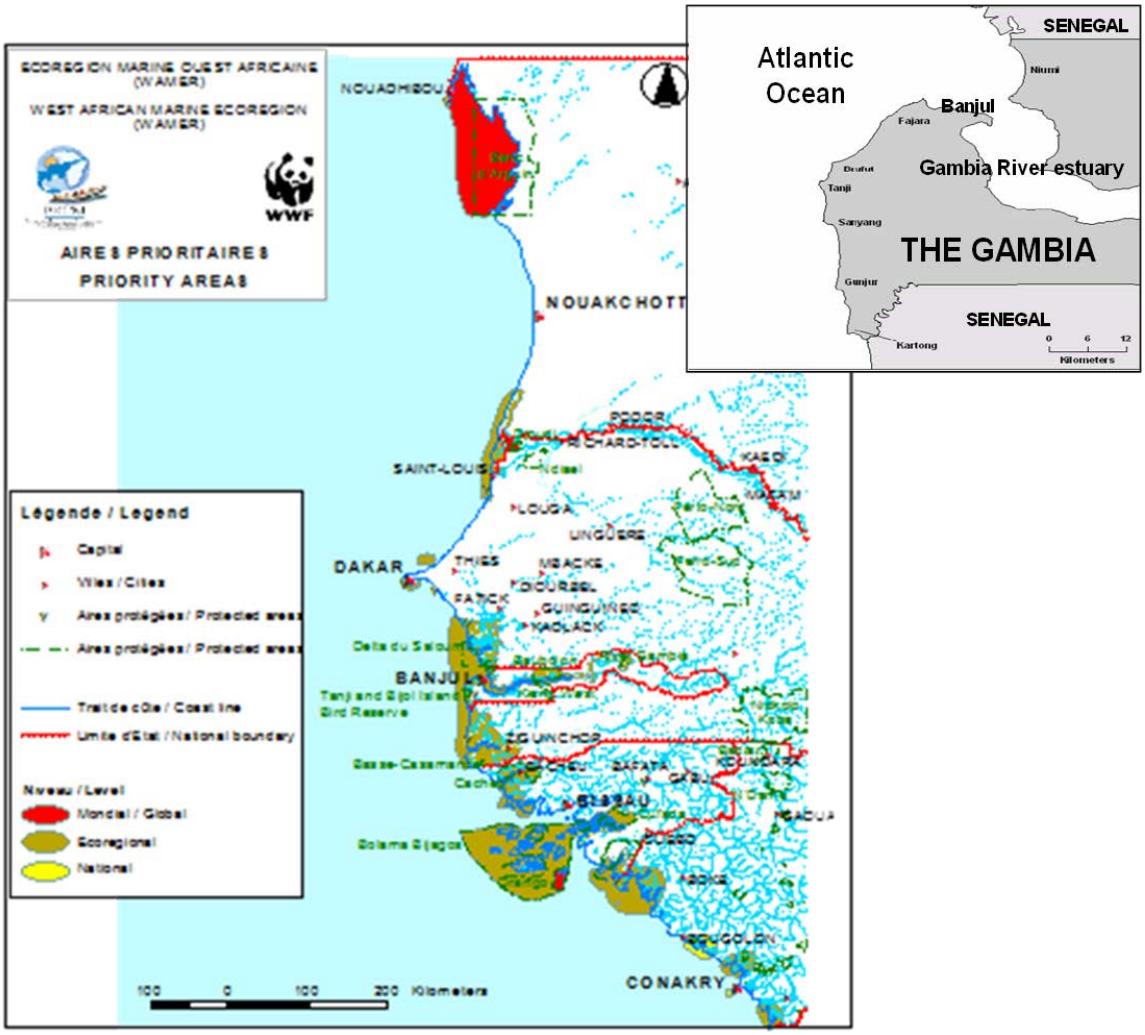


Figure 1. Areas of Biodiversity Significance in the WAMER and The Gambia River Estuary and Atlantic Coast

2. Year 4 Quarter 3 Accomplishments

See Appendix A for The Results Framework, Indicator Results Tables, Results to Date and Life of Project Targets and Appendix C for Activity Implementation Status.

2.1 Intermediate Result 1[1]

Strategies to increase social and economic benefits to artisanal fishing communities, and otherwise create incentives for a sustainable fisheries agenda in the WAMER identified, tested and applied.

Year 4 Highlights as of Quarter 3

- Implementation of the Sole Fishery and the Oyster and Cockle Fishery Co-Management Plans:
  - One year after approval of the Plans, each of the Co-Management Institutions (NASCOM and TRY) hosted and led the first annual review meetings of the plans as scheduled in Q1 and Q2. In addition to compliance with the current management measures, actions recommended at these meetings such as updating the sole stock assessment and conducting a gillnet study for increased mesh sizes for sole are now underway. Results will be presented for consideration at the 2nd annual review meetings to be held at the end of the 2013 calendar year.

- NASCOM capacity strengthened
  - Office established with equipment and furniture purchased under the seed grant in Q1.
  - Administrative/Financial Management Training for NASCOM, TRY, TAGFC and TARUD conducted in Q1. Follow-up training conducted in Q2.
  - Draft Standard Operating Procedures (SOP) and Business Plan under review, Q3
  - German seafood company Kaufland gave NASCOM a donation of 100,000 Euro to support development of a Marine Stewardship Council eco-labeled Sole Fishery in The Gambia, Q3.
  - 42 spar buoys built and deployed along the Atlantic coast of The Gambia marking the 1 nm seasonally closured area for all fishing, all gears from May 1 – October 31, Q3.

- TRY Oyster Women's Association capacity strengthened.
  - Administrative/Financial Management Training provided in Q1. Follow-up training in Q2.
  - UNDP funding awarded in Q1 for processing and marketing, including training 300 women in fish hygiene and handling and constructing fuel efficient oyster smoking ovens at each of the 15 TRY community sites based on USAID/BaNafaa funded demonstration model.
  - SOP Manual finalized in Q2.
  - First audit conducted by a local consultant in late February (report pending).
  - Exchange visits to oyster processing facilities in the Fatick Region of Senegal (Q2) and to Atlantic Seafood in The Gambia (Q3).
  - Women's health programs for members and member's daughters conducted.
  - 15 daughters graduate from the 2 year skills training program in April.

- Trans-Boundary Oyster and Cockle Co-Management Plan for the Allahein River estuary under development with 9 Casamance/Senegal and 3 Gambian communities.

[1] Most activities described under IR1 also contribute to IRs 2, 3 and 4. Some activities described under IR2 also contribute to IR1.

Year 4 Highlights as of Quarter 3 (continued)

- Bi-monthly water quality testing at oyster harvesting sites continued as the basis for National Shellfish Sanitation Planning (NSSP). Important harvesting sites deep inside the Tanbi added to testing protocol in Q2. The third, twice-yearly Shoreline Sanitation Survey conducted in Q2.
- Results of Water Quality Testing and Sanitary Shoreline Survey work presented to Gambian National Assembly members in Q2. National Assembly support will help stakeholder institutions secure budget lines to sustainably continue NSSP work as an interagency coordinated effort after the project.
- 160 participants (including 130 women) at 4 fisheries landing/oyster harvesting sites trained in Participatory Hygiene and Sanitation Transformation (PHAST).
- 80 Trainers (including 61 women) trained at 4 fisheries landing/oyster harvesting sites in Community Outreach and Hygiene Promotion (20 per site).
- Construction of sanitation facilities almost complete at 2 sites.
- 6 WASH Management Committees in place and 3 WASH Management Plans developed.

Project activities described below have contributed significantly and directly to this IR in Quarter 3. The results of the strategies identified, tested and applied in economic and social terms and the degree to which they are influencing a broader sustainable fisheries agenda in the WAMER are positive. The quantification of number of businesses and persons benefitting economically, as reported in indicators for this IR, are exceeding targets specified in the Project Design. However, these numbers do not reveal the underlying complexity of the benefits and the degree to which they are sustainable. USAID/BaNafaa project activities have, to date, focused on creating the enabling conditions for longer term sustained benefits to artisanal fishing communities. Integration of WASH activities at fishery and shellfish landing sites into the project is also aimed at ensuring that health and economic benefits are realized at the community level. The achievements under this IR also contribute to increasing recognition in the region and beyond of Gambian artisanal sole and oyster fisheries as a model for best management practices led by those directly benefitting socially and economically. Marine Stewardship Council (MSC) engagement and Kaufland Seafood Company's support for the development of a sustainable sole fishery, as well as award of the UNDP Equator Prize to TRY Association in 2012 are just two examples.

a. An Effective Sole/Multispecies Demersal Fishery Co-Management Plan

1. Implementation of the approved Fishery Co-Management Plan for The Gambia Sole Complex.

Outreach at the Ministerial Level. The Fishery Co-Management Plan for the Gambia Sole Complex approved in January 2012 has yet to be gazetted by the Government of The Gambia. On May 14, 2013 NASCOM was granted audience with the Minister of Fisheries and Water Resources, Mass Axi Gaye, appointed in November 2012. NASCOM had written several letters requesting a meeting to brief him on Co-management activities. The briefing included:

- The history, legal basis and participatory process for development of the sole fishery co-management plan
- Establishment of functional committees (NASCOM and LACOMS)
- The contents of the plan
- The urgency of Gazetting the Plan
- Implementation actions underway, especially the 1 nautical mile area along the Atlantic coast closed from May to October annually and deployment of buoys to mark the area
- Support received from German company Kaufland Seafoods for continuing the process towards MSC certification and for the purchase of 3 boats for monitoring and enforcement of management measures.
- Opportunities, achievements, constraints, challenges and the way forward for collaborative sustainable fisheries resource management.

Following the meeting, the Ministry of Justice, where the gazetting process is managed, seems to be taking steps towards gazetting.

Figure 2. The Honorable Minister of Fisheries and Water Resources (right) and his Deputy Permanent Secretary.

Outreach at the Community, Fisherfolk and Institutional Stakeholder Level. It is significant that NASCOM and its associated LACOMS developed the management measures specified in the Plan for their own short, medium and long term benefit and are motivated to start implementation while gazetting is pending. . From June 24 - 27 NASCOM visited two fish landing sites daily to conduct an outreach campaign to inform fishing communities, Department of Fisheries field staff, local Government Authorities and Security personnel on the start of monitoring and enforcement of the management measures in the plan. This included the seasonally closed area from May 1 – October 31 each year along the Atlantic coast of The Gambia from Kartong in the south to Banjul in the north out to 1 nautical mile for all fish species and all fishing gear types. The sites -covered were Kartong and Gunjur, Sanyang, Tujereng/Bato Kun ku and Tanji, Brufut and Bakau, Old Jeshwang and Banjul. Participants included LACOMs, the Department of Fisheries and its Extension Unit, Security personnel (Military, Sea Rescue and the Police), Alkalos, Councilors, and Village Development Committee (VDC) representatives.

The communications emphasized that:

- Agreement on the closure specified in the co-management plan was participatory. Thus, the need for a shared responsibility on monitoring and enforcement of the area.
- As primary beneficiaries of the success of the closure, fishermen were tasked to use the auto-regulatory approach and take ownership of the closure.
- The role of the local government, authorities and security personnel is important in monitoring and enforcement of the closure to ensure complete compliance.

The campaign was simultaneously broadcast in the media for 2 weeks by the Gambia Radio and Television Services' (GRTS) FM Radio and Janneh Koto Community FM Radio in Gunjur.

Selected reactions from the outreach campaign were as follows:

- The issue of complacency during monitoring and enforcement was thoroughly discussed and a strong collective consensus for full engagement was reached.
- Sea Rescue and Military personnel recommended that NASCOM write to their headquarters to request their participation in collaborative enforcement.
- The need to make available copies of the Co-management Plan, LACOMs by-laws and Fisheries Act and Regulation to security personnel, Alkalos, Councilors and LACOMs.
- Sustainability of the newly deployed spar buoys to mark the area is a concern, due to the roughness of the sea. Suggestion for NASCOM to look into more durable and sustainable buoys (cost is a key consideration).
- Recommendation to kick start monitoring by rented boat while waiting for the Kaufland funded boat and engine purchase.
- Night fishing identified as a problem, with these fishers potentially responsible for missing or damaged buoys. Recommendation for collaboration of the Department of Fisheries to immediately stop night fishing and to look into the apparently successful model for stopping this in Mbour, Senegal.
- Inland fishing communities wanted to know whether they are included in the closure. The response was no, but they should inform foreign Atlantic coast fishers who may be hosted in those communities.

Figure 3. Site meetings with Alkalos and Councilors, including military, DoFish, Sea Rescue and Communities (LACOMS)

Stock Assessment. At the First Annual Sole Co-Management Plan Review Meeting held in Quarter 1 of FY13, DoFish technical staff presented the stock assessment conducted in 2012 based on 2010/2011 data. USAID/BaNafaa, URI, the Atlantic Seafood Company and DoFish worked together to collect and analyze the sole data. The data show signs of overfishing related to small numbers of adult/mature fish and high fishing effort. DoFish staff with URI technical assistance are currently preparing an updated stock assessment using additional sole data from 2012 provided by Atlantic Seafood in Quarter 2. Preliminary results seem to indicate a less concerning situation than the previous stock assessment. The results will be finalized, disseminated and discussed with stakeholders at the Second Annual Sole Co-Management Plan Review Meeting scheduled for the October to December 2013 period. It is significant that the current process of annual co-management plan review is being firmly established as a legitimate and recognized forum for discussion of stock assessment results and adaptive management decision-making.

The co-management plan and its implementation is also significant for stakeholders in the Gambian artisanal sole fishery to demonstrate progress on management of the fishery at a standard that aims to meet the eligibility criteria for MSC certification, although certification is not the objective of USAID/BaNafaa project support. The Gambia is one of MSC's pilot countries for fisheries in transition, which helps developing countries move towards sustainability.

2. Development/Integration of a Catfish Co-Management Plan.

Based on the Bycatch study conducted for the Sole Co-Management planning process, Catfish, Cymbium, and Sole make up 80% of the catch by weight for the Sole targeted fishery using gillnets. Since this fishery is associated with the same nets, landing sites and fishermen as sole, a catfish management plan along with sole can be easily integrated with work already done on sole and involves the same stakeholder groups. Management responsibilities for this stock could also be added to the charge of the sole management committee. This will close existing gaps in the ecosystem based sustainable management approach. The potential for economic benefits to artisanal fishing communities will, likewise, be broadened under a multi-species plan.

Following the Local Ecological Knowledge (LEK) and Scientific Knowledge studies on Catfish that were presented at the Sole Co-Management review meeting in October 2012, additional research on Catfish has been done in the context of the mesh size gillnet study (see section 5 below). Sampling of catfish caught in these nets in May and June 2013 confirmed that this is a period when egg development and spawning is occurring in females and mouth brooding of eggs is occurring in males (see Figures 4 and 5 below). Thus, the closed season starting from May 1 seems especially appropriate for catfish as well as sole. It may be more critical for catfish given the very high parental investment in a small number of eggs relative to most fish species.

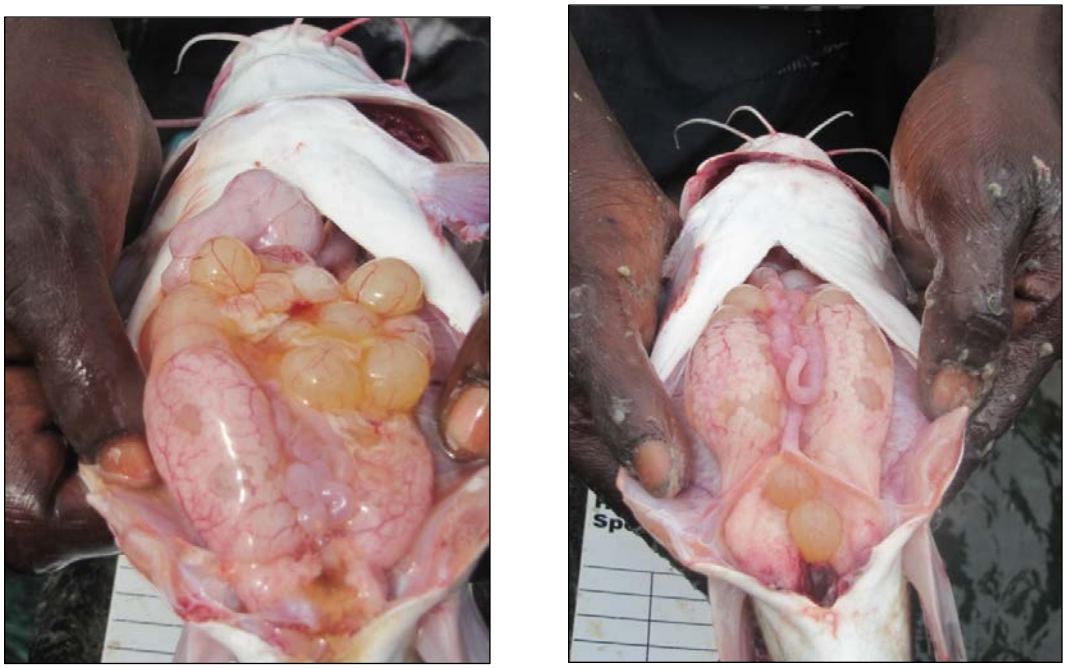


Figure 4. Catfish eggs developing in the female.

Figure 5. Catfish eggs after spawning being brooded in the mouth of the male Catfish.

As noted in the USAID/BaNafaa Year 4 Workplan, the USAID/BaNafaa Project's capacity to support more in-depth analyses, including a value chain study, stock assessment, otolith analysis and additional gear studies is very limited. Management measures for Catfish can still be developed based on the existing information, while additional studies can be recommended as part of a future research plan for Catfish. New information can be reviewed and accounted for in management decision-making annually as is the case for sole.

3. NASCOM Capacity Strengthened.

Based on a preliminary assessment of NASCOM's institutional capacity conducted by the project, a seed grant was provided to NASCOM in the last quarter of FY 12 to strengthen its institutional capacity. Sound administrative and financial management systems and the capacity to operationalize them is of immediate and growing concern for NASCOM as it attracts donor funding. NASCOM also has an ambitious agenda for collecting and managing its own membership fees, fines and penalties for non-compliance with co-management plan measures and for initiating a revolving credit program for members. NASCOM's reputation and credibility will depend in part on its real and perceived strength as capable and transparent in financial management. In Quarter 3 the following activities were implemented under the seed grant:

- The development of a Standard Operating Procedures (SOP) manual and Business Plan were assigned to two consultants. Drafts have been submitted for review and comment.
- Action research to test a locally made buoy model, the spar buoy, for marking the 1 nm seasonal closure zone was initiated in Quarter 2. NASCOM completed deployment of the buoys in Quarter 3. From May 11 – June 8, 42 spar buoys were dispatched from Kartong at the southern border of The Gambia to Bakau just south of Banjul. The NASCOM Chairman, Secretary and Treasurer were part of the deployment team. Although the co-management plan specifies that buoys would be placed at 500 meter intervals, actual deployment was at 1 km intervals. Plans are in place to fill the gaps to comply with the agreed interval.

Figure 6. Constructed Spar buoys ready for deployment

Figure 7. Buoy deployment trip from Kartong on The Gambia's southern border.

MSC and Kaufland Seafood invited NASCOM to the European Seafood Exposition from April 22 - 24, 2013 in Brussels. Kaufland handed over a 100,000 Euro check donated to NASCOM at a media event at the MSC stand. These funds were raised by Kaufland in a consumer campaign to support sustainable seafood from The Gambia and will be used for:

- Co-financing the sole fishery's assessment to the "MSC standard for well-managed and sustainable fisheries" Purchase of 3 boats and engines for monitoring, enforcement of the closed area as well as search and rescue at sea;
- Purchase of sanitation equipment and materials (dustbins, rakes, spades, wheel barrows, shovels etc.,) for environmental sanitation;
- Purchase of ice boxes to maintain quality of fish and improved fish and fishery product handling at sea and landing sites etc.
- Revolving loan program among members
- Data collection
- Outreach meetings with LACOMs members country wide.

Figure 8. Kaufland handing over € 100,000 cheque to NASCOM Secretary Dawda Saine.

4. TAGFC Capacity Strengthened.

TAGFC was not able to resolve organizational issues related to its constitution and management structure before the end of Quarter 3. Further support to TAGFC will not be possible in the remaining project timeframe.

5. Mesh Size Gillnet Study.

As per the Year 4 Workplan and following analysis of the Sole stock assessment at the Annual Review Meeting for the Sole Co-Management Plan held in October 2012, USAID/BaNafaa is providing technical assistance for a follow-on gillnet study. The objective, as per recommendations from the review meeting is to test the effectiveness of an increased mesh size (from the current 40mm to 42-46mm) as a management measure to reduce the catch of juveniles. The study, conducted from May 24th to June 22nd, was based in Kartong using set gill nets of 42 mm and 46 mm mesh sizes. There were 4 sets of 18 nets of 20 meter length of the 42mm mesh size and 4 sets of 18 nets of 20 meter length of the 46mm mesh size. Two sets of the 42mm mesh size net were set separately and 2 sets of the 46mm mesh size were also set separately. Finally, 2 sets of the 42mm mesh size net were joined with the 2 sets of 46mm mesh size net. Each morning Gibril Gabis (Senior Fishery Technician of the USAID/Ba- Nafaa project), Geoffrey Kibler (Peace Corps Volunteer) and two local fisherman hauled in the nets. The fish caught from each net were identified, weighed and measured. The nets were then set for another 24 hours. It is important to note that the fishing method and fishing time is the same as practiced by the local fishers. The team identified, dissected, sexed and photographed a sample of 20 catfish each day, 10 from the 42 mm mesh size net and 10 from the 46 mm mesh size net. The team successfully collected 29 days of data, which have been sent to URI for analysis. A comprehensive report will be prepared.

b. An Effective Oyster and Cockle Co-Management Plan

1. Implementation of the Oyster and Cockle Fishery Co-Management Plan for the Tanbi Special Management Area.

The Oyster and Cockle Co-Management Plan approved in January 2012 has yet to be gazetted by the Government of The Gambia, but is on the same trajectory as the Sole Plan with steps towards gazetting now being taken by the Ministry of Justice.

Like the Sole fishermen, TRY Oyster Women's Association members, having developed the management measures specified in the Plan for their own short, medium and long term benefit are motivated to implement the Plan while gazetting is pending. In Quarter 2, TRY hosted the first annual review meeting described in the Plan as part of the Plan's adaptive management approach and the 4 month 2013 oyster harvesting season in the Tanbi opened on March 1 as specified in the plan. In Quarter 3 on June 30th, the open season came to an end and all TRY members suspended the harvesting and sale of oysters. The women have complied with the recommendations of the co-management plan. . On July 5th, an annual general meeting was held at the TRY Center. The purpose was to have a general review of the year's events and activities and recommendations for the future. The meeting attracted 200 women from all communities.

Two Board members were also present. One of the major topics discussed was the co - management plan, which is a living document subject to changes if necessary. Some members had been voicing a proposal to consider shifting the beginning of the open season from March to January and potentially prolonging it by an additional month (i.e., January to May each year rather than March – June). The issues considered by the women when discussing this option demonstrate how far they have come in their knowledge, experience and engagement in managing the fishery. They considered economic, social and biological factors in making the decision. In the end, they unanimously agreed (by vote) that they all maintain the March to June opening and closing. One woman said, "…we have reached grade 12, we will not go back to grade 1."

Figure 9. More than 200 TRY members voting no on a proposal to change the period of the open season for oyster harvesting

Establishment of Community Committees. In accordance with the Co-Management Plan, TRY Association has started conducting community meetings in the nine Tanbi communities. The purpose of the meetings is to inform the broader communities of the Co-Management Plan and elect 6 – 8 representatives from each community (youth leader, alkalo, village development committee (VDC) members, and TRY women representatives) to be on the larger Community Committee. As of the end of June, TRY has very successfully completed this process in all but 2 of its 15 communities. Now that the oyster harvesting season is closed (June 30), these last two communities will have the time to meet.

Biological Sampling. The aim of this research is to compare the size of oysters harvested from the beginning of the oyster open season to the end of the season. This information can be used to assess the biological objective of the Co-management plan (i.e., provide information about the status of the stock as the open season progresses and from year to year). In preparation for the opening of the oyster season on March 1, TRY decided to engage TRY member's daughters from the skills training program run by TRY, rather than external consultants, to sample oysters at selected sales points for this study. In February, Mr. Kanyi of USAID/BaNafaa trained four of the girls. Together they collected samples during the harvest season at six sites, Kamallo, Wencho, Old Jeshwang (Jeshwan), Abuko, Lamin, and Ibo Town. They collected samples two

times per month (March – June) on designated days. They purchased four cups of oysters at each site and at the TRY Center they recorded the number of oysters and weight per cup. The data will be available in Quarter 4 for review. This data is not sufficient to determine the status of the stock. However, given the lack of any data on oysters collected by DoFish, it is data that is within TRY's capacity to collect systematically from year to year and data that will be owned, understood and easily accessed by TRY members for management decision-making.

2. TRY Capacity Strengthened.

Implementation of the co-management plan described above demonstrates the growing capacity of TRY and its members. The marketing and processing activities described below also demonstrate the development of this capacity in concrete terms. The USAID/BaNafaa Project has supported these efforts as described in those sections through both the Seed Grant to TRY and through the technical assistance provided by USAID/BaNafaa staff. In addition, in Quarter 3 the following activities have contributed to the growth of TRY's capacity.

Peace Corps Volunteer placement with TRY. USAID/BaNafaa's seed grants to TRY have supported housing and project related per diem and transportation for Peace Corps Volunteer's posted with TRY since 2011. At the end of April 2013, Peace Corps Volunteer (PCV) Fern Aguda-Brown returned to the United States following the successful completion of her assignment with TRY. She made significant contributions to TRY in many areas, including administrative and financial management systems strengthening and health and girls skills training program strengthening in particular. Lisa Helm, the new PCV, arrived in May. She has a wealth of knowledge and experience in the health field and will be assisting with programs to address the health needs of the women and their daughters, including health education. Topics of interest include the importance of taking prescribed medications, HIV/AIDS, birth control, cervical cancer, hypertension, diabetes, malaria, and menopausal problems.

Figure 10. (*From the left*) Isatu, Lisa (new PCV), Fern (outgoing PCV), Jalang and Fatou.

Annual INSEAD Social Entrepreneurship Conference. Although not funded by USAID/BaNafaa, in a complimentary capacity building activity, Fatou was invited and sponsored to attend the 2013 INSEAD conference in Madrid, Spain from Aril 26-27. It brings together leading social entrepreneurship practitioners, academics, business leaders and policy makers from all parts of the world. The theme for this year was "Technology, Innovation, and Social Change". Fatou presented on TRY, led the discussions that followed and exchanged ideas with her counterparts. She highlighted the need for the women to carry their mobile phones while at work harvesting oysters in the mangrove wetlands and the importance of this linkage of women to the police and the navy for protection while at sea. She emphasized the need for all TRY members to be taught how to make calls on their mobile phones.

Annual Oyster Festival. TRY's annual outreach and fundraising event has been held at the opening or the closing of the oyster season in past years. This year, it has been postponed until further notice due to the fact that the President of The Gambia, who is usually the chief invited guest, was not available. TRY now hopes to organize the event at the beginning of the 2014 season opening (March).

3. Processing and Marketing.

TRY Land Acquisition and Center. TRY continues to pursue its plans to acquire land from The Government of The Gambia to establish a permanent headquarters/processing/marketing and education center. Japanese Government representatives from the Embassy in Senegal have met twice with TRY in The Gambia (in January and in May) and are negotiating with TRY on the terms of an approved $66,500 grant through the Grant Assistance for Grassroots Human Security Projects (GGP) mechanism. However, this funding for a training center will not be available until TRY has secured the land. USAID/BaNafaa staff have accompanied, assisted and advised TRY in the meetings, funding application process and on-going negotiations.

UNDP Processing and Marketing Support. In Quarter 1 of FY 13, TRY received funding from UNDP in collaboration with the Ministry of Trade, Industry and Employment and as of Quarter 3 received the following support:

- An industrial vacuum packing machine
- Equipment, including chest freezers, an LCD projector, flat screen TV, and DVD player
- Fuel saving oyster smoking ovens at 15 TRY community landing sites (based on improvements to the design demonstrated at Kamalo built with USAID/BaNafaa assistance in FY12). One of the main improvements has been to locate the ovens inside of a covered open air shelter. Not only does smoking with these ovens require less fuelwood than would otherwise be used to boil the oysters on a traditional 3 rock fire, but the price per kilogram of smoked oysters is higher than boiled and should bring more value to the women for the limited kilograms they are sustainably harvesting.
- Capacity building training for 300 women from TRY's 15 communities on shellfish handling, processing and quality control. The program has raised awareness on improved shellfish handling and processing practices, which will contribute to the attainment of increased production of high quality and wholesome seafood products.

USAID/BaNafaa staff provided technical assistance to TRY for the development and negotiation of this proposal and has been accompanying TRY in implementation and monitoring of the services and infrastructure, including understanding of the UNDP financial management and reporting requirements that TRY must comply with. UNDP funding to TRY for 2012 and 2013 activities is considered as Cost Share from TRY under the USAID/BaNafaa project.

Figure 11. Oyster smoking oven infrastructure constructed at 15 harvesting sites.

Figure 12. TRY members at Faji Kunda invested their own resources to improve the hygiene of their smoking and processing site by building a fence

Visit to Atlantic Seafood Processing Plant. TRY continues to educate its members on improved processing techniques and on best practices in seafood handling and hygiene with assistance under its USAID/BaNafaa seed grant. In February 2013, 4 TRY members went on a study tour to a women-run oyster and cockle processing facility in Senegal. Since their return, these women have presented their observations to other TRY members whenever they have gathered for scheduled meetings and training sessions. On May 13, TRY members from Kamallo visited the Atlantic Seafood Plant located at mile 5 on the Banjul Serekunda Highway. This plant is a joint venture by private owners from the Netherlands. Employees at this plant are mostly

Africans from surrounding countries, including Gambians. The purpose of the visit was to observe processing and quality control techniques and to understand hygiene and sanitation practices in food production, including proper packaging procedures. During the tour, the women were required to wear uniforms and hair nets and follow correct hand washing protocol. The plant processes various types of fish for the export market. Exporting Gambian oysters is a long term goal of the TRY women.

Figure 13. TRY members from Kamallo visiting Atlantic Seafood processing plant in The Gambia.

Global Giving. With the cash donation that was received from Global Giving, TRY was able to purchase one hundred pairs of protective goggles from Dakar, Senegal. This will help address the problem of eye irritation which has been a major complaint by the women during processing. Because the oyster harvesting season has closed this year, distribution of goggles will be done at the beginning of the next season. USAID/BaNafaa continues to support TRY to operate the Global Giving website and considers this revenue as cost share from TRY.

4. Aquaculture Action Research.

Environmentally friendly aquaculture research and development is a management measure specified in the Oyster and Cockle Co-Management Plan. USAID/BaNafaa has been supporting this aspect since the beginning of the project with action research pilots on floating basket culture of oysters, cockle ranching and rack culture of oysters conducted by TRY members in their communities.

TRY Association continues to monitor the oyster culture racks that were constructed in November and December with the grant they received from GEF. Although the wild harvest is currently so plentiful it is not evident that aquaculture could produce comparable volume with comparable effort and cost/benefit in the immediate term, donor support is enabling TRY to continue to develop this technique and to scale it up. USAID/BaNafaa staff provide technical assistance to TRY for implementation, including oversight for monitoring and maintenance of the racks at 6 community sites and assistance to prepare reports for GEF. After 2 years, GEF support is coming to an end and the women are expected to continue monitoring and caring for

their aquaculture racks on their own. GEF funding is considered as cost share from TRY on the USAID/BaNafaa project.

Figure 14. GEF funded oyster rack culture.

With technical assistance from USAID/BaNafaa staff, TRY has pursued additional donor funding for oyster aquaculture. These opportunities include:

- Proposed funding from Taiwan to support to the Department of Fisheries and TRY for the management of oyster resources in Tanbi Wetlands National Park. The proposed project involves 3 sites (Old Jeshwang, Lamin and Kubuneh) and is for $88,000 over 3 years.
- British High Commission funding of approximately $6,800 is approved for expansion of oyster culture in the Tanbi for the remaining 6 oyster communities that did not benefit from the GEF-UNDP Small Grant. TRY was chosen out of 100 applicants.

5. Mangrove Planting

Now that the oyster harvesting season has ended, TRY members will conduct another campaign of mangrove planting during the rainy season.

6. Other Programs Directly Benefitting Members.

Microfinance: TRY Association's microfinance program is continuing with existing active participants. The women are slowly continuing to realize the importance of saving their money.

Skills Training of TRY Daughters. Alternative livelihood development is also a management measure specified in the co-management plan to reduce pressure on shellfish and mangrove resources. Fifteen students graduated from the Skills Development Program on April 19, 2013. The ceremony held at the TRY Center marked successful completion of a 2 year program. Invited guests included parents, friends and board members of TRY Association. The country

Director for Action Aid was a guest of honor as Action Aid The Gambia was the major sponsor of this graduating class. Certificates were awarded to the students, who performed a drama about teenage pregnancy, HIV and AIDS and how to say no to men and boys. The students displayed the items they produced during the training, including tie-dye and batik, soap and soap powder and handmade bags. This was followed by a reception with snacks prepared by the girls themselves.

Figure 15. Skills training graduates completing their 2 year program at TRY.

Health. TRY Association has begun a health education initiative to educate the TRY members on various health topics relevant to their lives and chosen by the women themselves, including sexual and reproductive health, malaria, cancer, nutrition, oral and eye health. This initiative came in response to requests from the TRY women for health classes. The activity is currently being funded by the Peace Corps SPA (Small Project Assistance) Program. However, because the costs are so minimal ($45-$60), this program can be continued by TRY once SPA funds end. In Quarters 1 and 2 classes were held on the topics of female and male reproductive anatomy, menstruation, menopause, breast health, STIs, HIV, cervical cancer and family planning. More than 40 women were tested for cervical cancer. Rarely do Gambians, especially uneducated women, have the chance to speak freely with willing health professionals as TRY members were able to do as a result of this activity. The classes will also help make the women more confident in understanding and accessing health services, especially sexual and reproductive health services, available in the Greater Banjul area. Fatou Janha, TRY Executive Director was invited by The Woodrow Wilson Center in Washington DC to speak about TRY's integration of health activities into natural resource management programs. She will speak on July 26th on a panel entitled "Oysters, Octopus and Resilience." The talk will be live webcast and available on the Wilson Center website archives.

7. Allahein River Trans-Boundary Oyster and Cockle Co-Management Plan

Based on the PRA conducted in 2012, the next stage of the participatory management planning process was undertaken in Kartong/Allahein River estuary at the southern border of The Gambia and the Casamance Region of Senegal in Quarter 2. Following a two day meeting in March that

brought together community stakeholders from both countries, it was agreed an Association be formed named "ALLAHEIN KAFO". The communities are interested in working together to prepare and implement a co-management plan. However, the communities will first be trained and capacities built on co-management. Outreach and awareness raising on these ideas was carried out in each community. A report of the progress will be available in Quarter 4.

8. Water Quality, Sanitary Shoreline Surveys and a Gambian National Shellfish Sanitation Plan (GNSSP).

Water quality testing to determine whether there are public health risks from contamination of oyster harvesting areas has continued in Quarter 3 of Year 4 at 15 oyster harvesting sites within Tanbi Wetlands and Western Region. In January 2012, 4 additional important harvesting sites deep inside the Tanbi were added to the testing protocol. Testing is conducted on a fortnightly basis and analyzed at the laboratory in Abuko. Total and fecal coliforms are determined by the membrane filtration method, using standard TC and FC media. Coliform counts are done using 25 mL of filtrate and reported as colony counts per 100mL of sample as is routinely reported in shellfish sanitary water quality literature (e.g. Graybow et al, 1981). The results of the study to date show that both total coliform and fecal coliform counts were relatively low in all sample sites. The data from the Tanbi sites appears to be reasonably clean in comparison to U.S. NSSP Total Coliform water sanitation standards, although Fecal Coliforms are higher. The data also show that there is a distinct wet season signal and variability in the maxima from month to month indicating that there are definite transient contamination events from time to time in some locations (Figures 16 and 17).

In addition to water quality testing, shoreline sanitation survey techniques enable decision makers to identify areas of critical threat to shellfish sanitation. Based on the twice yearly schedule put in place, the third shoreline sanitation survey was completed in February 2013. One of the next steps in the process is classification of water quality zones. Profiles of baseline water quality in the different zones will be the basis for making management decisions regarding closure at times of risk for human consumption. In addition to the technical framework for a GNSSP, USAID/BaNafaa will focus on encouraging documented procedures for interagency collaboration and budget appropriations for GNSSP work in the future after project assistance ends.

The process being undertaken in The Gambia was shared by Dr. Rice at the USFDA 65th Annual Mid-Atlantic Interstate Seafood Seminar in Rehoboth Beach, DE, “Changing Environments for the Future” on April 16th.

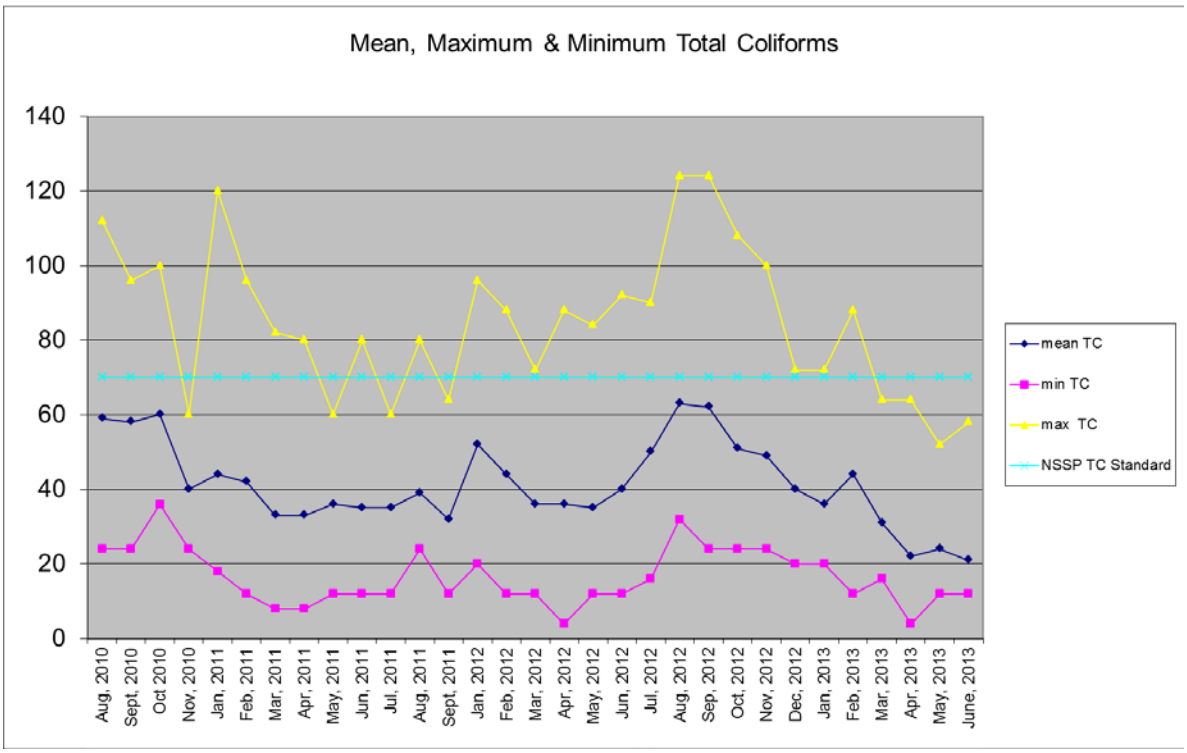


Figure 16. Average Total Coliforms at oyster harvesting sites August 2010 – June 2013.

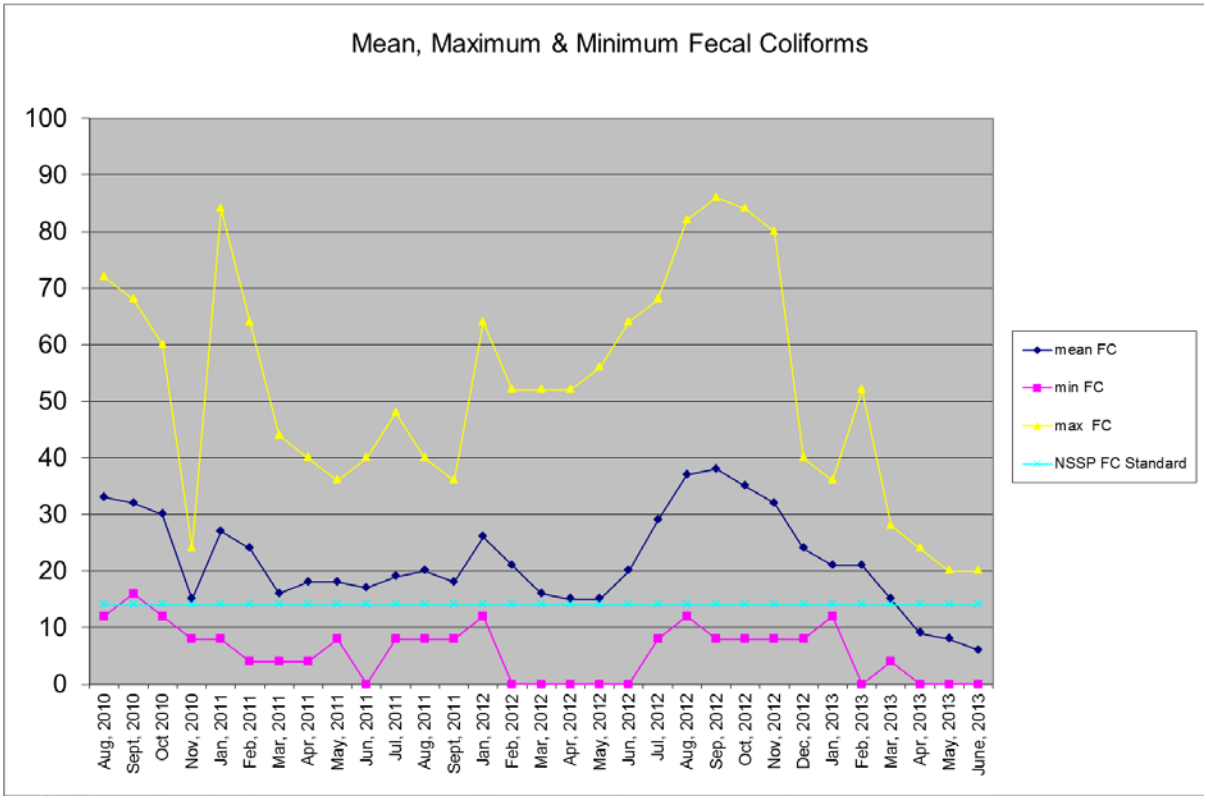


Figure 17. Average Fecal Coliforms at oyster harvesting sites August 2010 – June 2013.

c. Water, Sanitation and Hygiene (WASH)

The Water and Sanitation component of the USAID/BaNafaa Project was incorporated to support needed water and sanitation activities linked to the artisanal fishery and Community Fishery Centers (CFCs) and oyster landing sites. The objectives of these WASH activities are to improve water supply and sanitation at approximately seven public fisheries landing/processing facilities, including oyster harvesting/processing sites. This will provide direct benefit to the thousands of fishermen, oyster harvesters, women fish venders, small scale fish processers and other laborers that utilize these facilities daily. An added benefit is that clean water supply and sanitary facilities at these sites will also result in improved sanitary handling of seafood supply and result in safer and healthier seafood product that enters both the local food chain as well as processing centers for export. In addition, recent research on small-scale African fisheries suggests that addressing high priority fisher household vulnerabilities such as water, sanitation and health issues are likely to increase incentives for fishermen to engage in more sustainable fisheries management practices[2]. Lessons Learned from outbreaks of Cholera in neighboring countries in West Africa over the last 2 years have also highlighted the critical importance of addressing poor water, sanitation and hygiene conditions at hubs, such as fish landing and marketing sites, that can be the entry points for spreading the epidemic nationwide and across borders.

Six fish and oyster landing sites are prioritized for WASH interventions as a result of the needs assessment and stakeholder workshop conducted in Year 3 (FY12) (see Table 1).

Table 1. USAID/BaNafaa WASH Intervention Sites

No.	Site	Rank( ) and type of site	Comments
1	Brufut	(1) Fisheries	
2	Kamalo	(1) Oysters	
3	Sanyang	(3) Fisheries	
4	Jeshwang	(3) Fisheries and Oysters	
5	Abuko	(3) Oysters	
6	Kartong	(6) Fisheries and Oysters	
7	Tanji	(7) Fisheries	Not anticipated due to size/cost and difficulty/complexity/timeframe.

As of Quarter 3, Year 4 progress is as follows:

Environmental compliance activities previously completed. These included selecting sites for the individual facilities, testing potable water sources as per USAID requirements for arsenic and other required water quality parameters. Only 2 of the 6 WASH sites will have boreholes. The 4 others will access municipal water, which was also tested. All water sources were found to be within acceptable standards.

[2] Mills, D., et al. 2009. Vulnerability in small-scale African fishing communities. J. Int. Dev. DOI: 10.1002/jid.

Participatory Hygiene and Sanitation Transformation (PHAST) Training previously completed. A total of 160 participants, including 130 women were trained at Brufut and Old Jeshwang, Kamalo and Kartong (40 at each site). The training was conducted by TARUD.

Training of Trainers (TOT) in Community Outreach and Hygiene Promotion. TARUD trained 80 participants, including 61 women, in Quarter 3 (20 at each of the 4 sites - Brufut, Old Jeshwang, Kamalo and Kartong). The training aimed to develop and strengthen the capacities of these four communities to address water, sanitation, hygiene, behavioral and attitude change. The TOT approach on hygiene and sanitation promotion focused on the linkages between water, sanitation, hygiene and health in the following areas:-

- Personal hygiene and its related water uses
- Safe and unsafe water
- Waterborne and excreta related diseases.
- Environmental cleanliness
- Food handling and storage
- Specific behaviors such as hand washing practices, water collection, storage and use
- Latrine use and maintenance

Participants comprised mainly the Community Fisheries Centre (CFC) Management Committee, user groups, local government authorities and community elders. Trainees will now reach out to others in their communities with various outreach sessions and activities. Participants were each given an exercise book to record the names of the people they are able to reach and train, the type of work they do, their gender status and the dates of the training.

Figure 18. Kartong participants

Figure 19. Kamalo participants

WASH Management Committees established. Six WASH Management Committees have been established at four sites. One at the Brufut fish landing site, one at the Old Jeshwang oyster site and one at the Old Jeshwang fish landing site, one each at the Kartong fish and oyster sites and one at Kamalo oyster site.

WASH Management Plans. The USAID/BaNafaa WASH Coordinator is leading the process of developing the WASH Management Plan with each of the four communities that have already benefitted from the PHAST training. These are:

a. Brufut Community fisheries centre
b. Old Jeshwang fishing community
c. Old Jeshwang Oyster harvesting and processing community
d. Kartong fishing community
e. Kartong shellfish harvesting and processing community
f. Kamalo Oyster harvesting and processing community

TARUD is providing input into these plans through its training activities. GAMWORKS, the Department of Fisheries and the Public Health Department are also engaged with communities to develop their respective WASH management plans. Weekly meetings are held and the communities are making their own rules and coming up with management measures on the operation and maintenance of the WASH facilities and on other sanitation and hygiene measures. The WASH Management planning process cultivates community ownership of WASH management through a participatory approach incorporating consultations with community members directly to make all key decisions. This approach is crucial in ensuring that operating practices and maintenance of the water and sanitary facilities and environmental soundness of the sites are sustained. As for the fisheries management plans, the WASH management planning process has made clear that management plans should be flexible to adjustment as implementation begins and experience is gained. Behavior change and user fee strategies in particular will need to be reviewed and revisited regularly by the WASH Management Committees.

Figure 20. Kartong WASH Management Committee members

The development process of the WASH management plans for Brufut and Old Jeshwang communities are in their final stages. Kartong and Kamalo communities are also working hard to complete their Plans. Next Quarter, WASH Management Committees will hold a general meeting with other stakeholder institutions on their roles and responsibilities under the WASH Management Plans. This will be organized before handing over the WASH facilities to the communities.

Community participation in cleaning of their landing sites. The fishing and oyster communities in Old Jeshwang embarked on a two day cleaning exercise of their respective landing sites from 8-9 June 2013. The communities were supported by their local area Ward Councillor who provided them with trucks for collection and removal of thrash to the recommended dumping site in Bakoteh. The community members thanked the USAID/Ba-Nafaa Project for developing their capacities on environmental health and sanitation. According to community members, the initiative to come together and clean their fish and oyster landing sites was as a consequence of the PHAST training and the Training of Trainers for Community Outreach on Hygiene Promotion. Also, the WASH management planning meetings with the communities have contributed immensely in the decision making to clean their own environment.

Figure 21. Areas at the Old Jeshwang site previously covered in trash

WASH infrastructure. The construction of WASH facilities in Brufut and Old Jeshwang commenced in the middle of March 2013 and are near completion (Figures 22 and 23 below). The communities report that they are very satisfied with the quality of work. Design and contracting for the next 2 sites (Kamalo and Kartong) is complete and construction will begin in Quarter 4.

Figure 22. WASH facilities at Old Jeshwang fisheres site.

Figure 23. WASH facilities at Old Jeshwang oyster site**.**

Following payment of water and electricity installation fees by GAMWORKS to the National Water & Electricity Company (NAWEC) for the communities of Brufut and Old Jeshwang, the WASH Committee members of these communities and their local government authorities (Ward Councillors) met with the management of NAWEC on June 25, 2013. The principal purpose of the meeting was for the communities to express their concern about the delay in connection of water and electricity to their sites following payment. Among the stakeholders who visited NAWEC were Fisheries Department staff, women fish and shellfish processors, Area Ward Councillors, Fisheries centre management committee members and staff of the USAID/Ba-Nafaa project.

Figure 24. Stakeholders visit at NAWEC

The NAWEC Customer Relations Manager confirmed to the community members that all measures would be taken by NAWEC to ensure that the communities are provided with water and electricity supplies without any undue delay.

2.2 Intermediate Result 2

Institutional capacity strengthened at all levels of governance to implement an ecosystem-based, co-management approach to sustainable fisheries, and to prevent overfishing.

Year 4 Highlights as of Quarter 3

- Department of Fisheries Capacity Strengthened
  - 2012 Stock assessment (using 2010/2011 data) presented by DoFish staff at the First Annual Review Meeting for the *Fishery Co-Management Plan for The Gambia Sole Complex* and reviewed by stakeholders for management decision-making.
  - 2013 Stock assessment update (using 2012 data) under preparation
  - Degree training in Fisheries for 1 staff in Nigeria continuing
  - Fish Biology Course for DoFish field staff completed
- NASCOM capacity strengthened (see IR1)
- TRY Oyster Women's Association capacity strengthened. (see IR1)
- A total of 268 participants trained, of whom 201 were women (75%).

a. DoFish Capacity Strengthened

1. Stock Assessment.

As reported in Year 3, the first stock assessment done by MSC was very rough and preliminary, based on little data. With USAID/BaNafaa assistance, DoFish improved the data and a 2012 Stock Assessment Report based on 2010/2011 data was produced. As reported under IR1 above, the findings were presented by DoFish staff at the first Annual Review Meeting of the *Fishery Co-Management Plan for The Gambia Sole Complex* in October 2012 and will be updated for the 2013 Annual Review Meeting later this year. The co-management plan provides the institutional framework for stakeholders to decide how to act on the findings. The 1 nautical mile (nm) seasonal closure was incorporated into the management plan as a precautionary measure, but will now be considered a significant management action. The meeting also recommended increasing the gillnet mesh size minimum from 40mm (currently in the Plan) to 42-46mm.

In spite of this recent progress and the very positive momentum on the part of NASCOM for implementation of the Co-Management plan, the greatest challenge now faced by stakeholders in the co-management process is that DoFish has not taken action to effectively capitalize on technical assistance and capacity building provided by the USAID/BaNafaa project and others to institutionalize the sole stock assessment function within the Department. This is in spite of growing competency demonstrated by technical staff in the statistics unit and in spite of four senior DoFish staff attending the URI Fisheries Leadership course in Rhode Island since 2010, among multiple other opportunities provided by the project to support DoFish to realize its co-management role. To date in 2013, only Atlantic Seafood is providing critical data needed for stock assessment and NASCOM is preparing to collect length frequency data, realizing that DoFish does not have the capacity to do it. In addition, DoFish has still not produced and shared

a report on vessel registration completed in 2011 (with USAID/BaNafaa financial assistance). The project will continue to address issues of DoFish capacity with DoFish and with the New Minister of Fisheries and Water Resources appointed in November 2012.

2. Fish Biology Training.

Following Training of Trainers in Fish Biology in The Gambia and at the University of Rhode Island in 2011, DoFish organized its staff for the long planned in-country fish biology training facilitated by these trainers (Mr. Gibril Gabis of DoFish, seconded to the USAID/BaNafaa Project and Mr. Lamin Sanyang of Atlantic Seafood Company) starting in February 2013. Chris Parkins of URI provided support for the first of the series of 5 day-long classes and Geoffrey Kibler, Peace Corps Volunteer posted with WWF also assisted throughout, but the objective was for local resource persons to lead the instruction. The new Fish ID guides produced with USAID/BaNafaa support were used in the training and distributed to all participants for their continued use in the field.

The course objective was to improve the knowledge and understanding of the Gambia Department of Fisheries staff on fish biology. The topics covered included: Identifcation of Common Fishes of the Gambia; Anatomy of Fish; Determining Age, Sex and Maturity of Fish; Fish Sampling Types and Methods, and Field Sampling Practical Exercises. Participants were trained on how to create a field data sheet using Microsoft Excel. The training method for the fish biology course included lectures, handouts, reinforced group discussions, and hands on laboratory and field exercises. A post test was administered to evaluate how much the trainees learned. Observations of the course facilitators and findings from the tes are summarized below. The course contributed to capacity development of DoFish field staff.

Figure 25. Fish Biology Course participants with their Fish ID Guides.

The table below lists the participants and classes attended.

Trainees	Station	Designate	# of classes attended
Yusupha Jassey	Tanji	Assistant Fisheries officer	2
Bintou Colley	Tanji	Senior Fisheries assistant	1
Kajally Sarr	Tanji	Fisheries Assistant	5
Janko Bojang	Brufut	Principal Fisheries Assistant	5
Fatou Carr	Brufut	Senior Fisheries Assistant	5
Amie Jallow	Brufut	Fisheries Assistant	5
Isatou Bajan	Kartong	Senior Fisheries Assistant	4
Ebrima Jabang	Kartong	Fisheries Assistant	5
Amadou Jallow	Bakau	Trainee Fisheries Assistant	5
Fatou Camara	Banjul	Fisheries Assistant	5
Lamin Dampha	Banjul	Principal Fisheries Assistant	2
Trainers			
Gabril Gabis	BaNaFaa Project	Principal Fisheries Assistant	5
Lamin Sanyang	Atlantic Seafood		3
Geoffrey Kibler	PCV BaNafaa	Peace Corps Environment Volunteer	4

Summary of observations and post-test findings:

Class 1: Identification of Common Fish of the Gambia

- Many participants could identify the different species, while some of the newer employees found it difficult. The test results indicated that all participants still need to become more familiar with the common fish of the Gambia. With the help of the guide they can continue to expand their knowledge.
- Individuals added their own knowledge of the local species and the different local names for each fish. There were some disagreements on the local names.
- This class was the favorite of the participants. All felt that they will use the knowledge gained from this class in their field work.

Class 2: Anatomy of Fish

- This subject is very important because it lays the foundation for identifying unknown species based on their varied characteristics.
- Test results indicated that this was a very tough topic for trainees to understand.
- The hands on approach to learning the different internal and external features may be a possible way of delivering this class in the future.

Class 3: Field sampling and data collection

- The class was designed to last three hours, but took well over 5 hours to complete.
- The informal question and answer session at the beginning of the class really helped to find out the level of understanding of the class.
- There was a heavy emphasis on accurate data collection and common mistakes.
- There is currently no set way in which each landing site collects its data.

- Trainees expressed the need for the Department to provide them with the necessary resources, support and monitoring so that they can accurately collect the data.
- The Excel demonstration on how to prepare a data sheet was 100% needed but the participants lack the ability to reinforce any of the material learned because they don't have access to computers.

Class 4: Age sex and maturity/Length and Weight

- Participants had little prior knowledge on how to determine fish age, sex and maturity.
- The post-test indicated that trainees understood how to successfully determine the sex and maturity of a given fish.
- Many of the participants also understood the process of how to age a fish based on its scales or otoliths. They all felt that the hands on demonstration of removing otoliths and gonads was very useful.

Class 5: Working visit to Atlantic Sea Food Company

- This trip to the fish processing plant really helped to reinforce some of the material learned in prior classes.
- It gave facilitators the opportunity to test the class on the materials learned.

General Feedback

- The students were very thankful that they had the chance to attend the classes.
- Most felt the overall course should have been a lot longer so they could better retain the information presented.
- A few individuals felt that time was wasted on things of little importance to their job (i.e they will never be working at the DoFish office in Banjul on data sheets).
- Classes could be more efficient and structured like a more traditional class.
- Instructors felt that a pre-test/assessment to determine trainees level is essential if this type of training is repeated.
- All wanted to learn more about fish biology and how to better perform their jobs. They just have no way to obtain such trainings.
- Although the overall evaluations of each of the classes indicated that trainees did not retain all the material covered, instructors now have a better idea of the starting level and participants felt that they did learn something new and that they would use the information from the course in their day-to-day activities.

3. Degree Training for DoFish Staff

Within DoFish, there is a strong cadre of approximately one dozen mid-career professionals who cannot be advanced through promotion within the civil service system as they lack the appropriate degree qualifications, in spite of the fact that they have ample experience and competencies. This creates a morale problem and is typically a problem for retaining highly skilled people within the Department. Most of these individuals have completed two-year diploma programs, but require a four-year degree to be promoted. Such degrees in fisheries are not available in The Gambia and require training outside the country. Individuals from DoFish with two years of study already completed were selected to continue degree training to a four year level (i.e., the Project provides support for an additional two years of education). Degree

training at Nigerian universities is very cost effective. Two individuals were nominated for these degree scholarships, were accepted for admission and began their studies. One who only needed an additional year has completed his degree in September 2012 and is currently seconded to the USAID/BaNafaa project. The other is expected to complete his program in September 2013.

4. Comparative Cost Study.

The Interagency Committee to further review the report on the Comparative Cost Study met on May 2, 2013 at DoFish. The key points were as follows:

The Chairperson, Ms. Baturu Camara Ceesay of the Ministry of Trade, Employment and Regional Integration welcomed the Committee members present and lamented that some key member agencies/institutions were not present namely: Office of the Vice President, Ministry of Finance and Economic Affairs and GIEPA and said that these institutions can be important players in the work of the Committee. The Chairperson recalled the raison d'etre for creating the Interagency Committee and said that the Committee was mandated to take further action(s) based on the recommendations of the study report, the most important of which is to prepare a Cabinet Paper to inform The Gambia Government on the contents of the report.

The Comparative Study report made reference to a value chain assessment of the sole fishery commissioned by the USAID/Ba-Nafaa project, and the assessment revealed that an unknown quantity of sole fish is trans-shipped into Senegal and much of this transshipment is not being fully captured by the Department of Fisheries statistics. Sole fish caught in Gambian waters are loaded onto trucks coming from Senegal and transshipped to Senegal. The transshipped products are purportedly caught in southern Senegal (Cassamance) and transshipped to Senegal for eventual processing and export. Although the value chain assessment was limited to the sole fishery, the assessment also revealed that other high value fish species are included in the cross border trade such as cephalopods, shrimps and high value finfish species. This illegal trade can have significant impacts on trying to accurately assess landings of sole and other high value fish species caught in Gambian waters. Therefore, additional assessment of the cross border trade was needed and this warranted the commissioning of the comparative cost study to assess the impact of the cross-border of Gambian fish to Senegal to fully understand market context and opportunities for improving marketing that benefits more fully Gambian fishermen, processors and exporters.

The discussions of the meeting of the Committee focused on review of the conclusions and recommendations of the study report which relate to the following: the price of fish; the incentive package offered in the two countries; the prevailing financing system; the position of the supporting industries; the institutional framework and the human resources available for the promotion of the fish processing industries; and the comparative cost per unit of the processed sole. The study report recommended that the competitiveness, profitability and sustainability of the Gambian fish processing industry depend on the following issues: 1) financing, 2) utilities cost reduction, 3) infrastructure improvements, 4) associated industries, and 5) the supply of raw materials (fish).

During the meeting, the Committee agreed that the Ministry of Fisheries and Water Resources and the Fisheries Department should be the lead agencies and the Ministry should assume the Chairmanship of the Committee. The conclusion was that the Ministry of Fisheries and Water Resources is better placed to coordinate the affairs of the Committee including the drafting of the Cabinet Paper and submitting it to Cabinet. The Committee recommended that the Security Service agencies and Customs Department be involved in the work of the Committee especially as regards ensuring compliance with the fisheries legislation and monitoring, surveillance and enforcement. The Committee requested that the USAID/Ba-Nafaa project should continue to support the work of the Committee.

The Deputy Permanent Secretary of the Ministry of Fisheries and Water Resources, Ms. Fatou Sosseh Jallow, informed the Committee that her Ministry will internalize the study report (study and discuss the report at the level of the Ministry) and will come up with a strategy on the way forward.

The membership of the Interagency Committee include the following: Ministry of Fisheries and Water Resources, Department of Fisheries, Ministry of Trade, Employment sand Regional Integration, Gambia Investment and Export Promotion Agency (GIEPA), Ministry of Finance and Economic Affairs, Office of The Vice President, Association of Gambian Fishing Companies (TAGFC) and National Sole Fishery Co-Management Committee (NASCOM). 2 fisheries non-governmental organizations Gambia Artisanal Fisheries Development Agency (GAMFIDA) and National Association of Artisanal Fisheries Operators (NAAFO) were co-opted as members.

Progress on Fisheries Infrastructure Development in The Gambia

The newly constructed US$8.5M Banjul Fisheries Jetty was Tuesday (July 9th) handed over to the management of the Gambia Ports Authority (GPA) through a signed management contract by the minister of Fisheries and Water Resources (Daily Observer, July 10, 2013)

The Fisheries Jetty was among the sub-projects sponsored by the African Development Bank (ADB) and the Arab Bank for Economic Development in Africa (BADEA) and coordinated by the Gambia Artisanal Fisheries Development Project under the Ministry of Fisheries. The acting deputy managing director of Gambia Ports Authority (GPA), Ousman Jobarteh, said the institution is well prepared to take over the management of the Jetty. "The objective to have the jetty will include the need to earn foreign exchange by providing the adequate service to foreign and local fishing trawlers on the industrial level as well as catering for artisanal fisheries for the local fisher folk," he stated.

The jetty has a total length of 125 meters. There are two piers; pier 1 has a 85 meter length access bridge and a 60 meter length pier head; whilst Pier 2 – the concrete deck part of the jetty which is connected to pier 1 – has a 40 meter length access bridge and a pier head of also 60 meter length for industrial fishing vessels. There are two floating pontoons attached to access bridge of pier 1 each of 20 meter length for artisanal canoes to enable fish to be offloaded from commercial artisanal fishing boats,

b. Local Partner Capacity Strengthened

As reported under IR1 above, USAID/BaNafaa has strengthened the capacity of TRY and NASCOM in particular in various ways with positive results.

As reported under IR1 for the WASH component, PHAST training of WASH Management Committees and community leaders as well as the TOT for Community Outreach and Hygiene Promotion are also building capacity at the community level.

c. Bilateral Stakeholder Capacity Strengthened

Second Annual Bilateral Co-Management Meeting. Based on the recommendation of the First Annual meeting held in May 2012, the second annual meeting is now scheduled for August 19, 20, 21 in The Gambia (after Ramadan) and will include the "twinning" activity between Gambian and Senegalese fishing communities identified as a priority action at last year's meeting. Repeating this activity was also one of the recommendations of the Mid-Term Evaluation of USAID/BaNafaa.

2.3 Intermediate Results 3 and 4

IR 3. Nursery areas and spawning areas for critical life stages of commercially important species and for associated marine turtles and mammals are protected

IR 4. Change unsustainable and destructive marine resource use practices that threaten improved biodiversity conservation in the West Africa Marine Ecoregion.

Year 4 Highlights as of Quarter 3

- Implementation of *Fishery Co-Management Plan for The Gambia Sole Complex* (see IR1).
    - 121,245 ha under improved management (the entire Atlantic Coast of The Gambia out to 9 nautical miles)
    - Seasonal closure for all species and gear types out to 1 nautical mile from May to October
    - Fish size limits and gear restrictions. New recommendation to increase mesh size limits from the current 40mm to 42-46mm.

- Implementation of *Oyster and Cockle Fishery Co-Management Plan for the Tanbi Special Management Area* (see IR1).
    - 6,304 ha under improved management (the entire Tanbi Wetlands National Park)
    - Seasonal Closure for Oysters from July to February
    - Gear restrictions for mangrove protection
    - Mangrove reforestation
    - Shellfish size limits
    - Shellfish Sanitation Planning, including bi-weekly water quality testing and bi-annual shoreline sanitation surveys.

- Improved biophysical conditions in areas under improved management not yet demonstrated.

a. Sole Fishery and Oyster and Cockle Fishery Co-Management Plans

The status of hectares under improved management remains the same as reported in the Year 3 Annual Report and as illustrated in Figures 30 and 31 below. As reported under IR 1 above, implementation of the Sole Fishery and Cockle and Oyster Fishery Co-Management Plans approved in January 2012 is underway. The co-management process of annual review of the two plans is being led by NASCOM and TRY respectively and updated information is being reviewed and used to adjust management measures. Improved biophysical conditions in the areas under improved management have not yet been demonstrated. Impact at this level is not expected at this point in time. Implementation of management measures is still very recent and still based solely on fisher community consensus to begin implementation while gazetting of the plans is pending. At the same time, the most recent sole stock assessment indicates that pressure on the sole fishery seems to be increasing in recent years and that improved management is more critical than ever.

Expansion of the sole plan to include Catfish is under development, broadening its scope towards a multi-species plan. In addition, the cross-border Allahein River oyster and cockle fishery co-management plan now under development will eventually expand the number of hectares of biodiversity significance under improved management in the oyster and cockle fishery.

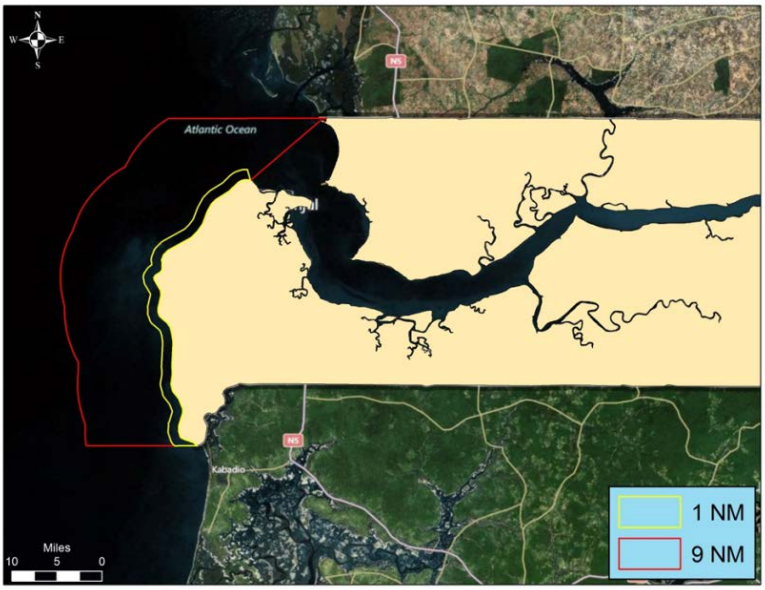


Figure 26. 121,245 hectares under improved management for the artisanal sole fishery out to 9nm.

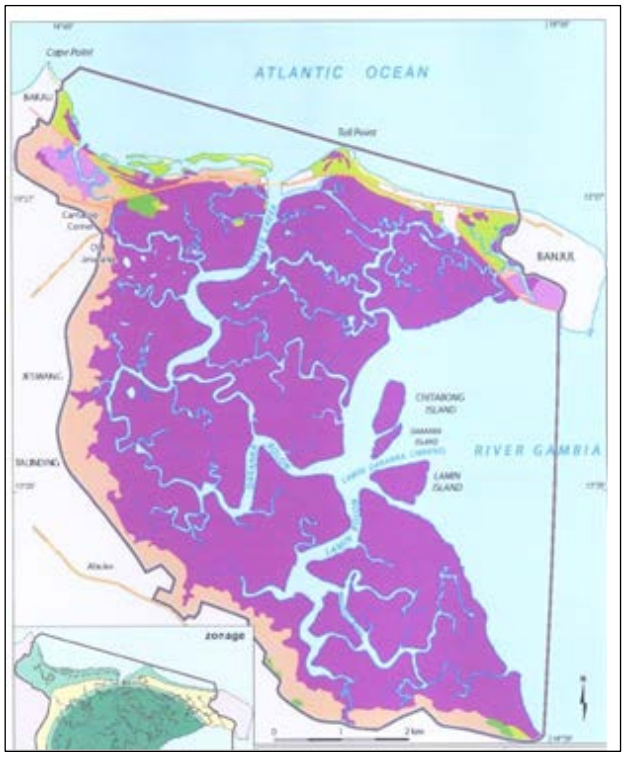


Figure 27. 6,304 hectares under improved management for the oyster and cockle fishery in the Tanbi

3. Project Management

CRC/URI established its own in-country office in The Gambia, primarily to manage the WASH component in Year 3, but also to implement directly some of the fisheries work with local partners previously managed under the WWF sub-contract. A WASH Coordinator, Dr. Bamba Banja started on September 1, 2011. An Administration and Finance Assistant was recruited and started on November 1, 2011. The WASH Coordinator is supervised by the USAID/BaNafaa Project Manager and provided oversight by the U.S. based USAID/BaNafaa Team Leader.

The WWF National Program Coordinator in The Gambia serves as a senior advisor to the project. Alagie Manjang, on secondment from the Department of Parks and Wildlife, has been interim Program Coordinator since November 1, 2011.

The Project has benefitted from direct collaboration with Peace Corps volunteers based in Kartong, in Banjul at TRY and in Banjul at the USAID/BaNafaa WWF office. As of Q3 2013, new Peace Corps Volunteers have replaced the previous ones at TRY and at WWF.

3.1 International Travel

This international travel schedule does not include travel between The Gambia and Senegal, which for planning and management purposes is considered local travel. The following list captures all international travel other than within and between The Gambia and Senegal.

First Quarter Actual

- Kim Kaine: Administrative/Financial Training for local seed grant partners (October)
- Kathy Castro & Barbara Sommers: DoFish Capacity Building Planning/Stock Assessment/Support Fish Biology Course/NASCOM Capacity Building and participation in first annual Sole Co-Management Plan Review meeting. (October)
- Karen Kent: External Evaluation, initial briefing, orientation and start up. WASH Implementation Support. (November)

Second Quarter Actual

- Mike Rice: Gambian National Shellfish Sanitation Plan MOU and TA, Kartong Cockle and Oyster Co-Management Plan Development support, January, 2013.
- Chris Parkins: Gillnet study field work, February 2013.
- Ousman Drammeh: Ghana for the USAID/WA Climate Change Training and Partner's Meeting, February 2013.

Third Quarter Actual

- None due to delay of the Bi-lateral Co-Management Workshop until after Ramadan.

Fourth Quarter Anticipated

- Kathy Castro: Annual Bi-lateral Co-Management Workshop and Gambia-Senegal Fishing Community twinning activity August 2013.
- Karen Kent: Workplanning (August/September)

3.2 Environmental Monitoring and Compliance

Based on the revised initial environmental evaluation (IEE) approved in 2011 for the project and in accordance with the EMMR in Appendix D, monitoring and mitigation plans are in place to ensure no significant environmental impacts are occurring for those actions identified in the IEE with a negative determination subject to conditions. The key activity conducted this year that has conditions is the work related to water and sanitation improvements at landing sites.

In this respect, an environmental report was completed by GAMWORKS for the WASH intervention. An Environmental Mitigation and Monitoring Plan (EMMP) has been developed specifically for the construction phase of the WASH infrastructures and is included in URI's FY13 sub-agreement with GAMWORKS.

The USAID/WA Environmental Officer visited WASH activities in The Gambia in March, 2013.

3.4 Branding

The USAID/BaNafaa Project provides information through many existing channels, including presentations at meetings, conferences, outreach sessions and other forums, print media—e.g., peer-reviewed articles in professional journals, locally produced Information, Education and Communication (IEC) materials, pamphlets, brochures, policy briefs, guides, and PowerPoint presentations. The main target audiences include local communities, local government agencies, national policymakers, grassroots NGOs, and other donors. Acknowledgement is always given to the generous support of the American people through USAID in all Project communications and materials. Also recognized are partnerships and support from local government ministries, agencies and departments who participate in various activities of the Project.

Synopsis of Communication Items Affected by USAID Marking/Branding Regulations (ADS 320/AAPD 05-11)

Item	***Type of USAID marking***	***Marking Code***	***Locations affected/ Explanation for any 'U'***
Press materials to announce Project progress and success stories	USAID logo (co-branded as appropriate)	M	Primarily a Gambian audience
Project brief / fact sheet	USAID logo (co-branded as appropriate)	M	Primarily a Gambian audience
PowerPoint presentations at meetings, workshops and trainings	USAID logo (co-branded as appropriate)	M	Primarily a Gambian audience
Brochures/posters on environmental issues	USAID logo (cobranded where/as appropriate)	M	Primarily a Gambian audience
Landing or marketing site facility improvements	USAID logo / stickers (cobranded where/as appropriate)	M	Primarily a Gambian audience
Project Office/room within WWF/Gambia office in Banjul	Project sign in English and local dialect name as well *(USAID/BaNafaa*) but no USAID identity used	M	Primarily a Gambian audience
CRC Project Office/room within TRY/Gambia office in Banjul	Project sign in English and local dialect name as well *(USAID/BaNafaa*) but no USAID identity used	M	Primarily a Gambian audience
Fisheries management plans		PE	Primarily a Gambian audience
Project vehicles, office furnishings and computer equipment purchased for project administration by WWF	No USAID identity used	U	Standard exclusions under USAID marking guidelines/policies

Marking Codes: M = Marked, U=Unmarked, PE = Presumptive Exception, W=Waiver

3.5 TraiNet Data on Trainings Conducted during the Reporting Period

The Ba Nafaa Project Office compiles information on all training events as required by USAID, This information is submitted to CRC where the data is entered into the TraiNet electronic reporting system. A summary of trainings conducted to date is provided in the following table.

Training program	*Location*	*Start date*	*End date*	*Participants*			*Estimated Cost*
				Male	**Fem**	**Total**	***US $***
Study Tour to Sine Saloum	Senegal	12/16/2009	12/18/2009	1	31	32	3,507
Co-management Training on Sole Fishery	The Gambia	1/25/2010	01/26/2010	37	3	40	2,188
Co-management Training on the Oyster Fishery	The Gambia	02/01/2010	02/02/2010	2	51	53	2,373
Aquaculture training	The Gambia	01/12/2010	02/05/2010	60	0	60	2,696
Training on Entrepreneurship (study tour to Baddibu)	Gambia	03/18/2010	03/19/2010	2	11	13	600
Stock assessment training	The Gambia	03/15/2010	03/22/2010	14	5	19	3,144
Training on Improved Processing & Packaging	Gambia	30/4/2010	12/4/2010	0	300	300	750
Coastal Adaptation to Climate Change	US	4/6/2010	25/6/2010	2	0	2	26,000
Cayar Study Tour	Senegal	13/6/2010	18/6/2010	11	4	15	4,500
Oyster Aquaculture Training	Gambia	17/6/2010-	28/6/2010	1	36	37	750
Water Quality Assessment Training Workshop	Gambia	23/6/2010	23/6/2010	18	5	23	100
Fisheries Leadership	US	16/8/2010	3/9/2010	3	1	4	32,000
Biostatistics course	Gambia	09/20/2010	09/27/2010	10	2	12	5,832
GRAND TOTAL YEAR 1				***161***	***449***	***610***	***$84,440***
Micro-credit and enterprise development	Gambia	25/10/2010	2/11/2010.	0	250	250	1,290
Climate Change workshop	Senegal	3/22/2011	3/25/2011	52	8	60	50,900
Study tour to Tanzania on res. mgt and livelihood development	Tanzania	2/7/2011	2/12/2011	0	1	1	2,145
Water quality and shellfish sanitation	USA	5/21/2011	6/5/2011	3	0	3	15,910
Fish stock assessment	USA	5/21/2011	6/12/2011	3	2	5	34,387
MPA-PRO Certification Training	Kenya	6/13/2011	6/17/2011	1	0	1	3,000
BS Degree Training – Fisheries technology	Nigeria	5/15/2011	on going	1	0	1	10,000
BS Degree Training – Fisheries technology	Nigeria	8/29/2011	9/30/2012	1	0	1	10,000
TRY members to FENAGIE	Senegal	09/2011	xx	0	4	4	2,759

Training program	*Location*	*Start date*	*End date*	*Participants*			*Estimated Cost*
				Male	**Fem**	**Total**	***US $***
GRAND TOTAL YEAR 2				***61***	***265***	***326***	***130,391***
CUMULATIVE GRAND TOTAL TO DATE END YEAR 2				***222***	***714***	***936***	***$214,831***
PHE workshop	Senegal	12/4/2011	12/07/2011	0	1	1	1,174
Training of the Facilitators for WASH Needs Assessment	The Gambia	12/27/2011	12/29/2011	8	2	10	1,128
TRY literacy training	The Gambia	11/2011	On-going	0	30	30	TBD
Shellfish Sanitation Shoreline Survey Training	The Gambia	1/5/12	1/11/12	8	0	8	TBD
Shellfish Sanitation Shoreline Survey Training	The Gambia	1/16/12	1/16/12	25	5	30	945
USAID Environmental Compliance Training	Ghana	3/19//12	3/23/12	1	0	1	1,040
Stock Assessment	The Gambia	1/20/2012	09/30/2012	2	0	2	4,098
TRY Microfinance training	The Gambia	2/6/12	2/24/12	0	67	67	1,229
TRY hygiene/food handling training	The Gambia	1/31/12	2/1/12	0	90	90	343
Bi-lateral Climate Change Vulnerability Assessment Workshop	The Gambia	4/10/2012	4/11/2012	35	9	44	27,651
WASH Needs Assessment Stakeholder Workshop	The Gambia	4/18/2012	4/18/2012	25	13	38	961
Shellfish Sanitary Shoreline Survey Report Stakeholder Workshop	The Gambia	4/19/2012	4/19/2012	17	4	21	775
Bi-lateral Fisheries Co-Management Workshop	The Gambia	5/30/2012	5/31/2012	60	25	85	23,110
Population, Health Environment URI/Summer Institute	USA, Rhode Island	6/4/2012	6/22/2012	2	0	2	20,380
Fisheries Leadership	USA, Rhode Island	7/2/2012	7/20/2012	2	1	3	19,516
GRAND TOTAL YEAR 3				***186***	***247***	***433***	
CUMULATIVE GRAND TOTAL TO DATE END YEAR 3				***408***	***961***	***1369***	
Administrative/Finance Training	The Gambia	11/12/2012	11/14/2012	6	3	9	947
PHAST Training (Brufut)	The Gambia	11/27/2012	11/29/2012	16	24	40	1,426
PHAST Training (Old Jeshwang)	The Gambia	12/17/2012	12/19/2012	9	31	40	1,393
PHAST Training (Kartong)	The Gambia	01/7/2013	01/09/2013	5	35	40	$1393.00
PHAST training (Kamalo)	The	01/21/13	01/23/2013	0	40	40	$1393.00

Training program	*Location*	*Start date*	*End date*	*Participants*			*Estimated Cost*
				Male	**Fem**	**Total**	*US $*
	Gambia						
Administrative/Finance Training follow-up	The Gambia	03/18/2013	03/18/2013	5	3	8	$280
WASH TOT – Community Outreach and Hygiene Promotion - Brufut	The Gambia	04/17/13	04/19/13	10	10	20	$877
WASH TOT – Community Outreach and Hygiene Promotion - Kartong	The Gambia	04/23/13	04/23/13	4	16	20	$877
WASH TOT – Community Outreach and Hygiene Promotion - Old Jeshwang	The Gambia	04/30/13	05/02/13	5	15	20	$877
WASH TOT – Community Outreach and Hygiene Promotion - Kamallo	The Gambia	05/15/13	05/17/13	0	20	20	$877
Fish Biology Course	The Gambia	03/01/13	04/16/13	6	5	11	TBD

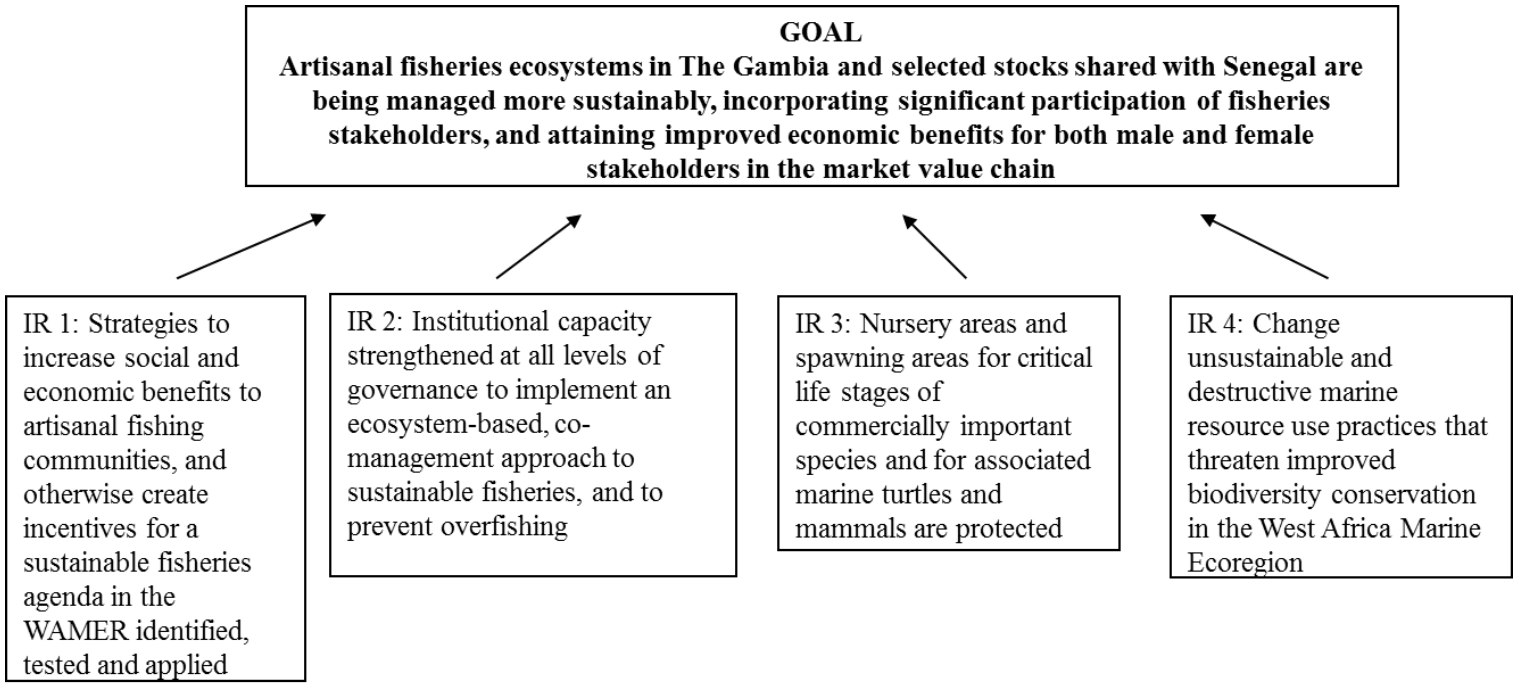
3.6 Estimated Financial Status

The following table shows a pipeline analysis of expenditures in relation to obligations through **June 30, 2013**.

AMOUNT SUB-OBLIGATED		3,414,566
(total federal outlays as of last SF 425/voucher)		
Expenditures		
Period Covered In Last SF 425	Thru March 31,2013	2,741,353.91
Estimated	April to June 2013	
		285,732.31
TOTAL EXPENDITURES (Amt on SF 425 + Recent Expenditure)		$3,027,086.22
BALANCE OF SUB-OBLIGATED FUNDS REMAINING		$387,479.78

Appendix A. Results Framework, Results to Date & LOP Targets

The Project Results Framework below is organized by Project Goal and IR. The Gambia - Senegal Sustainable Fisheries Project contributes directly to USAID West Africa Regional Office's Environment & Climate Change Response (ROECCR) Results Framework, specifically IRs 1, 3 and 4 as per the May 2011 draft in Appendix B below. Each IR in the Gambia - Senegal Sustainable Fisheries Project Results Framework has one or more indicators and Life of Project (LOP) Targets that are shown in the table on the following pages. In the Year 4 Workplan URI reduced and simplified the biodiversity indicators reported by the project to more closely align with ROECCR indicators. The remaining priority biodiversity indicators now include only ROECCR standard indicators and one custom URI indicator on governance scorecards.



Results to Date, Year 4 (FY 13) and LOP Targets

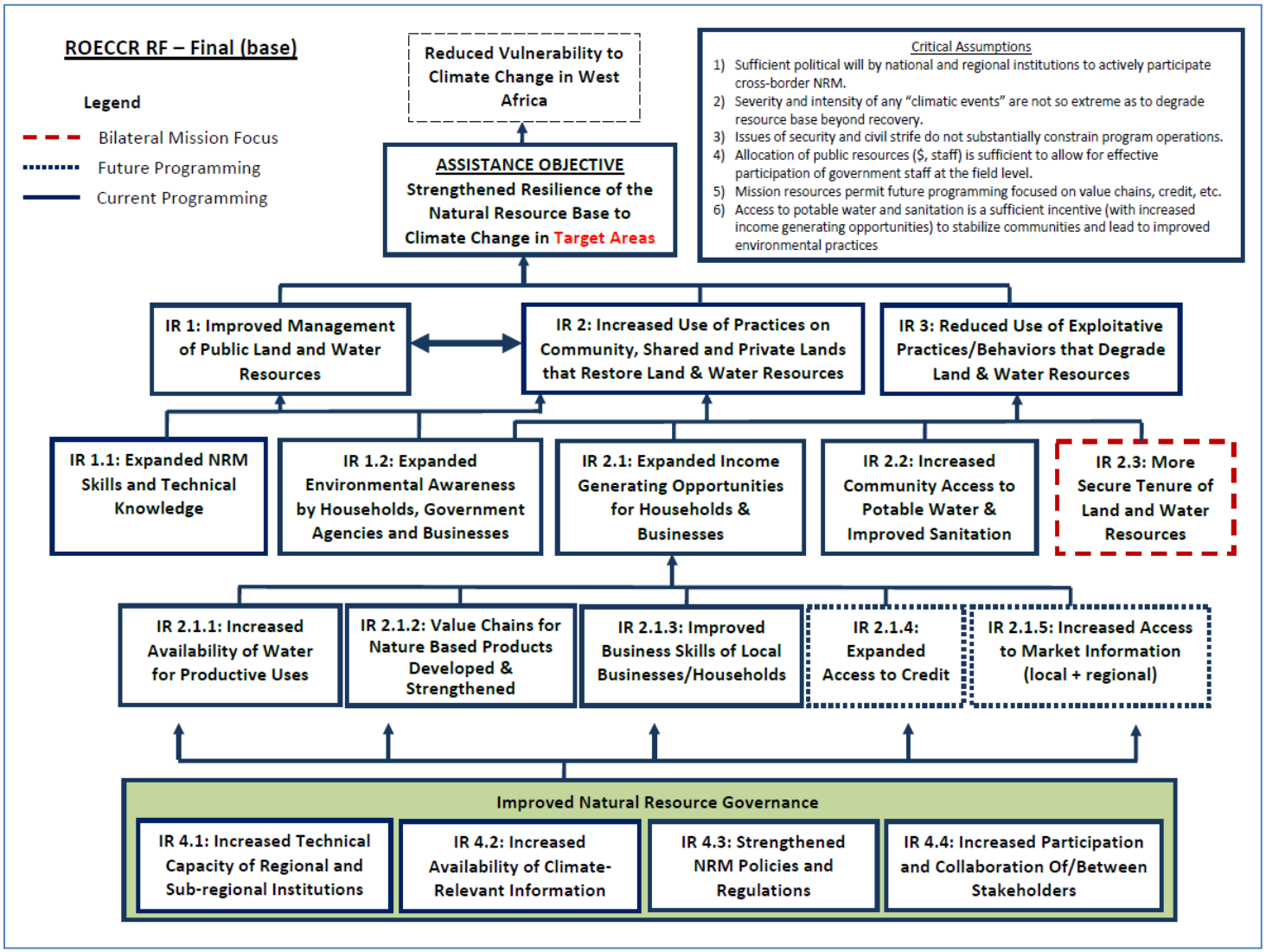
No	Indicator	Cumulative Results as of FY12	FY13 Target	Q1	Q2	Q3	LOP Target	Comments
	IR1							
2	No people with increased economic benefits derived from sustainable natural resource management and conservation as a result of USG assistance (ROECCR 2.1.1)	910[3]	127	0	0	300	220	FY 13 target = NASCOM & TRY members providing improved product due to improved fish handling and hygiene training. TAGFC members with traceability improvements. *Note that 300 women were trained in fish handling and hygiene under the TRY UNDP grant (considered cost share) rather than by USAID/BaNafaa.*
W1	Improved access to water and sanitation facilities	0	12,000	0	0	0	20,000	Target = infrastructures at 4 sites completed in FY13.
W2	Number of persons receiving Participatory Hygiene and Sanitation Transformation (PHAST) Training.	0	240	80 F=55	80 F=75	0	240	Q1 FY 13 = 40 at Brufut and 40 at Old Jeshwang; Q2 = 40 Kamalo, 40 Kartong.
W3	Number of persons receiving training and outreach messages on hygiene promotion	0	4000	0	0	0	6000	80 Trainers Trained in Q3
W4	Community water and sanitation committees established and trained with program assistance	0	4	3	3	0	6	Q1 FY13 = 1 at Brufut and 2 (Fish and Oyster) at Old Jeshwang ; Q2 = Kamalo, Kartong (Fish and Oyster). Higher than target due to separate oyster and fishery committees at some sites.
	IR2							
4	No of institutions with improved capacity to address NR, BD, climate change, water issues as a result of USG assistance (ROECCR 4.1.1)	16[4]	4	1	0	0	13	Cumulative. However, the same institutions continue to receive multiple additional capacity building assistance, but are not counted again. Previous = LACOMS in 7 communities (Gunjur, Brufut, Sanyang, Tanji, Batokunku/Tujereng, Bakau, Banjul), NASCOM, GAMFIDA, NAAFO, TRY, DoFish, NEA, DPWM, Water Lab. FY12 = TAGFC. FY13 = Most of the above institutions are to receive additional capacity building in FY 13, but TARUD is the only one not to have received it in previous years.
5	Number of people receiving USG supported training in natural resources management and/or biodiversity	1,369	210	89 F=58	88 F=77	91 F=66	200	= TrainNet

[3] The same individuals may be counted more than once if they received assistance (i.e., training) that improves their economic benefits on multiple occasions in one year or in successive years.

[4] Adjusted up from the 13 reported in the Year 3 annual report as NEA, DPWM and Water Lab are in the "previous" group as documented by their repeated participation in various training activities documented in TraiNet.

	conservation. (F 4.8.1-27)							
6	Improvements on governance scorecard	Increasing	Increas-ing				Increase-ing	Not yet scored for the previous year (2012).
11	Number of laws, policies, strategies, plans, agreements, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance (ROECCR 4.3.1)	2	1	0	0	0	2	FY12 = Sole and Oyster Co-Management Plans FY13 – 14 = 2 drafts (Kartong cockle and oyster co-management plan, GNSSP-Tanbi,) FY 13 = Cabinet Paper on cross border trade issues.
CC1	Number of climate vulnerability assessments conducted as a result of USG assistance	1	0	0	0	0	1	No additional activity without add-on
CC2	Number of stakeholders using climate information in their decision making as a result of USG assistance	44	0	0	0	0	30	No additional activity without add-on
CC3	Number of institutions with improved capacity to address climate change issues as a result of USG assistance	18	0	0	0	0	8	No additional activity without add-on
	IR3 & IR 4							
12	No. of Hectares in areas of biological significance under improved natural resource management (ROECCR 1.1): • Hectares covered by the fisheries management plan defined as the range of fishing fleets targeting these species • Oyster fishery estuarine and mangrove areas designated and allocated as community managed zones, including no-take areas	Sole = 121,245 Oyster = 6,304	Sole = 121,245 Oyster = 6,304	Sole = 121,245 Oyster = 6,304	Sole = 121,245 Oyster = 6,304	Sole = 121,245 Oyster = 6,304	FMP Areas: Sole = 12nm seaward = 158,332 ha FMP Areas Oyster = Tanbi wetlands 6000 ha	Kartong Co-Management Plan will only be draft and Catfish added to sole, but not adding Ha.
17	No. of HA in areas of biological significance showing improved biophysical conditions as a result of USG assistance. (ROECCR AO1) = Hectares under effective mgt (progress towards BRPs) for sole and oysters	No target but tracked	No target but tracked				No target but tracked	Reference points for sole to be established as part of the management plan. Baseline will be established based on results of preliminary stock assessment Baseline data for oysters collected in year 1 PRA

Appendix B. USAID ROECCR Results Framework



Appendix C. Activity Implementation Status

IR1 Sole Activities	FY13				Local Implement. Partners	Quarter 2 Progress
	Q1	Q2	Q3	Q4		
Gazetting of the Sole Co-Management Plan					DoFish	Pending. Evidence of steps being taken at Ministry of Justice.
Gillnet Study testing impact of larger mesh size conducted					Master Fishermen, DoFish	Completed in Q3. Report pending.
Support addition of Catfish to the Sole Co-Management Plan					NASCOM, DoFish	LEK and scientific knowledge for Catfish presented and reviewed at the first annual Sole Co-Management Plan review meeting in October. Recommendations for further research made. LEK Report finalized. Data from Gillnet study being analyzed.
Implement Seed Grant #1 to NASCOM					NASCOM	See below.
- SOP Manual					‘	Draft submitted by consultant for review.
- Business Plan					‘	Draft submitted by consultant for review.
- LACOM By-Laws revised					‘	Reviewed at the Annual Co-Management meeting in October.
- Quarterly/annual Co-Management Plan meetings held and documented					‘	Annual Meeting hosted by NASCOM in October. Report produced by NASCOM. NASCOM Executive Committee meetings held in October, December and Q3.
Seed Grant #2 Capacity Strengthening to NASCOM					NASCOM	Expected Q4
- Fish handling and hygiene training, selected landing sites					NASCOM	Expected Q4
- Bi-lateral co-management twinning exchange visit					NASCOM	Scheduled for August 2013
Seed Grant #1 Capacity Strengthening to TAGFC					TAGFC	Activity cancelled.

IR1 Sole Activities	FY13				Local Implement.	Quarter 2 Progress
Implementation TAGFC Seed Grant, including activities focused on traceability					TAGFC	See previous.
Administrative/Financial Training for Seed Grant recipients					NASCOM, TAGFC	Completed in October. One on one conducted. One day follow-up training held in March.

IR1 Oyster Activities	FY13				Local Implement. Partners	Quarter 1 Progress
	Q1	Q2	Q3	Q4		
Gazetting of the Oyster and Cockle Co-Management Plan					DoFish	Pending. Evidence of steps being taken at Ministry of Justice.
TRY Seed Grant Capacity Strengthening					TRY	See below.
- Quarterly/annual Co-Management Plan meetings held and documented					‘	First Annual Co-Management Review Meeting hosted by TRY in January 2013.
- Shellfish handling and hygiene training, selected landing sites					‘	300 TRY women trained Oct. – Dec. under UNDP funding. USAID/BaNafaa technical assistance provided for proposal development and submission.
- Peace Corps Volunteer posting with TRY					‘	New replacement PCV arrived in May.
- Annual market/biological survey at sales points					‘	Conducted by girls in the TRY skills training course March 1 – June 30. Analysis and report pending.
Administrative/Financial Training for Seed Grant recipients					TRY, NASCOM, TAGFC	Completed in October. One on one follow up and a one day follow-up in March conducted.
Kartong Oyster and Cockle Co-Management Plan Development (to draft)					TRY	On-going. Two day meeting held in March with communities from The Gambia and Casamance. This will be a trans-boundary Allahein River co-management plan. Awareness raisning in communities conducted Q3.
- Community meetings					TRY, DoFish	See above
- Larger stakeholder workshops					TRY, DoFish	None to date.
Cockle Redistribution research continued					TRY DoFish,	Die-off investigative experiment done but inconclusive due to inability to control for dissolved oxygen.

Monthly Water Quality testing continued					Water Resources Lab. DoFish,	On-going. 4 new sites added in January deeper inside the Tanbi.
Inter-agency MOU for development of GNSSP – Tanbi signed, including commitments to fund water quality testing after Year 4.					Water Lab, DoFish, DPWM, DOH, NEA	Dr. Michael Rice technical assistance visit Q2 met with National Assembly members on budget allocations for sustainability of the initiative.
Draft GNSSP – Tanbi developed, including preliminary mapping of water quality zones					Water Lab, DoFish, DPWM, DOH, NEA	Dr. Michael Rice technical assistance visit for Q2 made progress on this. Water quality zone baseline profiles beginning to be developed.

IR1 WASH Activities	FY13				Local Implement. Partners	Quarter 1 Progress
	Q1	Q2	Q3	Q4		
PHAST Training for 6 sites					TARUD	Training for 2 sites Completed in Q1. 2 additional sites in Q2.
Community awareness raising, training and outreach for 4 sites through TOT model					TARUD	TOT conducted in Q3 for 80 participants from 4 sites.
Management planning 1st 2 sites					TARUD	Plans completed but not yet signed.
Management planning 2nd 2 sites					TARUD	Initiated and on-going.
Management planning 3rd 2 sites					TARUD	Pending.
Environmental Compliance activities at 4 construction sites					GAMWORKS	Environmental report by GAMWORKS completed. EMMP for construction phase included in GAMWORKS contract. Construction at 2 sites begun and almost complete as of Q3 following EMMP.
Site designs for 4 additional sites (2 in Q1 and 2 in Q4)					GAMWORKS	Final designs for 1st 2 sites completed. Final designs for 2nd 2 sites completed Q3.
Contracting for construction of infrastructure at 2 additional sites					GAMWORKS	Contracting for 1st 2 sites done in Q2. For 2nd 2 sites done in Q3.
Construction at 4 sites					GAMWORKS	Construction at 1st 2 sites started Q2. 2nd 2 sites to begin early in Q4.
Handover of 4 completed infrastructure (2 in Q2 and 2 in Q4)					GAMWORKS	Handover expected in September.

IR2 Activities	FY13				Local Implement. Partners	Quarter 1 Progress
	Q1	Q2	Q3	Q4		
Support to DoFish Statistics unit and in-country stock assessment training.					DoFish	Provided technical assistance for DoFish staff to present the new Sole stock assessment results at the Annual Co-Management Review Meeting in October. Update with 2012 data underway.
In-country fish biology training					DoFish, URI course alumni	Provided final color laminated copies of the bi-catch guide and technical assistance for the trainers who are to deliver the course. First session conducted in late February. Fifth and last session completed in April.

Support annual stock assessment (Najih)					DoFish	Additional stock assessment data from 2012 provided by Atlantic Seafood. Analysis underway.
Cross Border Trade/Comparative Cost Study Cabinet Paper development (submitted to Permanent Secretary) 3 committee meetings + 1 validation workshop					DoFish, Committee	Meeting of the Committee in Q3.
Bilateral Co-Management (Gambia/Senegal) fishers and decision-makers annual workshop					NASCOM, DoFish, DPM, TRY	Planned for August 19, 20, 21 in The Gambia.
Bilateral Co-Management Action Plan - Twinning (through NASCOM seed grant fisher level exchange visit (see IR1 above))					NASCOM, DoFish, DPM	Planned for August 19, 20, 21 in The Gambia.
Support for Environmental Journalist's Group (BAJ) launch and training					BAJ	USAID/BaNafaa not satisfied that BAJ adequately represents a significant segment of the environmental journalists the project hopes to reach. This activity will not be implemented.
Governance Scorecards (Sole and Oyster)					NASCOM, TRY, DoFish	Nothing to report Q3. Delayed due to scheduling difficulties.

IR3 & 4 Activities	FY13				Local Implement. Partners	Quarter 1 Progress
	Q1	Q2	Q3	Q4		
Expanded Sole/Multispecies Catfish Fishery Co-Management Plan					NASCOM, DoFish	See this activity under IR1 above
Oyster and Cockle Co-Management Plan for the Tanbi					TRY, DoFish	See this activity under IR1 above
Draft Oyster and Cockle Co-Management Plan for Kartong					TRY, DoFish	See this activity under IR1 above.

Appendix D. EMMR

Environmental Mitigation and Monitoring Report – table for activities under Categorical Exclusion

Classes of actions as per 22 CFR 216.2(c) (2)	**Actions implemented in Year 3**	**Remarks**
(i) Education, technical assistance, or training programs	• Meetings with local communities and officials (Sole & Oyster) • Training in fish stock assessments • Sole stock assessment • TRY Oyster Association Standard Operating Procedures Manual developed. • Shellfish handling and hygiene training for TRY members • Literacy training for TRY members • Sanitary Shoreline Survey training • Training of facilitators for WASH Needs Assessment • PHE and Fisheries Leadership training at URI Summer Institutes and in Senegal	The core content of most of these activities revolves around sound environmental management.
(iii)Analyses, studies, academic or research workshops and meetings	***Sole Fishery*** • Local Ecological Knowledge study of Catfish (a Sole bycatch) ***Oyster Fishery*** • Participatory rapid appraisal to compile local knowledge of cockle harvesting practices, spawning period, and growth at Kartong • Bi-weekly water quality testing reports • Sanitary Shoreline Survey of Tanbi Wetlands and other oyster harvesting areas. • Hotel market survey to better understand the needs of this market. • Biological sampling of oysters at sales points during the open season to contribute information on status of the stock. ***WASH*** • Needs Assessment of 16 fish/shellfish landing sites and validation/stakeholder workshop to select priority landing sites for WASH intervention.	The core content of most of these activities revolves around sound environmental management.
(xiv)Studies, projects or programs intended to develop the capability of recipient countries and organizations to engage in development planning.	• Bilateral (Gambia-Senegal) Climate Change Vulnerability Assessment and stakeholder workshop • Bilateral (Gambia-Senegal) Fisher Level Co-Management Workshop to exchange experiences and best practices.	The core content of this activity revolves around sound environmental management

Environmental Mitigation and Monitoring Report – table for activities under Negative Determination with Conditions

Planned activities	**Recommended mitigation actions**	**Status of mitigation measures/Actions taken**	**Outstanding issues on required conditions**	**Remarks**
Copy from the IEE Sole: Value chain assessment Development of a sole management plan including managing access and gear Analyses of cost competitiveness of the export processing sector Oyster: Enterprise development training – micro credit, loans and micro-enterprises Value chain assessment Establish special area community management plans (SAMPs) for oysters Fuel wood saving program Reforestation Improve small scale landing, processing and product marketing facilities and outlets	*Copy from the IEE* Observe conditions in section 4.2 of the IEE <u>Conditions for fisheries management plans including managing access and gear</u> Fisheries management activities must be conducted in full conformity with the following points: 1. Areas for pilot fisheries management will be under an approved management plan. 2. Fisheries management plans (FMPs) will: a. Be based on the best available site-specific information on marine species and marine ecosystem status (*e.g.* key animal/plant species, marine habitats and use and ecosystem importance) and local, indigenous knowledge; b. Establish explicit, data-based management objectives for marine and coastal biodiversity conservation; c. Establish site-specific sustainable production/utilization guidelines based on growth and	*Mitigative measures that were put in place* <u>Management Plans:</u> Both the sole and oyster co-management plans were approved and signed by the relevant Govt. of The Gambia authorities in Jan. 2012 (Year 3). All of the conditions in points 1 – 5 have been addressed as documented in the approved plans and accompanying annexes. Draft Management Plans were shared with Robert Buzzard, Acting AOTR on June 7, 2011. Gazetting of the plans is still pending. Implementation of the approved Plans began in Year 3 and continues in Year 4, including continued support from USAID/BaNafaa to strengthen co-management institutions and the systems and procedures specified in the plans for environmentally sound,	*If mitigative measures were not successful or not implemented, why?* Pilot cockle aquaculture activities in Kartong, a PRA in 2012 and a bi-lateral Casamance/Gambia meeting in 2013 are contributing to the development of a draft Allahein River Shellfish co-management plan, eventually expanding the ha under management . Basket oyster culture action research was conducted in Year 3 and concluded in Year 4 using juvenile oysters that are knocked into the mud and die during the normal harvesting of adult oysters. Although successful in terms of growth, the capital investment for returns was determined	*Any follow-up actions/recommendations to meet these environmental requirements?* As implementation of the approved Co-Management Plans continues, the project will continue to focus on institutionalizing adaptive co-management through support for strengthening the systems, procedures and institutions responsible for environmentally sound co-management. Follow up to determine if oyster basket and rack culture

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	productivity estimates derived from the best available information; d. Demarcate and define marine resource access and use rights; e. Legally recognize management roles and responsibilities, including an agreement with local authorities to safeguard and maintain the resource base to ensure its continued productivity. Specific management roles and responsibilities will be further devolved to local communities, increasing transparency in management of the areas; f. Reflect a consultation process that allows the general public to comment and provide input on the management plan; and g. Include a monitoring plan of select ecological parameters. (The management plan will, in effect, constitute a locally developed environmental assessment, managed under local by-laws, and endorsed by the Gambian Department of Fisheries) 3. Marine resource management activities will be implemented in accordance with criteria established in the USAID/AFR/SD publication	adaptive co-management. For example, the project supported a new stock assessment for sole, and a 2013 update, biological sampling of oysters at sales points and 2 gillnet studies to test hanging ratios and mesh sizes for greater selectivity of large sole (reduced juvenile and other by-catch). TRY Association's work in environmental stewardship linked to sustainable resource based livelihoods for marginalized women was recognized by award of the UNDP Equator Prize of $5000 and participation in Rio+20 in Brazil in June 2012. In Year 4 both co-management institutions conducted the first annual review meetings of the plans as per the adaptive management processes defined in the plans. <u>Value chain assessments and improvements</u> Value chain assessments in	to not be competitive with the current conditions of wild harvest. This approach will not receive continued support from the project for replication/scale-up. If communities are motivated to continue in some form on their own, they have the knowledge to do so. The same is the case for rack culture of oysters which was the subject of action research in Year 2.	activities were continued successfully in any form by communities on their own will determine if scale up should be taken into account in annual reviews of the oyster and cockle management plan for the Tanbi and for any other newly developed plans.

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	Environmental Guidelines for Small-Scale Activities in Africa (Chapter 6: Fisheries – www.encapafrica.org.) 4. Production/utilization will be monitored regularly (see 2g, above). Information generated from monitoring will be used to fine-tune production/utilization guidelines as needed. This information will be shared with other partners and communities engaged in similar work to enhance NRM activities that most effectively respond to national poverty reduction strategies by improving livelihoods while conserving marine resource values (goods and services, including biodiversity conservation, etc.). 5. Because all of the products that might be targeted for production/harvesting and trade have not been identified/selected, potential marketing activities will be reviewed for environmental impact using the Environmental Screening Form/Environmental Review Report (ESF/ERR), or some other approved process/tool. Whether using the ESF/ERR or another tool this will include measures of performance, whereby the implementing partners will assure that effective and efficient environmental practices are an integral part of the overall	Shrimp, Sole and Oysters have been conducted in previous years. The USAID/BaNafaa Project will not pursue activities in the Shrimp fishery. For Sole and Oysters, value chain assessments were conducted in the context of the development of co-management plans. For sole, the assessment contributes to The Gambian government's effort to achieve MSC Certification. This process was on-going in Year 4. German seafood company Kaufland, through a marketing campaign to support the development of sustainable seafood from The Gambia, has donated funding to The Gambia's MSC efforts through the community-based sole co-management entity NASCOM. This is a positive indication that emerging market opportunities will be closely linked to sustainable management. A comparative cost study on sole fish between The		

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	assistance to resource users and local private enterprises involved in resource harvesting, processing and/or transformation for marketing. Finally, fisheries management plans will be submitted to the AOTR and Regional Environmental Advisor for review prior to implementation. Specific AOTR approval of these plans is required prior to implementation. <u>Conditions for value chain assessments and improvements</u> Value chain improvements must be implemented as complements to fishery management plans to ensure sustainability of fish stock harvests. A formal management plan does not have to be officially adopted prior to initiating work on value chain improvements, but a process must be underway that is working towards formal adoption of such plans. To ensure value chain improvements contribute to or promote sustainable fisheries, they should aim at obtaining international certification (*e.g.* Marine Stewardship Council certification/eco-labeling) for export products. <u>Conditions for enterprise development training – micro credit, loans and micro-enterprises</u>	Gambia and Senegal was conducted in Year 3 to better understand the incentives for sole fished in The Gambia to be construed as originating from Senegal and processed/exported in Senegal. USAID/BaNafaa assistance will support further reflection on the findings by a committee mandated to develop a Cabinet Paper on the issues, including the impact of potential recommended actions on sustainable management of the stock and the eco-system. The findings of this study were presented at a bilateral co-management meeting among Gambian and Senegalese fishermen in May 2012. Project assistance for improvements in the oyster value chain has supported the process of development of a Gambian National Shellfish Sanitation Plan for the Tanbi. This approach focusses on inter-agency cooperation to monitor and management water quality		

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	Activities relating to the expansion of micro-finance and or micro-enterprises shall be subjected to environmental review. The *Ba Nafaa* project will assure that in any support for micro-lending, financial intermediaries (FIs) fully implement an <u>environmental due diligence</u> process which: • enables 'Environmentally Sensitive Activities' , as defined below, to be identified in loan applications; • bars funding to activities which are prohibited under the Sections 118 & 119 of the Foreign Assistance Act; • bars funding for "classes of action normally having a significant effect on the environment (per 22 CFR 216.2.d) pending an Environmental Assessment acceptable to USAID and USAID's approval of that assessment; and • ascertains compliance with Gambian and Senegalese environmental statutes/regulations as a condition for loan-making. However, if one or more of the participating FIs have environmental due diligence procedures that depart in some measure from these requirements, project staff will consult the REA for a determination whether the existing procedures substantially satisfy the intent of this condition and are acceptable.	and environmental hazards as a means to improve the health and quality of the oyster stock and as the basis for market opportunity. Bi-weekly water quality testing at 20 sites and bi-annual shoreline sanitation surveys are continuing. <u>Enterprise development training – micro credit, loans and micro-enterprises</u> The micro-finance activities conducted under the BaNafaa project were initiated by the TRY Oyster Association in order to build savings and financial management capacity among its members in the context of the Oyster Co-Management Plan for which TRY now has co-management responsibility. Under the co-management plan, environmentally favorable harvesting and management practices are specified and institutionalized. Loans are for a small, fixed amount and not granted based on specifically identified individual activities.		

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	Environmentally Sensitive Activities are defined as: a. Activities listed in 22 CFR 216.2.d "Classes of actions normally having a significant effect on the environment"; b. Activities prohibited or limited by Sections 118 and 119 of the Foreign Assistance Act; or c. Activities identified by host country environmental regulations as requiring environmental review, licensing or permits. (for a list of activities under a & b, see the ENCAP factsheet on environmental compliance for DCA activities: www.encapafrica.org/documents/ENCAP_AFR_DCA_Factsheet_3Feb2010.doc) If the project undertakes other activities to enhance availability of credit and financial services, it shall assure that where appropriate, environmental due diligence procedures (see above) are either (i) implemented (where USAID has direct control over provision of credit and financial services); or (ii) promoted and advanced to the degree feasible (where USAID does not have direct control). In cases where *Ba Nafaa* has direct control over the provision of credit and financial services, the project will ensure	USAID does not have direct control over the provision of these loans and financial services. This program is not expanding in Year 4, but working to complete active loan cycles.		

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	that the Environmental Screening Form (ESF) in the *Environmental Guidelines for Small-Scale Activities in Africa (EGSSAA) Part III, "Guidelines for Micro and Small enterprises"* (tailored as needed) will be used to assist in identifying potential environmental impacts that are likely to occur as a result of such micro-enterprise activities. When screening identifies moderate and high risk categories, mitigation measures will be described using Environmental Review Reports (ERRs). In addition, the URI-appointed Project Manager for *Ba Nafaa* will visit all projects for which ERRs exist to ensure they are not causing any adverse environmental impacts, with a view to correcting and or initiating additional mitigation measures as needed. <u>Conditions for small-scale infrastructure</u> For the rehabilitation of existing facilities, and for construction of facilities in which the total surface area disturbed is less than 10,000 square feet (1,000 sq meters), and where no protected or other sensitive environmental areas could be affected, the condition is that these activities will be conducted following principles for environmentally sound construction as provided in the Chapter 3: Small Scale Construction of EGSSAA			

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	http://www.encapafrica.org/EGSSAA/Word_English/construction.doc. For the construction of any facilities in which the total surface area disturbed exceeds 10,000 square feet (1,000 square meters), the program shall conduct a supplemental environmental review according to guidance in Annex G (www.encapafrica.org/EPTM/AnnexG EPTM_Mar2005b.pdf) of the Africa Bureau Environmental Procedures Training Manual (EPTM) (http://www.encapafrica.org/eptm.htm). Construction will not begin until such a review is completed and approved by the Mission Environmental Officer or REA.			
Sub-grants:	<u>Conditions for sub-grants</u>: Any sub-grants to support this project's activities must incorporate provisions that the activities to be undertaken will comply with the environmental determinations and recommendations of this IEE. This includes assurance that the activities conducted with USAID funds fit within those described in the approved IEE or IEE amendment and that any mitigating measures required for those activities be followed. In addition, environmental screening will be required. The AFR Environmental Review Form	<u>Sub-grants</u>: Small seed-grants to TRY Association were provided in Year 4. All activities in the grants were already considered in this IEE and included exchange visits to Senegal to visit processing centers, contribution to design plans for a training /processing center < 1000sq. m, Mangrove reforestation, wood saving oyster smoking		

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	and process, including supplemental NRM checklist, will be used for all *Ba Nafaa* small grants made after the effective date of this IEE. The form is available at www.encapafrica.org/documents/AFR-EnvReviewForm-20Dec2010.doc.	oven demonstration model installed at one oyster processing site. Mitigation measures, such as use of USAID guidelines Chapter 3: Small Scale Construction of EGSSAA, have been implemented. A small seed-grant to NASCOM at the end of Year 3 is being implemented. It is primarily institutional capacity building, except a pilot study of buoy types to determine appropriate methods for demarcating the 1 nautical mile seasonal closure for sole specified in the co-management plan.		
Water & Sanitation: Water and sanitation planning Test, pilot and conduct research on low-cost, small-scale technologies for water supply or sanitation service provision Construct or renovate boreholes Install mechanized or manual pump systems Construct or renovate hand dug wells Construct or renovate	Conditions for WASH • All water supply and sanitation activities will be conducted in a manner consistent with the good design and implementation practices described in *EGSSAA Chapter 16: Water Supply and Sanitation*. • All construction activities will be conducted following principles for environmentally sound construction, as provided in *EGSSAA Chapter 3: Small Scale Construction* • Aquifer protection measures and proper design and maintenance will be undertaken to minimize	Water & Sanitation Add-on funding received at end of Year 2. Needs Assessment of 16 fish/oyster landing sites conducted in Year 3. Six priority intervention sites selected. Environmental impact was considered in the needs assessment and site selection, including vulnerability of the sites to sea level rise and other		

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
connections to extensions of networked water supply distribution systems, including installation of tap stands Construct or rehabilitate water storage tanks Construct rainwater harvesting systems Construct or renovate sanitation facilities (latrines or other) Construct or renovate hand washing stations Improved solid waste handling Operate small-scale water supply and sanitation systems, including maintenance of pumps, pipes and other infrastructure	microbiological contamination of improved wells and springs. • Water quality testing is the responsibility of the *Ba Nafaa* project for interventions that provide potable water. This includes arsenic testing adhering to "Guidance Cable State 98 108651". In addition, the standards and testing procedures described in "*Guidelines for Determining the Arsenic Content of Ground Water in USAID-Sponsored Well Programs in Sub-Saharan Africa*" must be followed. The project will also build capacities and responsibilities that provide reasonable assurance that on-going water quality monitoring occurs. • The standards for initial and on-going testing will follow local laws, regulations and policies. Furthermore, a response protocol will be established in the event that water quality testing detects contamination. • Latrines will be sited far away from shallow wells, cisterns, spring sources, boreholes and wetlands. Latrine pits will be dug in the unsaturated zone above the water table, and latrine pits will be protected against flooding and overflow due to intense rainfall. *Ba Nafaa* will establish and train	impacts due to climate change. Staff and implementing partners with significant experience in environmental compliance have been put in place to implement these activities and Environmental Compliance language, copies of the IEE and screening tools have been included in their contracts. The USAID/BaNafaa WASH Coordinator completed USAID Environmental Compliance Training in Accra in March 2012 and has presented what he learned and shared materials with implementing partners. Principal activities in Years 3 & 4were: Facilities design, including environmental screening of the six selected sites and an EMMP for construction activities; PHAST training, Community training and outreach design and preparation; Establishment and orientation of site level WASH management		

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	community water and sanitation (WAT/SAN) committees to manage, repair and maintain all water points. Also, general concepts of watershed management will be explained to WAT/SAN committees. • *Ba Nafaa* will provide training and education in sanitation and hygiene to local water and sanitation committees and to participating communities with the aims of : o Ensuring community mobilization and public awareness of human health risks associated with water-borne disease vectors; o Encouraging the development of community responses that are environmentally sound, cost effective and safe; and o Ensuring control over the management of the facilities and operations through local community rules and best practices. Verification through site visits and photos will be done to assure practices are in accordance with local community rules and best practices. • *Ba Nafaa* will: o Follow best engineering practices with qualified professional expertise including	committees, who are developing by-laws, a management plan and an EMMP for their site. Construction at 4 sites. These design/planning and construction activities are being done in accordance with the specified conditions and recommended mitigation actions for WASH specified in this IEE. Four of the six sites are recommended for water sourced through connection to the municipal system. Two are recommended for boreholes. Initial Arsenic and other required testing has been conducted in Year 4 for both municipal and borehole sources and all sources meet standards.		

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	energy and water efficiencies; o Identify and mitigate any direct impacts on the existing physical environment or surrounding socio-economic environment caused by the construction of and presence of the water or sanitation system. These impacts relate to resource use, earthmoving and construction, soil compaction and impacts on neighboring populations. • When feasible, the majority of materials used will be of local origin and will not contain any hazardous materials (*e.g.* asbestos or lead)			
Global Climate Change Planning & Adaptation: Adaptation planning and implementation Climate change adaptation measures such as coastal development setbacks and building standards Small-scale agricultural activities Beach and dune nourishment Structural shoreline stabilization	<u>Conditions for Climate Change adaptation measures</u> *Beach and dune nourishment, use of hard structures to combat erosion from sea level rise* Use of hard structures or beach or dune nourishment to combat sea level rise will not be approved without additional screening prior to implementation. Institutions proposing hard structures and beach nourishment should be encouraged to identify alternative options including 'soft' engineering solutions including abandonment of built structures that are	<u>Climate Change</u> Add-on funding received at end of Year 2. Bi-lateral Climate Change Vulnerability Assessment conducted in Year 3. Stakeholder workshop and adaptation planning resulting in submission of a Bilateral Climate Change Adaptation Add-On request submitted to USAID/WA in July 2012.		This add-on has not been funded and proposed add-on activities are not being implemented.

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	at risk or retreat/movement landward of those that can be moved. Soft solutions, which include restoration of natural vegetation for erosion control and promotion of green coastal barriers to combat erosion or stabilize beaches, are allowed without further screening. *Small-scale agricultural activities that pro and carry out sustainable agriculture activ including tilling, cultivation, fertilization, harvesting, etc.* All agricultural activities will be conducted according to the following principles: **(a)** emphasize and fully integrate environmentally sound practices substantially consistent with *ESGGAA Chapter 1: Small Scale Agriculture; Chapter 11: Livestock; and Chapter 12: Integrated Pest Management* (www.encapafrica.org/egssaa.htm) and the Africa Bureau Fertilizer Factsheet http://www.encapafrica.org/docs.htm#specificagriculture). This shall be an ongoing effort, and it is expected that *Ba Nafaa* guidelines and practices will be refined over time in response to field monitoring. "Environmentally Sound Practices" include basic good hygiene/animal waste management/biosafety practices as a part	Beach and dune nourishment, use of hard structures to combat erosion from sea level rise are not proposed in the add-on request, which includes the following adaptation measures designed to comply with the conditions specified in this IEE: 1: Protection and rehabilitation of mangroves and wetlands Activity 1: Establishment of Buffer Zones Adjacent to Mangroves and Wetlands. Activity 2: Identification and remediation of sites where natural water flow to wetlands and mangrove areas is restricted or may be restricted in the future by man-made barriers or infrastructure. Activity 3: Reforestation of mangroves Activity 4: Study the applicability of REDD and other Payment for Environmental Services mechanisms in the zone 2: Diversified Livelihoods		

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	of animal husbandry TA/training (if applicable), and cleaner production approaches, as appropriate, for agro-processing. If direct assistance to specific processing operations is undertaken, the project must ensure that the operations employ (or will employ, as a result of the assistance) adequate environmental management techniques. These techniques must, at a minimum, satisfy obligations under local law or policy. Where no such requirements exist, the enterprise must employ appropriate, common-sense practices to safely dispose of waste, minimize pollution of surface or groundwater and safely store inputs and commodities. **(b)** include the fundamentals of pesticide safer use if it becomes apparent that beneficiaries are using pesticides in the agricultural production activities enabled by project-funded inputs, training or extension. If such use is observed, the project must take all feasible steps to discourage the use of Class I and Class II pesticides by beneficiaries. *Refer to Section 5.1: General restrictions-pesticides.* **(c)** promote intensification of agriculture, while undertaking all feasible measures	for Sustainable Resource Use Activity 1: Climate proofing livelihoods infrastructure Activity 2: Development of eco-tourism Activity 3: Development of non-fisheries livelihoods Activity 4: Fisheries livelihoods Activity 5: Study of Climate Change related migration impact on artisanal fisheries 3: A Cross-cutting Communications Plan 4: Shoreline protection Activity 1: Policy/regulatory level actions - both national and bi-lateral in scope. Activity 2: Living Shorelines		

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	to discourage the expansion of beneficiary agricultural production into non-degraded habitat or important ecological areas (*e.g.*, mangroves, undisturbed wetlands, primary forest, *etc*.). If such expansion is observed, the project shall immediately notify the AOTR and REA.			