

**Gambia-Senegal Sustainable Fisheries Project  
USAID/BaNafaa**

**Year 4, Semi-Annual Report**

**October 1, 2012 – March 31, 2013**

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## 1. Introduction

The USAID/ BaNafaa project is a five-year regional initiative supported by the American people through 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.

As a result of significant achievements and the need to build on this momentum to further institutionalize and expand on favorable enabling conditions and governance systems established with project assistance over the first three years, in Year 3 (FY12), URI developed and submitted a request for a \$4,438,523 add-on to the project for biodiversity, WASH and climate change adaptation activities, including an extension of the end date from April 2014 to April 2016.

In Quarter 1 of Year 4 (FY13), an external evaluation of the project was conducted by a USAID contracted firm, beginning with more than a month of fieldwork in The Gambia in November and December 2012. 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." Conclusions, Lessons Learned and Recommendations are presented in the Project Management section of this report.

URI was anticipating feedback from USAID on its add-on request following the evaluation. URI now understands that 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.

USAID/BaNafaa's approach for the remaining 12 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. With less than 12 months left and a very limited budget, evaluation recommendations will be integrated as appropriate to prioritize sustainability.

This report describes progress made in the first half of Year 4 (October 1, 2012 – March 31, 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 Niimi 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.

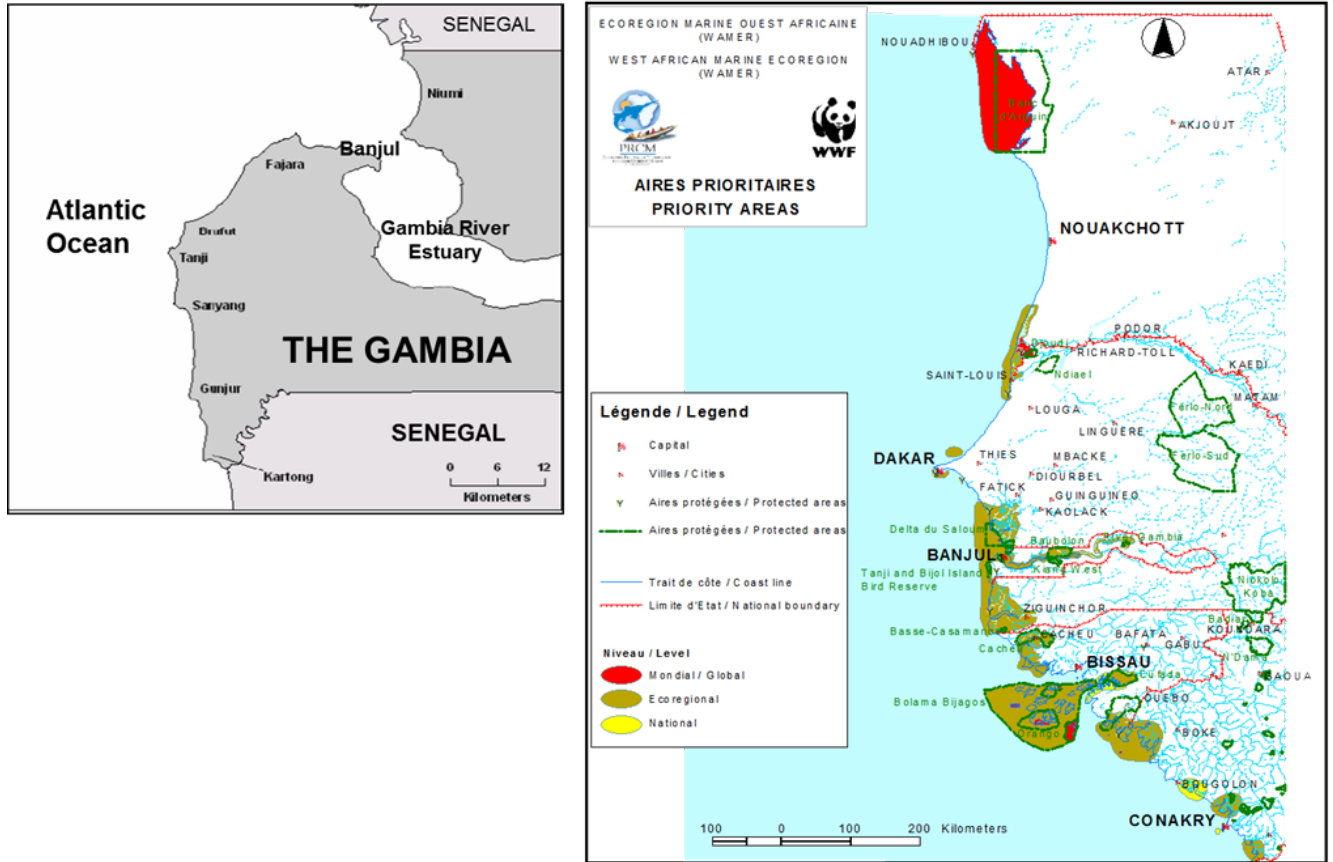


Figure 1. Areas of Biodiversity Significance in the WAMER and The Gambia River Estuary and Atlantic Coast

## 2. Year 4 Semi-Annual 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<sup>1</sup>

**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 2

- One year after approval of the Sole Fishery and the Oyster and Cockle Fishery Co-Management Plans, each of the Co-Management Institutions hosted and led the first annual review meeting of their respective plans as scheduled.
  - NASCOM hosted the sole fishery meeting in Q1
  - TRY Association hosted the oyster and cockle fishery review meeting in Q 2.

The meetings are a key milestone, institutionalizing the adaptive management process defined in the plans and building confidence among stakeholders that the process will be respected. They have also reinforced the co-management institutions' capacity as they (not the project) take the lead in convening stakeholders, analyzing and presenting new information and documenting and acting on recommendations.
- NASCOM capacity strengthened
  - Office established with equipment and furniture purchased under the seed grant.
  - Administrative/Financial Management Training for NASCOM, TRY, TAGFC and TARUD conducted in Q1. Follow-up training conducted in Q2.
  - German seafood company Kaufland signed an agreement with NASCOM for a donation of 100,000 Euro to support development of a Marine Stewardship Council eco-labeled Sole Fishery in The Gambia.
  - Spar buoy pilot to mark 1nm seasonal closure begun and on track to be fully deployed by May 1 closure date.
- 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; industrial vacuum packing machine, freezers, training 300 women in fish hygiene and handling, fuel efficient oyster smoking ovens at each of the 15 TRY community sites based on USAID/BaNafaa funded demonstration model.
  - Standard Operating Procedures (SOP) Manual finalized in Q2.
  - First audit conducted by a local consultant in late February (report pending).
  - Exchange visit to oyster processing facilities in the Fatick Region of Senegal.
  - Women's health programs for members and member's daughters conducted.
- Trans-Boundary Oyster and Cockle Co-Management Plan for the Allahein River estuary under development with 9 Casamance/Senegal and 3 Gambian communities.

### **Year 4 Highlights as of Quarter 2 (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 wetland added to testing protocol in Q2 to provide data to demonstrate and manage shellfish quality from these sites. The third, twice-yearly Shoreline Sanitation Survey was conducted in February.
- Dr. Rice of URI, the project team and stakeholder institutions presented results of Water Quality Testing and Sanitary Shoreline Survey work 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).
- Construction of sanitation facilities underway at 2 sites with WASH Management Committees in place and WASH Management Plans developed. USAID/WA Environmental Officer visited WASH sites in March.

Project activities described below have contributed significantly and directly to this IR in Quarter 1. 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 but still preliminary. 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. MSC engagement and Kaufland support for the development of a sustainable sole fishery, and award of the Equator Prize to TRY are just two examples.

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

1. First Annual Review Meeting for the [Fishery Co-Management Plan for The Gambia Sole Complex](#).

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. A new Minister of Fisheries and Water Resources was appointed in early November 2012 and seems to now be taking action after repeated official communications from NASCOM. 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. This includes implementing the annual review process described in the Plan as part of the Plan's adaptive management approach. It is critically important at this early stage that stakeholders experience the participatory and adaptive process moving forward and that it is not perceived to be just on paper.

With financial and technical support from the USAID/BaNafaa project provided through a seed grant, NASCOM took the lead to convene and host the first annual review meeting from October 10-11, 2012. The meeting was attended by 60 participants (including a strong showing of 29 women) from the Ministry of Fisheries and Water Resources, the Department of Fisheries, NASCOM, LACOMS, TAGFC, the National Environment Agency (NEA), USAID/BaNafaa, the University of Rhode Island and the media. The following key issues were on the agenda:

*Status of the Sole Stock:* DoFish technical staff presented the new [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. The following recommendations were made by the review meeting to address this issue:

#### **Sole Fishery Management Recommendations**

- Increase mesh size from 40mm to 42mm or 46mm.
- Fishers are responsible for juvenile landing through use of small mesh size, an auto-regulation approach should be introduced to bring defaulters to task.
- Monitoring Control and Surveillance (MCS) of the 1 nm seasonal closure shall be the responsibility of NASCOM/LACOM members. They should check fishing activities at sea and gears used to ensure compliance with the recommended and legal mesh sizes. Funding donated to NASCOM by German Seafood Company Kaufland will be used in part for purchase of surveillance boats and engines.
- A national forum on best and destructive fishing gears should be held, to include beach seine, purse seine and shrimp nets considered the most destructive.

Although effort reduction is also recommended for consideration in the stock assessment report, the mesh size and seasonal area closure measures currently documented in the approved Management Plan have yet to be fully enforced and the impact evaluated. Stakeholder consensus is that this should happen first before other more contentious forms of effort reduction are considered for implementation. What is important is that the current process of annual co-management plan review, having just completed its first iteration, is being firmly established as a legitimate and recognized forum for future discussion of more sensitive management measures if necessary.<sup>2</sup>

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<sup>2</sup> Note that additional sole data from 2012 was provided by Atlantic Seafood in Quarter 2. DOFISH staff with URI technical assistance are updating the stock assessment to take this new data into account. The results will be disseminated and discussed with stakeholders when final, but at the Second Annual Sole Co-Management Plan Review Meeting at the latest (Oct-Dec 2013 period).

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. The information reviewed at the meeting did not result in an obvious timeline for the Gambian stakeholders to schedule another assessment by MSC. However, additional measures to institutionalize data collection and stock assessment capabilities among Gambian co-management institutions are needed to demonstrate a more robust and sustainable management system.

*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.

Findings of the [Local Ecological Knowledge \(LEK\)](#) and Scientific Knowledge studies on Catfish were presented.

#### **LEK Findings**

- Multiple species of salt, brackish and freshwater species identified.
- Most species caught year round, with peak periods based on species and location.
- Migration patterns generally from the North (Sine Saloum Senegal) and from deep waters North and West to The Gambia River through the river mouth in January and back to the sea when the rains start in June.
- At 4 sites prevalence of Ngunja (*Arius heudeloti*) is much less compared to the past. In Mbankam fishermen have not seen Ngunja for the last 5 years. They can only catch it further south.

#### **Scientific Knowledge Findings**

- Very slow growing; believed to live > 30 years.
- Produce only a few eggs per year; the male mouth- broods them for 2 months
- Mature between ages 2 and 3 (about 25cm fork length); can reach 80cm.
- Appear to be highly vulnerable to overfishing; may be overfished.
- By-catch survey showed large catches year round in all the sites
- Fishermen reported they catch catfish with gillnets, long lines and even purse seines.
- Note that the Marine Stewardship Council (MSC) process for eco-labeling will want to know percentages of catfish caught by the sole nets out of some total amount landed.
- Propose the need to be very proactive with catfish management to get the MSC label.
- Length frequency data would be useful.
- Suggest a hook selectivity study, along with gillnet.
- Information needed on the period of egg brooding by the female before the 2 months male mouth brooding.



**Figure 2. Catfish identified during the Local Ecological Knowledge (LEK) study conducted at 16 coastal and inland fish landing sites.**

The review meeting recommended that Catfish work should be expedited so that a management plan is developed to prevent its extinction. As noted in the USAID/BaNafaa Year 4 Workplan, without additional time and resources, 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, but can be recommended as part of the future research plan for Catfish.

*Review of LACOM By-Laws:* Prior to the annual Co-Management Plan review meeting, NASCOM conducted a consultative process with the 7 LACOMS to review, revise and harmonize by-laws to ensure that they reflect the management measures and responsibilities of LACOMS specified in the Sole Co-Management Plan in addition to the membership fees, landing site fees and other institutional arrangements agreed upon internally. At the annual review meeting proposed revisions were presented and discussed and will now be taken back to the LACOMS for final approval. The review meeting also made the following recommendations for NASCOM/LACOM organizational development:

- Landing sites must strengthen their sanitation taskforces and removal of waste to designated dumping sites
- NASCOM should undertake another outreach to other landing sites for inclusion in its membership since it is a national committee

The annual Sole Co-Management Plan review meeting consolidated NASCOM's standing as an active and responsible co-management institution that is stepping into its leadership role as it continues to gain experience and strengthen its capacity to represent and serve its members and to responsibly manage valuable national fisheries resources.

## 2. 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 is beginning to attract donor funding and has an ambitious agenda for collecting and managing its own membership fees, fines and penalties for non-compliance with co-management plan measures and other financial transactions. NASCOM's reputation and credibility will depend in part on its

real and perceived strength as capable and transparent in financial management. In The first half of Year 4 the following activities were implemented under the seed grant:

- Hosting the first annual review meeting for the Sole Fishery Co-Management Plan.
- LACOM by-laws reviewed and revised.
- Regular Quarterly and Executive Committee Meetings conducted.
- NASCOM office established with equipment and furniture.
- Administrative/Financial Management Training for NASCOM, TRY, TAGFC and TARUD conducted by URI in Q1, with logistics and finances for the training managed by NASCOM. Three NASCOM management team members attended the 3 day training, followed by a mini audit of NASCOM's seed grant accounts conducted by URI. As per recommendations from the training and mini-audit, the URI in-country Admin./Finance Assistant continued to provide targeted follow-up mentoring one on one in Q2 and conducted a one day follow up training for all local partners in March.
- Action research to test a locally made buoy model, the spar buoy, to determine the most durable and cost effective options for marking the 1 nm seasonal closure zone was initiated. One pilot buoy was constructed and deployed at Bakau on the 7th February (see Figures 3 and 4). As of April, the buoy was still in place and holding up well. In March, spar buoy materials were dispatched to 6 additional landing sites: Kartong, Gunjur, Sanyang, Tanji, Brufut and Banjul. The buoys should be constructed and deployed by May 1, when the seasonal closure of 1 nm begins.



**Figure 3. Dawda Saine and Ousman Bojang of NASCOM deploy the first spar buoy at Bakau.**





(photo credit: MSC)

**Figure 4. Ousman Bojang of NASCOM deploying the spar buoy.**

In Q2, The Marine Stewardship Council (MSC) contracted NASCOM to collaborate on producing photographs and video of the buoy deployment and other sole fishing and fishery related activities, including fish processing and boat building. The objective is to develop a film to explain the MSC program to other developing country stakeholders, highlighting The Gambia sole fishery as an example of a fishery working towards certification. MSC and Kaufland Seafood have also invited NASCOM to the upcoming European Seafood Exposition on 22nd – 24th April, 2013 in Brussels. A media event will be organized at the MSC stand during which Kaufland will hand over the 100,000 Euro check to NASCOM. These funds will be used for:

- co-financing the sole fishery’s assessment to the “MSC standard for well-managed and sustainable fisheries” and
- for implementing various measures that will help improve the daily lives of the fisherfolk community and will help increase the quality of the landed and processed fish, potentially leading to higher returns for the fishers.

### 3. TAGFC Capacity Strengthened.

The project continues to dialogue with The Association of Gambian Fisheries Companies (TAGFC), which is an institutional member of NASCOM. The Executive Secretary attended the URI Fisheries Leadership course in July 2012 and TAGFC members attended the Administrative/Financial Management training in February and follow-up training in March conducted by URI in The Gambia. However, TAGFC is still working to address organizational issues related to its constitution and management structure. Also, the Executive Secretary has since taken a staff position in DoFish. If TAGFC does not act before June, further support to them will not be possible to initiate in the remaining project timeframe.

### 4. Mesh Size Gillnet Study.

As per the Year 4 Workplan, following analysis of the new 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 study was initiated in Quarter 2 with assistance from Chis Parkins of URI. 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. Net materials from Senegal were difficult to procure and the study is expected to be ongoing throughout the next quarter.

### ***b. Effective Oyster and Cockle Co-Management Plan***

#### 1. First annual review meeting of the [Oyster and Cockle Fishery Co-Management Plan for the Tanbi Special Management Area](#).

As for the Sole Co-Management Plan, the Oyster and Cockle Co-Management Plan approved in January 2012 has yet to be gazetted by the Government of The Gambia. 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. This includes implementing the annual review process described in the Plan as part of the Plan's adaptive management approach. As for the Sole Plan, it is critically important at this early stage that stakeholders experience the participatory and adaptive process moving forward and that it is not perceived to be just on paper. The Annual Review Meeting was hosted by TRY on January 10-11, 2013. Forty-eight participants attended, including all key partner institutions, 2 representatives from each of TRY Association's fifteen communities comprising one TRY member and the alkalo (village leader), and the local media. The main objective of the meeting was to review the work of TRY and all other co-signatories of the Co-Management Plan (Departments of Fisheries, Forestry, Parks and Wildlife Management and the National Environment Agency) over the last year since the plan was approved. Another objective was to engage the stakeholders in identifying and addressing priority issues regarding the Plan.

Following opening remarks by the TRY Executive Director and the USAID/BaNafaa Project Manager, Maria Dacosta spoke on behalf of the TRY Board of Directors, emphasizing the Plan's significance, as well as highlighting the importance of the government gazettement of the Plan. Dr. Michael Rice of the University of Rhode Island/Coastal Resource Center (URI/CRC) spoke on behalf of URI/CRC. Amadou Saine, Permanent Secretary at Ministry of Fisheries and Water Resources, delivered the keynote address.



**Figure 5. Hatab Camara of the Dept. of Forestry described DoF's involvement in implementation of the Plan.**

Dr. Rice of URI and Fatou Jahna, Executive Director of TRY, presented the results and conclusions of more than a year of action research on a modified version of the Taylor Float System used for oyster culture. This was introduced in Kubuneh in early 2012 by Dr. Rice and USAID/BaNafaa Project staff. The study, written up in a [Technical Paper](#), found that this method of oyster culture is not at this time economically viable for the women to continue on their own. At the current stocking density of 150 seed oysters per float basket, it would take about 17 annual oyster culture seasons to break even on the materials costs of a float basket of this design. Most of the source of the economic imbalance rests largely with the low market prices that the Gambian oyster harvesting women receive for their product in local markets.



**Figure 6. The modified Taylor float oyster culture basket deployed in the estuary system close to the oyster harvest sites at Kubuneh**

The women in this community, however, have a high level of interest and excitement in continuing to experiment with this method. The women reported it to be safer and easier than traditional harvesting; it allows them to work closer to home; it has less impact on the mangrove forests; and it produces marketable, higher value oyster shapes and sizes. The recommendation was that TRY Association and USAID/BaNafaa continue to lend support to these women to develop more economic ways of creating these baskets/floats, in addition to USAID/BaNafaa's continued support for improvements in the handling, processing and marketing aspects of the value chain with the aim of higher returns for the women.

The presentation sparked good discussion amongst participants on how to continue experimenting with this oyster culture method. The question was raised as to whether URI could provide materials to do this method on a larger scale involving more oyster harvesting communities. Participants in support said that if the materials were initially provided, this would give the women a financial springboard to then purchase their own materials locally. Other participants noted that it is important materials be available locally and at reasonable prices to make this venture sustainable in the long term. The focus, they argued, should be on the development of local technology using locally available materials versus depending on donated imported materials. TRY representatives who travelled to Senegal in 2011 on a study tour described the aquaculture systems they observed and learned about there. These systems were donated by the Taiwanese through the Food and Agriculture Organization (FAO). The discussion

was excellent in informing all participants of the potential and possibilities in oyster culture. Aside from technical support for building the baskets from local materials, USAID/BaNafaa is not in a position to support materials purchase for scale up of this method due to the cost/benefit and sustainability issues, as well as the limited resources and timeframe remaining on the project.



**Figure 7. Breakout groups discuss the management measures.**

Review of the Oyster and Cockle Co-Management Plan management measures concluded that they are still valid, except the need to revisit the following measure, “No oyster harvester shall operate for more than two days at harvesting sites, but should adopt a shift system.” Also noted were the following:

- Need for training of some women on use of axes.
- Hygienic and sanitary processing conditions are imperative and are currently lacking. The women often process oysters without gloves and always in the open air.
- Need for continued outreach and education among members on not engaging school age children in marketing activities.

For enforcement of fines under the plan, participants recommended that TRY should notify violators through an official letter copied to the alkalo of the village where the incident occurred and the Department of Parks and Wildlife Management (DPWM). TRY highlighted the need for improved and open communication between government agencies, especially DPWM, and village leaders. Turnover of government officials and the lack of continuity was one of the challenges identified.

Potential activities in 2013 for TRY in collaboration with all key partners identified by participants include the following:

- Continuing to develop oyster culture methods
- Beach and river cleanings
- Public sensitizations on rebuilding of the coastal environment
- Forming community-based management committees
- Capacity building trainings
- Marketing

- Facilitating linkages for funding and training
- Mangrove reforestation. Participants emphasized the importance of evaluating the mangrove reforestation efforts thus far before going forward with more reforestation activities. It was suggested that TRY liaise with the DPWM to monitor progress.

One very positive outcome of the meeting was the involvement of the alkalos from TRY's various communities. This is the first time TRY engaged community leaders in this way and they responded very positively. At the end of the meeting, they expressed how happy they were to be included and how important it is for them to be aware of TRY's objectives, activities, and plans for the future. TRY Association's next step of establishing the community-based management committees in every community will be much easier now with the support of the local community leaders. The TRY representatives who attended the meeting are responsible for reporting back to the rest of the TRY membership during scheduled community meetings. This will build the capacity of these TRY members.

The local media (including the newspapers, GRTS, and a radio station) provided excellent coverage of the meeting. Fatou was invited to further discuss TRY and the Co-Management Plan on a local radio station, Kora FM. These radio sessions included receiving calls from listeners and continued daily for one week due to the high level of public interest. The media coverage will help to inform and educate Gambians about the TRY Association, the Plan, and sustainable resource management. It will also remind the government of the importance of the Plan and its need to be gazetted.

Unrelated to the annual meeting but during the same period, on January 30, 2013, a second radio piece on TRY produced by Helen Scales (in addition to the one aired in 2012), was featured on BBC World Service ( <http://www.bbc.co.uk/programmes/p013k938> ).

## 2. TRY Capacity Strengthened.

Along with the benefits of the Co-Management Plan, TRY and its members also have a significant obligation to responsibly and sustainably manage the oyster and cockle fishery. Thus, ensuring the institutional sustainability of the TRY Association and the social and economic wellbeing of its members is a principal focus of TRY's efforts at this stage in its development. In Q2 TRY was awarded a follow on seed grant from USAID/BaNafaa.

*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 March, TRY has held meetings in six communities (Wencho, Ibo Town, Fajikunda, Lamin, Abuko, and Kubuneh). The feedback, especially from the village men and youth, has been very positive. They say they now understand the work of TRY and are familiar with the Co-Management Plan and now feel included and involved, which makes them more willing to help develop and support TRY activities in their communities.

*Biological Sampling:* 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 the purpose of collecting data on the biological status of the stock. In February, Mr. Kanyi of USAID/BaNafaa trained four of the girls. Each girl is assigned two landing sites/market areas and will visit their sites two times per month (March – June) on designated days. They purchase four cups of oysters and bring them to TRY Center for measurement and recording. The girls first count how many oysters are in each cup and then weigh each cup. The data will be compiled at the end of June. 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.



**Figure 8. Skills Training Program participants count the number of oysters in each cup.**

*Administrative/Finance Training and Support:* TRY's Executive Director and the Peace Corps Volunteer posted with TRY attended the Administrative/Finance Management Training for local partners conducted by URI in October in The Gambia. TRY also benefitted from one on one support and a one day follow-up training conducted on March 18<sup>th</sup> by the URI in-country Admin./Finance Assistant. As TRY continues to attract significant donor funding from multiple donors, begins to increase its own revenues from product sales and manages financial transactions with members, sound and transparent financial management is an increasingly important priority for the short and long term. TRY's Standard Operating Procedures (SOP) Manual was finalized in Q2, followed by its' first audit. The audit report is not yet final.

While TRY has been highly successful in attracting grants and in kind donations from other donors (UNDP, Action Aid, Global Giving, the Ministry of Education, etc.) none of these sources cover TRY's core operating costs, key staff stipends (including the Director and Administrative/Finance Assistant), rent, utilities, fuel and transportation. Covering these costs sustainably remains a key challenge for TRY.

TRY has worked to institutionalize and emphasize to its members the importance of timely payment of annual membership dues. Access to participation in the microfinance program, in GEF funded oyster aquaculture activities and to benefitting from school uniforms purchased with Global Giving funds have all been made conditional on timely payment of membership dues. However, membership dues can currently only generate a maximum of \$5,000 per year. This is not enough to sustain TRY's core operating costs, which are currently about \$20,000 per year. Investment in developing a sustainable revenue stream from product sales (and services) is TRY's principle long term strategy for covering operating costs (in addition to reducing major costs such as rent by establishing its own center). Seeking donor support for the core operating costs of this young and developing organization as an interim measure will be necessary for the short and medium term. The SOP Manual now identifies these costs and defines the standard process by which they will be budgeted in proposals to donors. USAID/BaNafaa has contributed to core operating costs through its seed grants to TRY.

*Peace Corps:* USAID/BaNafaa's seed grants to TRY have supported housing and project related per diem and transportation for a Peace Corps Volunteer posted with TRY. At the end of April 2013 the current volunteer will complete her service. A new Peace Corps Health Volunteer will be joining TRY in mid-May. She is a certified nurse practitioner.

On February 20th, 2013, the Acting Director of the U.S. Peace Corps, Mrs. Carrie Hessler-Radelet, visited TRY during her one-day visit to The Gambia. TRY was chosen because of its incredible progress as a community-based organization and because of the role Peace Corps Volunteers have played in developing and supporting TRY. Members from each of the 15 TRY communities were invited to the event. Ms. Hessler-Radelet met with the women and congratulated them and the Director on their incredible work and determination in creating a better livelihood for themselves. Isatou Sambou, TRY President, and Mari Sanyang, participant of TRY's Skills Training Program, both addressed Ms. Hessler-Radelet and thanked her for her visit. The local media, including the Daily Observer Newspaper and GRTS, [covered the event](#).

### 3. Processing and Marketing.

*Oyster Season 2013 Open:* The oyster harvesting season opened on March 1st, 2013. TRY staff has visited various landing sites as well as the market areas where oysters are sold to converse with the women, monitor if they are wearing their uniforms and if they are handling the oysters properly (including wearing gloves and covering their oysters when selling).

*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. In early December, TRY appealed to the Permanent Secretary of the Ministry of Regional Administration, Lands and Traditional Rulers for a fee waiver for the land application, copying the letter of request to other parties, including the Vice President, the Secretary General and Honorable Minister for Presidential Affairs and National Assembly Matters, National Environment Agency, Department of Parks and Wildlife Management, and Department of Fisheries. TRY has not yet received a response. A representative from the



**Figure 9. TRY members with Ms. Hessler-Radelet, Acting Peace Corps Director, and Mr. Leon Kayego, Peace Corps The Gambia Director**

Japanese Embassy in Senegal visited TRY Center on January 14th, 2013. The objectives of the visit included: learning more about TRY and its programs, assessing the effectiveness and success of these programs by meeting with the TRY members and TRY staff, and viewing the proposed land plot. The visit was very positive. TRY is still waiting to hear from the Japanese Embassy regarding funding for the proposed TRY Center and for a United Nations Volunteer to be funded by the Japanese Government. The volunteer position would provide technical assistance for the processing of shellfish and oyster culture.

*UNDP Processing and Marketing Support:* In Q1, TRY received funding from UNDP and as of Q2 has 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 (as demonstrated by the oven at Kamalo built with USAID/BaNafaa assistance in FY12) at 15 TRY community landing sites. Not only does smoking with this oven 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 so 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. The UNDP assistance is timely for the opening of the oyster harvesting season on March 1, 2013 and should enable TRY to more fully develop smoked and frozen oyster



markets in 2013 and to improve economic returns to the Association and individual members. UNDP funding to TRY for 2012 and 2013 activities is considered as Cost Share from TRY under the USAID/BaNafaa project.

*Study Tour to Senegal:* In late February, the TRY Director and three members went on a 4-day study tour to Soucoute, Senegal to learn improved ways of processing, packaging, and preserving oysters and cockles from an established group of female oyster and cockle harvesters. TRY participated in hands on activities during the tour as shown in Figures 10-16.



**Figure 10 and Figure 11. The tour guide demonstrates the weighing system. TRY members wash cockles several times in designated bins (property of the center).**



**Figure 12 and Figure 13. Cockles are put in a mesh bag and the bag put in a large cooking pot (property of the plant), then placed over a fuel efficient stove to steam the cockles.**



**Figure 14 and Figure 15. Isatou Sambou, TRY President, puts on a white uniform, following hygiene best practices. TRY women practice bottling oysters and cockles.**



**Figure 16. TRY women prepare to dry oyster meat under the hot sun.**

TRY reports that the important lessons learned from the study tour by participating TRY members include the following:

- They have now seen the potential TRY Association has in attaining a similar level of production and coordination.
- They witnessed the cooperation of the women involved and the seriousness and professionalism they apply to their work. They observed how the success of this processing center is contingent on the respect and trust held amongst the women. This cooperation is important for TRY members to see because they often get held up on small issues that prevent them and the organization from moving forward. One advantage of the Soucouta group is the women are all from the same community. TRY has found that problems most often result between women from different communities.
- They observed how this women's group is always willing to contribute funds from their earnings to maintain the property of the processing center, understanding that this is

necessary for the center's long term sustainability. This is a good example for TRY members because they often expect things and services to be free.

- They observed how the younger educated women are also involved, especially in areas of financial management, product distribution, and other administrative duties. This is a way of bringing community ownership and sustainability to the project.
- Though TRY does not yet have a processing center, there are small steps that can be taken even without a center. For example, wearing the TRY uniforms, use gloves, attend TRY trainings, and also organize themselves without TRY always being the initiating body.
- TRY now has an excellent model to use when thinking about and planning its own processing center in the future.
- Based on the relationship TRY has built with this women's group, they will be able to continue to use each other as resources. The groups can continue to collaborate. For example, TRY will invite them to attend its upcoming Annual Oyster Festival in June.

To help explain the processing center and its management to the rest of the TRY membership, TRY arranged for a video of the study tour. The video will be used during upcoming trainings and will continue to be a resource for TRY Association. The three TRY members will also present their study tour experiences, what they learned, and how they want TRY Association to move forward. TRY hopes that with this experience these women will be seen even more as resources and leaders among the TRY membership, enabling them to engage the membership to improve themselves, especially professionally (e.g. wearing uniforms and gloves), because they have seen the potential benefits.

#### 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 with action research pilots on floating basket culture of oysters, cockle ranching and rack culture of oysters conducted by TRY members in their communities.

A Technical Paper by Dr. Michael Rice of URI entitled, [“Modified Taylor Float System for Culturing Oysters in The Gambia,”](#) on the results of the floating basket culture of oysters was finalized in Q2. The results were presented and discussed with interest at the Annual Cockle and Oyster Co-management Plan Review Meeting as reported above.

Following the unexpected die off of cockles in Kartong in September 2012, where the cockle ranching/redistribution research was showing some positive results, USAID/BaNafaa supported a controlled experiment to determine if decreased salinity due to unusually heavy rains over a short period had been a contributing cause. The experiment was not conclusive because it was not feasible to control for dissolved oxygen, which would have required a 24/7 uninterrupted power supply. Continued ranching activities are being taken into account in the co-management plan for Kartong/Allehein River Estuary that is under development.

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. This GEF funding is considered as cost share from TRY on the USAID/BaNafaa project.

At the invitation of the USAID Aquafish Collaborative Research Support Project, Brian Crawford gave a presentation at Aquaculture 2013 in Nashville, TN in February 2013. The presentation was entitled, “Action Research in The Gambia: Can Shellfish Aquaculture And Sea Ranching Enhance Food Security, Incomes And Empower Women Harvesters In The Gambia.” It concludes:

*“Oyster aquaculture has the potential to increase women’s income and harvest yields, and reduce wild harvest pressure...Improving incomes, food security and empowering this disadvantaged group of women requires an integrated approach where no one activity will be sufficient to achieve this goal. Improving production through aquaculture and improved wild harvest management must be coupled with other interventions aimed at a broad range of factors that keep these women in poverty. These include - improved literacy, access to credit, a stronger producer association, improved products, markets, and landing site sanitary facilities, exclusive harvest rights, as well as cooperative and capable local government and non-government institutions that can provide support services.”*

#### 5. 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. From October 2012 to present, the girls of the Girls Skills Training Program continued their tie-dye and crochet skills instruction. Two days a week, the girls also learned about sexual and reproductive health topics, including STIs, menstruation, family planning, saying “No”, from two experienced and trained community health educators. Funding for this health education program came from Peace Corps Small Project Assistance (SPA). The skills training is funded by an Action Aid grant that is considered as cost share to USAID/BaNafaa from TRY. After completing their two-year course of skills training, the girls will graduate from the program in April 2013.

*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 Q1 during the first two classes a certified nurse-midwife and a community educator instructed with help from the TRY Director. They discussed female and male reproductive anatomy, menstruation, menopause, breast health, and STIs, including HIV.

In Q2 in January, staff from the SOS Mother and Child Clinic presented information to 50 TRY members on cervical cancer. They discussed the causes, prevention methods, and the local services available, including the Visual Inspection Test which is offered at two clinics in the Greater Banjul Area. At the end of the class, the participants were divided into two groups and each group was given a designated day to visit the clinic for testing. The clinic staff reported that more than 40 women visited the clinic on the specified days to be tested. TRY will continue to encourage the rest of the TRY membership to go for testing. In February, 45 TRY members attended when Mrs. Harr Sowe, community educator at Gambia Family Planning Association, presented on the benefits of family planning and child spacing, as well as various family planning methods available here in The Gambia. These health sessions were valuable in relaying important health information to the women. Rarely do Gambians, especially uneducated women, have the chance to speak freely with willing health professionals. Hopefully 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.



**Figure 17. Harr Sowe of Gambia Family Planning discusses how the various birth control methods work**



**Figure 18. SOS Clinic Staff discuss cervical cancer with the TRY women.**

#### 6. 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. A two day meeting on March 3-4 brought together community stakeholders from both countries.

There are 9 communities in Casamance and 3 in The Gambia bordering the Allahein River where, since the pre-colonial period, the women derive their livelihood from cockle and oyster harvesting along both banks of the River. There has never been an ownership issue and these people do not regard the territorial boundary as an obstacle to accessing the resources of the River. From the discussions, it was revealed that there used to be seasonal closures of the bivalve fishery under traditional management systems that were well respected by all communities. However, in the recent past, some communities on the Casamance side approached the Kartong, Gambia women on the issue of closing the bivalve fishery because the fishery was becoming unprofitable due to over exploitation. Harvesters were becoming more interested in the shells for lime production than for the meat inside the shells. Only juveniles were available for harvest and the oyster population along the estuary was no more. Unfortunately, the Kartong women were not interested in closing the fishery at that time. So, it is encouraging to all that now both sides are interested in the sustainable management of the fishery and in protecting the mangrove ecosystem for increased economic and social benefits.

The communities on both sides of the River consider themselves as one large family unit and have been coming together to address issues of common concern and interest, such as jointly constructing the road leading from the River crossing point to the first village on the Casamance side. On one occasion, the women from both sides came together on a mangrove reforestation activity.

The conclusions of the meeting were as follows:

- It was agreed an Association be formed named "ALLAHEIN KAFO"
- It was agreed each community will democratically select a committee of 3 persons (2 women and 1 man). However some communities felt that another male (from the youths) should be included to offer support to the women when required. The committees will later on select a full-time committee for the Association
- An interim committee of 8 persons was selected to sensitize and create awareness in all the communities on the Casamance side, since only 5 of the 9 were at the meeting. Travel will be supported by the USAID/BaNafaa Project. For The Gambia only one community did not attend and will be visited by representatives of the 2 other Gambian communities.
- 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.
- It was agreed that Government agencies (Fisheries Departments in the two countries, NGOs and local authorities) need to support the initiative. To this end, the meeting report will be translated into French.
- For The Gambian communities who participate in this co-management process, harvesters should first become members of TRY. Isatou Jarjue (Secretary of TRY) talked about the Association and the benefits. The women from the neighboring community of Berending who are not yet members expressed great interest.

#### 7. 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 Q2 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 19 and 20).

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 has now been completed in February 2013. Dr. Michael Rice of URI visited The Gambia in January 2013 to provide technical assistance on the on-going development of a framework for an interagency Memorandum of Understanding (MOU) to form a Gambian National Shellfish Sanitation Program (GNSSP). Dr. Rice, USAID/BaNafaa staff and institutional stakeholders made a presentation to National

Assembly Members who will be influential in supporting 2014 budgetary allocations to the appropriate agencies for the continuation of this work after the project ends.

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. The profile in Figure 21 below is one example of how the baseline for a zone might look. Note that this example is for the most contaminated site of the 20 sites because it is near the floodgate to the lagoon where all of the runoff from Banjul accumulates.

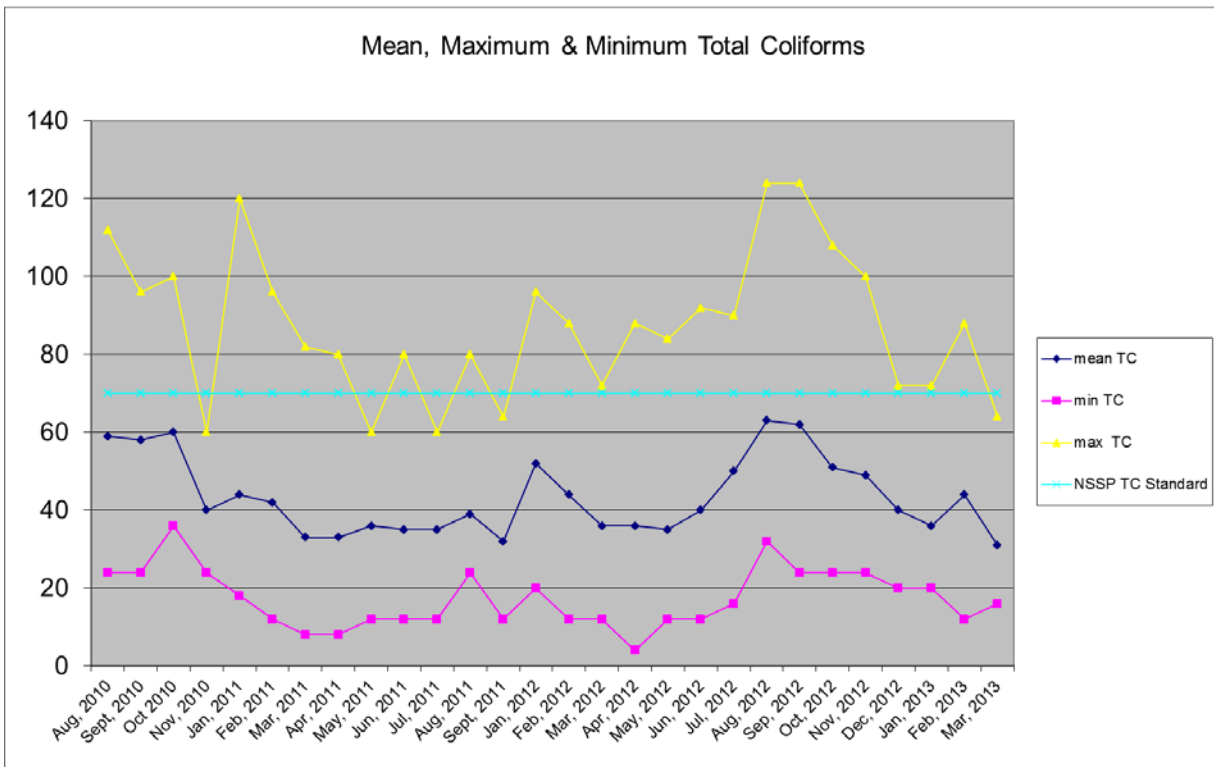


Figure 19. Average Total Coliforms at oyster harvesting sites August 2010 – March 2013.



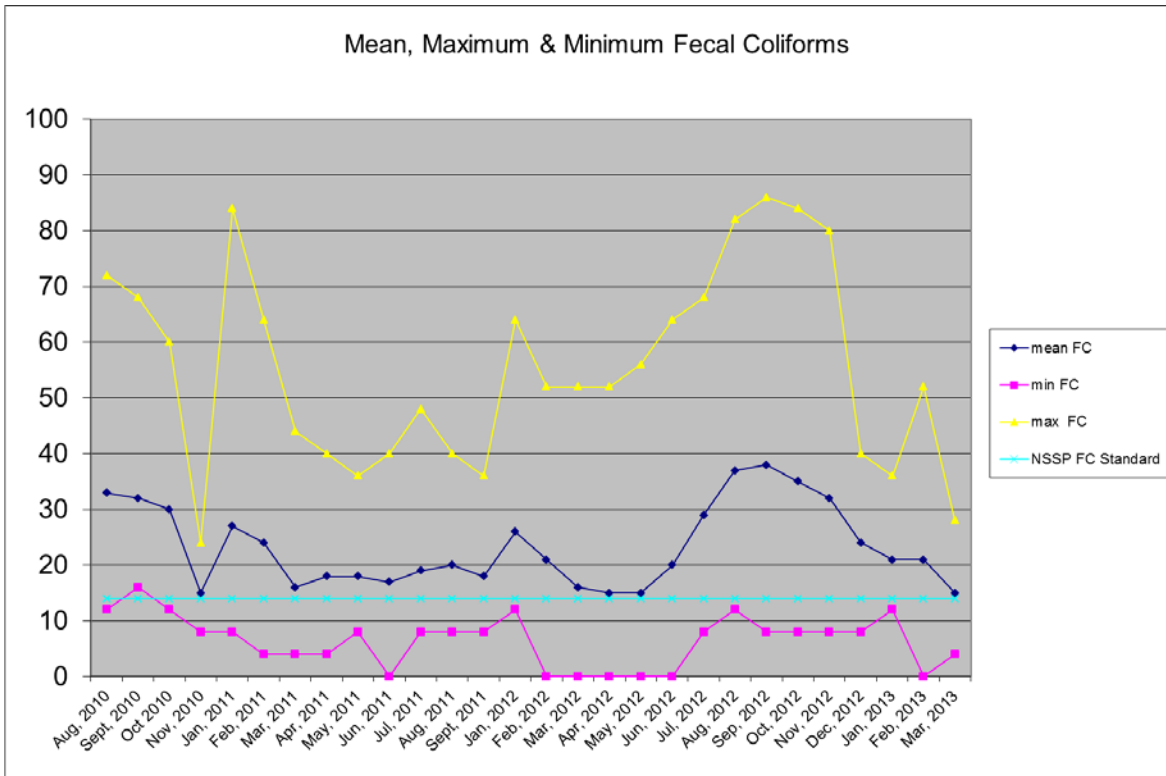


Figure 20. Average Fecal Coliforms at oyster harvesting sites August 2010 – March 2013.

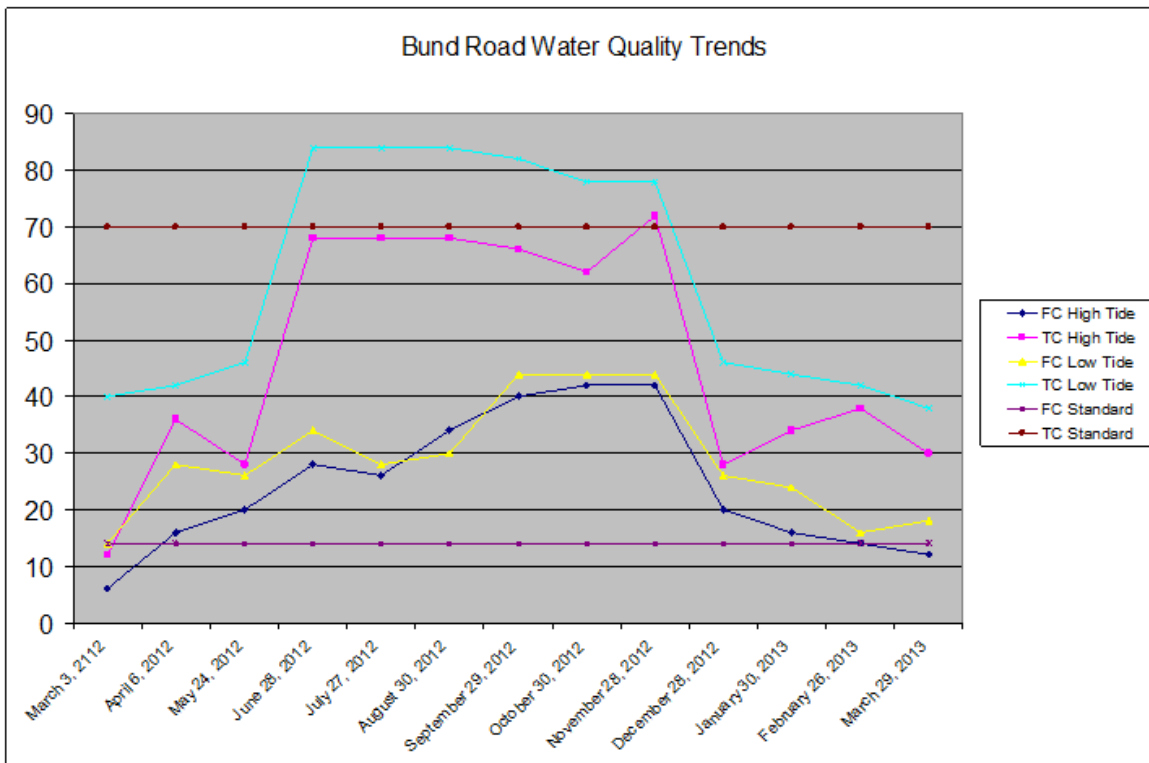


Figure 21. Example baseline water quality profile for future management of GNSSP water quality zones.

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

**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 processors 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<sup>3</sup>. [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 Q2 Year 4 (FY13) progress made to date is as follows:

- The Environmental Screening Report and Environmental Mitigation and Monitoring Plan (EMMP) for the construction phase, as well as recommendations for individual site EMMPs for management of the completed facilities completed by GAMWORKS.

<sup>3</sup> Mills, D., et al. 2009. Vulnerability in small-scale African fishing communities. J. Int. Dev. DOI: 10.1002/jid.

- Testing potable water sources as per USAID requirements for arsenic and other required water quality parameters was completed in Quarter 2. Results are within acceptable standards. Note that only 2 of the 6 WASH sites will have boreholes. The 4 others will access municipal water, which was also tested and was within acceptable standards.
- Participatory Hygiene and Sanitation Transformation (PHAST) Training of a total of 160 participants, including 130 women, at Brufut and Old Jeshwang, Kamalo and Kartong (40 at each site) has been conducted by TARUD. Coordination with UNICEF's previous work on Community Led Total Sanitation (CLTS) in The Gambia and their training of in-country resource persons in this approach has benefitted the implementation of USAID/BaNafaa project training at the community level.



**Figure 22 and Figure 23. Rubbish dumping and open defecation identified and discussed during PHAST training at the Brufut Fish landing site**



**Figure 24 and Figure 25. Poor hygiene in fish processing and handling identified and discussed by participants during PHAST Training**



**Figure 26. Kamalo PHAST training participants**



**Figure 27. Picture used during a training session showing good water sanitation practice**

- Six WASH Management Committees have been established at three 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.
- Draft WASH Management Plans have been developed by Brufut and Old Jeshwang communities, including behavior change strategies, environmental compliance and facilities management and maintenance. Community discussions of WASH Management Plans have been particularly rich and well attended, with women participating fully as they want their voices to be heard on water, sanitation and hygiene issues that affect them so fundamentally. 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.
- WASH infrastructure siting and engineering designs by GAMWORKS were completed and approved by the Brufut and Old Jeshwang communities in Q1 after a series of participatory consultations, including consideration of climate change impacts on the coast (coastal erosion

and sea level rise). Construction began in Q2, late February. Excavations have been completed and concreting of the base for the Fish landing and Oyster landing Sites are in progress. Bedrock 3 meters in depth was encountered at about 1m below ground level at Brufut. This required the Contractor to hire heavy machinery, delaying work and increasing costs. Work on these sites is scheduled for completion by June 15th.

- The USAID/WA Environmental Officer made a monitoring visit to The Gambia in March and visited WASH construction sites.



**Figure 28.** Jeswang Fish Landing Site, concrete is done and reinforcement is being fixed for tank



**Figure 29.** Jeswang Oyster Landing and Processing Site, Excavation Complete and oversite concrete cast

The USAID/BaNafaa team's observation thus far is that integrating WASH activities into existing fisheries co-management activities with communities and stakeholders who have been participating in a successful participatory co-management process with the USAID/BaNafaa project and with each other for more than 3 years promises to deliver a higher quality and more sustainable result than would otherwise be the case.

## 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 2

- Department of Fisheries Capacity Strengthened
  - 2012 Stock assessment (most recent 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.
  - Degree training in Fisheries for 1 staff in Nigeria continuing
  - Fish Biology Course for DoFish landing site staff initiated (first session)
- NASCOM capacity strengthened (see IR1)
- TRY Oyster Women's Association capacity strengthened. (see IR1)
- The Association of Gambian Fishing Companies (TAGFC) trained in Administrative/Financial Management (see IR 1)
- A total of 177 participants trained, of whom 135 were women (76%).

#### **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. 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 the fact 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 three 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. 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. The fact that DoFish has still not produced and shared a report on vessel registration completed in 2011 (with USAID/BaNafaa financial assistance) and has still not been able to facilitate the gazettement of either the Sole or the Oyster and Cockle Co-Management Plans more than 12 months after their approval, are examples of DoFish's weak service to its stakeholders in The Gambia.

In February, DoFish organized its staff for the first session of the long planned fish biology training. The subject of the first course was Fish Identification, showcasing the new [Fish ID guides](#) produced with USAID/BaNafaa support and teaching the participants how to use them. Ten DoFish staff attended the course, these included individuals from each of the landing sites along the coast. Gibril Gabis of USAID/BaNafaa taught the course. Chris Parkins provided support, but the objective was for local resource persons to lead the instruction. The course consisted of a three hour lecture followed by a one hour field exercise. Additional sessions will be scheduled in Q3.



**Figure 30. Fish Biology Course participants (session 1) with their Fish ID Guides.**

## 2. 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 have been 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 have been

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 2013.

***b. Local Partner Capacity Strengthened***

As reported under IR1 above, in Q1, USAID/BaNafaa provided a 3 day Administrative and Financial Management Training for local partners NASCOM, TRY, TAGFC and TARUD. The training was facilitated in The Gambia by Kim Kaine of URI and Assan Camara, USAID/BaNafaa, URI Administrative/Financial Assistant. The training was extremely well received by participating organizations and individuals whose scores on pre and post assessments all improved. One on one follow-up mentoring plans were developed and implemented for each organization. A follow-up training was conducted in-country by Assan Camara on March 18th.

As reported under IR1 for the WASH component, PHAST training of WASH Management Committees and community leaders is also building capacity at the community level.

In Year 4, the project also planned to support the environmental journalist's group Biodiversity Action Journalists (BAJ) to launch its activities and to conduct a training session for its members on providing more in-depth and meaningful reporting on sustainable fisheries management issues in The Gambia. USAID/BaNafaa is not satisfied that this group adequately represents a significant segment of the environmental journalists the project hopes to reach. As a result, this activity will not be implemented.



## 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 2

- Implementation of the *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, including a new recommendation to increase mesh size limits from the current 40mm to 42-46mm.
- Implementation of the *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 10 and 11 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 31. 121,245 hectares under improved management for the artisanal sole fishery out to 9nm.

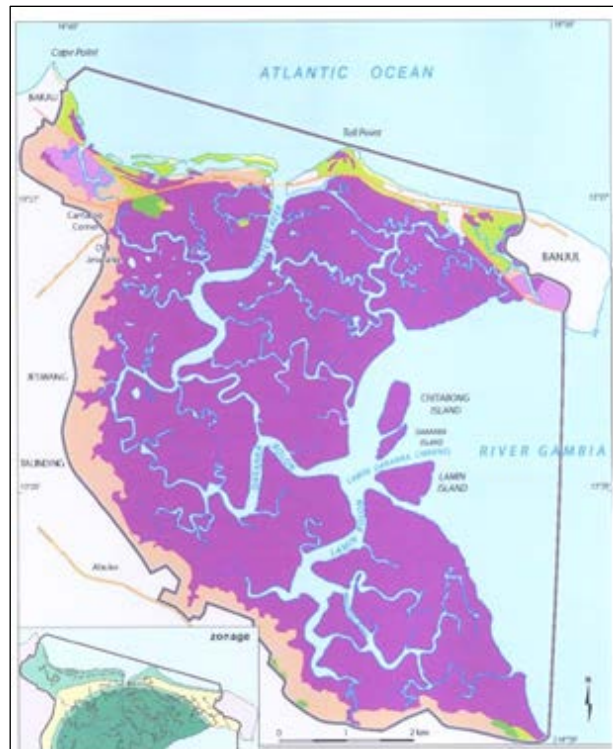


Figure 32. 6,304 hectares under improved management for the oyster and cockle fishery in the Tanbi

### **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 Q2 2013, the current Peace Corps Volunteers at TRY and at WWF will complete their service. A new volunteer with a fisheries background is already attached to WWF and a new volunteer will join TRY in May.

The USAID/BaNafaa Project Manager, Ousman Drammeh, attended USAID/West Africa's Climate Change Training and Partner's Meeting in Accra, Ghana in February, 2013.

#### **3.1 External Mid-Term Evaluation**

A USAID contracted firm, Mendez England & Associates conducted an external evaluation of the USAID/BaNafaa Project from November –February, when the report was finalized. Field work was conducted for 5 weeks by a team of three consultants from the first week of November to the first week of December 2012. It should be noted that the USAID/BaNafaa in-country team met frequently with the evaluation team and provided significant support in arranging meetings with stakeholders and ensuring that the evaluation team had the logistics that it needed to conduct its work over this 5 week period. A summary of the evaluation conclusions, lessons learned and recommendations follows. As noted in the Introduction to this report, the USAID/BaNafaa team agrees with the overall conclusion of the evaluation, but the project has limited resources and time to start new initiatives identified in some of the recommendations.

## Mid-Term Evaluation of the USAID/BaNafaa Project - Conclusions

- **Capacity Building Among Stakeholders:** Because of Ba Nafaa's efforts, there is a greater level of awareness in The Gambia about managing a healthy ecosystem. Lessons learned from the Bi-lateral (Gambia/Senegal) Workshop on Artisanal Fisheries Co-Management were a frequent topic of discussion among individual stakeholders during the evaluation interviews.
- **DoFish Indicators:** Compared to LOP Targets, each of DoFish's Achieved Targets for various indicators, the purpose of which is to accurately evaluate capacity building and governance abilities, exceeds expectations. However, 45% of respondents believe that while DoFish's technical capacity is strengthened, its institutional capacity in the co-management process is still weak.
- **Ecosystem-based Management:** Similarly to co-management, management plans and the establishment of associated ecosystem committees, such as NASCOM nationally and LACOMs locally, provide a strong foundation for ecosystem-based management. However, Ba Nafaa is in the beginning stages of ecosystem-based management and has only created sole, and oyster and cockle species management plans. To date, there has been regular ecosystem awareness capacity building for all stakeholders.
- **Gender Empowerment:** Ba Nafaa is creating a healthy environment for gender equality, which exists across all Ba Nafaa stakeholder activities including TRY and participation in WASH management committees. TRY comprises a major component of Ba Nafaa's gender equality integration and design, and receives project support in its efforts to empower women and serve as a unifying livelihood development organization. Furthermore, Ba Nafaa's participatory, ecosystem-based co-management approach, has successfully drawn women processors and fishmongers into co-management institutions.
- **Mangrove Ecosystem Management Practices:** Ba Nafaa has been successful in educating and training stakeholders about the benefits of sustainable mangrove ecosystem management, such as the restoration and replanting of mangroves and the four-month oyster-harvesting period that enables the mangrove ecosystem to sustain itself. Local stakeholders recognize the economic and social benefits of such activities and are likely to continue them after Ba Nafaa's completion.
- **Participation of Local Stakeholders in the Co-Management Process:** NASCOM and LACOMs have established local stakeholder participation and continue to build the foundation for a sustainable governance process. NASCOM's role as an intermediary and representative body for national and local co-management stakeholders serves as a solid springboard for decentralization. Moreover, LACOMs and its local representatives provide direct access to fisherfolk. Both organizations function as the main artery for the Ba Nafaa co-management plan.
- **Sole and Oyster and Cockle Fishery Co-Management Plans:** Ba Nafaa is on track with the fisheries co-management plans for the sole complex as well as for the oyster and cockle fisheries of the Tanbi Special Management Area— both of which have been approved and initiated. Both plans, however, have yet to be promulgated and enforceable by authorities, a delay which has hampered the co-management progress.
- **WAMER Management:** The geographic size of WAMER, in addition to the number of stakeholders involved, makes its management a difficult task. The primary institutional gaps to WAMER management are coastal stakeholder capacity, DoFish capacity, and regional coordination. As WAMER is a single marine ecoregion with common problems and concerns, greater effort to coordinate and build on lessons learned between all involved parties may address its institutional gaps.

### **Mid-Term Evaluation of the USAID/BaNafaa Project – Lessons Learned**

This section includes lessons learned that can potentially be applied throughout WA based on the evaluation's findings and conclusions.

- **National Level Management:** Regular rotation of GoTG officials frequently delays project activities. Ba Nafaa and NASCOM have been able to succeed through the mid-term by informing incoming officials and ministers at DoFish and the Ministry of Fisheries and Water Resources about relevant project updates and regulations.
- **Private Sector:** Ba Nafaa's integration of the private sector into its activities facilitates sustainability and strengthens value chains and revenue generating opportunities for all stakeholders.
- **Stakeholder Collaboration:** Ba Nafaa has provided a platform for organizational collaboration and partnership, which is invaluable for ecosystem-based management because it enables different fisheries sectors to work together toward the same goal.
- **Stakeholder Coordination:** Clear coordination among all levels of governance and stakeholders facilitates effective work because it enables management and information awareness, reduces the potential for user conflict as each party is made aware of the actions of others, and promotes transparency and accountability among each party.
- **Study Tours:** Reciprocal study tours between TRY members and their oyster harvester and processor counterparts in Senegal have been highly successful. FGDs showed how TRY members were able to put into practice skills they had learned after only one study tour and how, at the Kamalo oyster site, they constructed an oyster smoking oven as a result of technology transferred from Senegal. Therefore, information and technology transfer is important and should be encouraged.
- **Re-Planting Mangroves:** TRY groups in Kartong and Tanbi fish landing villages were trained by Ba Nafaa on replanting mangroves, an activity that had never before been performed in The Gambia or WA. There are over 150 villages in The Gambia where Ba Nafaa is not operational, in addition to other countries in WA, with similar mangrove challenges that could benefit from replication of such initiatives.
- **New Oyster Harvesting Techniques:** Ba Nafaa trained TRY members in new and more environmentally friendly methods of oyster harvesting that do not involve the destruction of mangroves as former harvesting practices did. These new practices can be taught and replicated throughout The Gambia and WA

## Mid-Term Evaluation of the USAID/BaNafaa Project - Recommendations

- **Bi-lateral Workshop on Artisanal Fisheries Co-Management:** BaNafaa's Bilateral Workshop on Artisanal Fisheries Co-Management was considered as highly successful and valuable by all stakeholders. The evaluation team recommends that Ba Nafaa and URI host more bilateral workshops in order to create greater awareness among all stakeholders, disseminate regional lessons learned, and strengthen cross-border relationships.
- **Coastal and Marine Environment Working Group:** It is recommended that Ba Nafaa's efforts expand to the NEA's Coastal and Marine Environment Working Group. 45% of respondents stated that DoFish's role in the co-management process needs improvement and this functioning working group enables parties to discuss differences of environmental opinions and to coordinate efforts. If Ba Nafaa expands at the national level to include another embedded institution that addresses marine ecosystem management concerns, the NEA can share the co-management role with DoFish.
- **DoFish Integration in the WASH Component:** All sanitation facilities are located at a fisheries landing site, allowing DoFish's local participation in the WASH component to strengthen its co-management role. It is recommended that DoFish take a national level role in the WASH component. Currently, the Gambian Agency for the Management of Public Works supervises infrastructure development and TARUD implements capacity building.
- **Domestic University Training:** Currently, no universities in The Gambia provide fisheries management as an academic discipline. It is recommended that Ba Nafaa assist domestic university students diversify into the field of fisheries management, through the creation of BaNafaa affiliated fisheries student awareness clubs and fisheries management presentations by BaNafaa stakeholders in order to create broader awareness related to fisheries management.
- **WAMER Management:** WAMER's size has created three human and institutional capacity gaps that the Ba Nafaa project is not currently targeting: capacity building among WAMER stakeholders; defined WAMER management roles for DoFish; and regional coordination. Recommendations for improved WAMER management include: an increase in the frequency of knowledge sharing conferences with participating country representatives; the establishment of clearly defined WAMER management roles and responsibilities for all Gambian national government offices; and increased number of trainings for artisanal fisherfolk to comply with WAMER guidelines on reporting fish catches, fisheries hygiene and sanitation; and their role in co-management.
- **USAID Presence in The Gambia:** The fact that the Ba Nafaa project is based in Senegal and USAID in Ghana creates a disconnect between headquarter and field locations, and makes more difficult the addressing of project and administrative concerns. It is recommended that USAID establish a larger presence in The Gambia through more regular visits to the country, so that it can more easily share information and provide direction to URI/CRC, WWF, and DoFish as needed.

### **3.2 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 Anticipated**

- Kathy Castro: Annual Bi-lateral Co-Management Workshop and Gambia-Senegal Fishing Community twinning activity (both to take place in Senegal) June 2013.

#### **Fourth Quarter Anticipated**

- Karen Kent: Workplanning (August/September)

### **3.3 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)

<i>Item</i>	<i>Type of USAID marking</i>	<i>Marking Code</i>	<i>Locations affected/ Explanation for any 'U'</i>
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 ( <i>USAID/BaNafaa</i> ) 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 ( <i>USAID/BaNafaa</i> ) 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
<b>GRAND TOTAL YEAR 1</b>				<b>161</b>	<b>449</b>	<b>610</b>	<b>\$84,440</b>
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

Training program	Location	Start date	End date	Participants			Estimated Cost
				Male	Fem	Total	US \$
TRY members to FENAGIE	Senegal	09/2011	xx	0	4	4	2,759
<b>GRAND TOTAL YEAR 2</b>				<b>61</b>	<b>265</b>	<b>326</b>	<b>130,391</b>
<b>CUMULATIVE GRAND TOTAL TO DATE END YEAR 2</b>				<b>222</b>	<b>714</b>	<b>936</b>	<b>\$214,831</b>
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
<b>GRAND TOTAL YEAR 3</b>				<b>186</b>	<b>247</b>	<b>433</b>	
<b>CUMULATIVE GRAND TOTAL TO DATE END YEAR 3</b>				<b>408</b>	<b>961</b>	<b>1369</b>	
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	

<i>Training program</i>	<i>Location</i>	<i>Start date</i>	<i>End date</i>	<i>Participants</i>			<i>Estimated Cost</i>
				<b>Male</b>	<b>Fem</b>	<b>Total</b>	<i>US \$</i>
PHAST training (Kamalo)	The Gambia	01/21/13	01/23/2013	0	40	40	
Administrative/Finance Training follow-up	The Gambia	03/18/2013	03/18/2013	6	2	8	

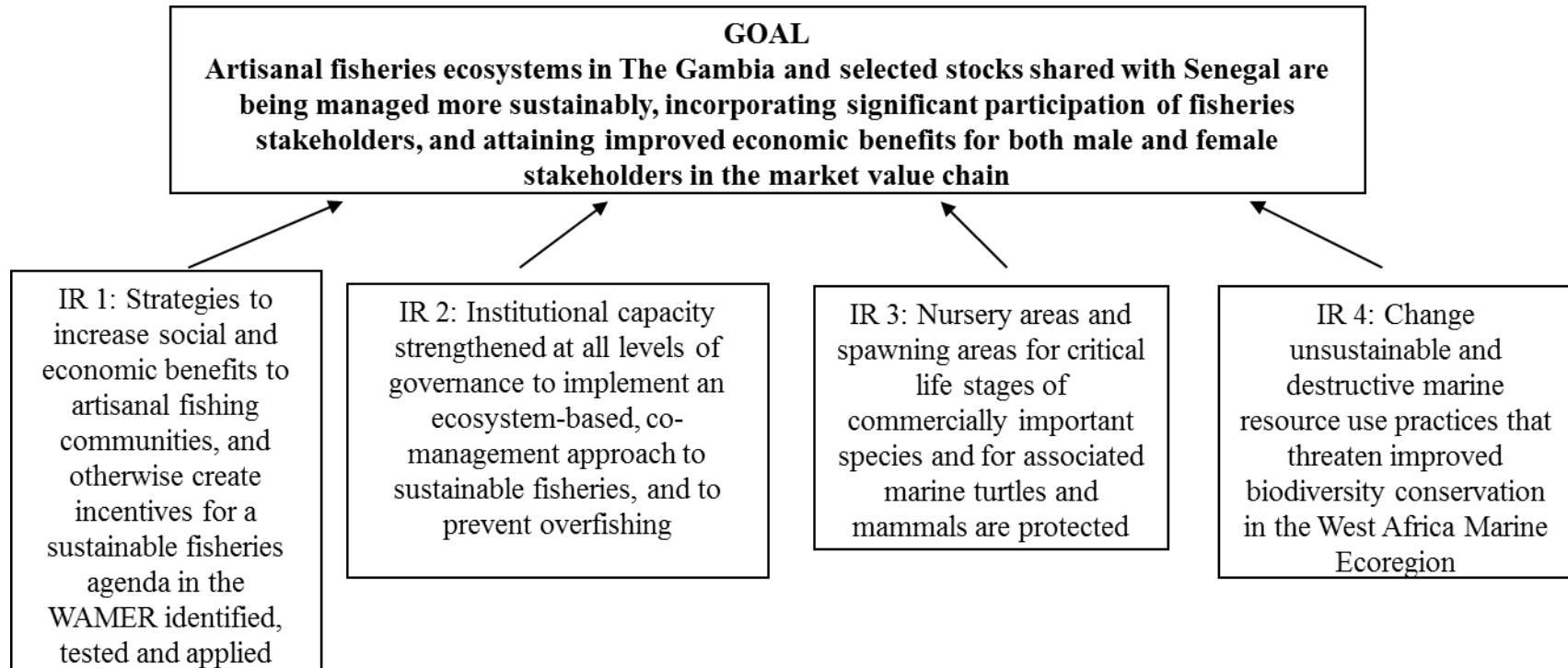
### **3.6 Estimated Financial Status**

The following table shows a pipeline analysis of expenditures in relation to obligations through **March 31, 2013**.

AMOUNT SUB-OBLIGATED		3,414,566
(total federal outlays as of last SF 425/voucher)		
Expenditures		
	Thru December 31,	
Period Covered In Last SF 425	2012	2,481,657.21
Estimated	January 2013 to	
	March 2013	264,009.00
TOTAL EXPENDITURES		
(Amt on SF 425 + Recent Expenditure)		\$2,958,046.21
BALANCE OF SUB-OBLIGATED FUNDS		
REMAINING		\$668,899.79

## 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

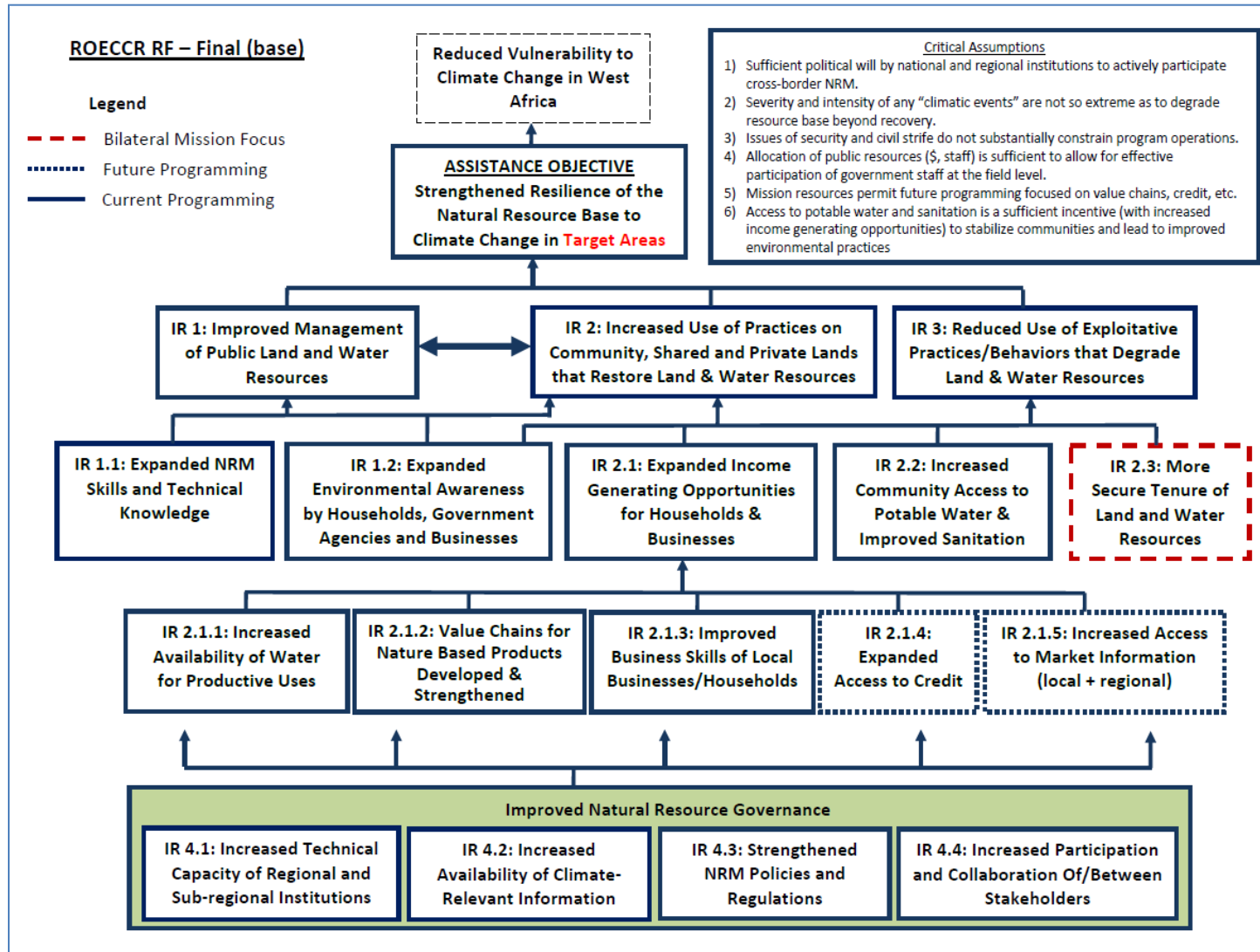
No	Indicator	Cumulative Results as of FY12	FY13 Target	Q1	Q2	LOP Target	Comments
<b>IR1</b>							
2	No people with increased economic benefits derived from sustainable natural resource management and conservation as a result of USG assistance (ROECCR 2.1.1)	910 <sup>4</sup>	127	0	0	220	FY 13 target = NASCOM & TRY members providing improved product due to improved fish handling and hygiene training. TAGFC members with traceability improvements. <i>Note that 300 women were trained in fish handling and hygiene under the TRY UNDP grant (considered cost share) rather than by USAID/BaNafaa.</i>
W1	Improved access to water and sanitation facilities	0	12,000	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	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	6000	
W4	Community water and sanitation committees established and trained with program assistance	0	4	3	3	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.
<b>IR2</b>							
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 <sup>5</sup>	4	1	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	200	= TrainNet

<sup>4</sup> 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.

<sup>5</sup> 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	Increasing			Increasing	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	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	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	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	8	No additional activity without add-on
<b>IR3 &amp; IR 4</b>							
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	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. Sent to Ministry of Justice to be put in legal language.
Gillnet Study testing impact of larger mesh size conducted					Master Fishermen, DoFish	Fieldwork begun in quarter 2 and will extend through quarter 3.
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.
Implement Seed Grant #1 to NASCOM					NASCOM	See below.
- SOP Manual					'	Pending.
- Business Plan					'	Pending.
- 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 and December.
Seed Grant #2 Capacity Strengthening to NASCOM					NASCOM	Expected Q3
- Fish handling and hygiene training, selected landing sites					NASCOM	Expected Q3
- Bi-lateral co-management twinning exchange visit					NASCOM	Expected Q3, June.
Seed Grant #1 Capacity Strengthening to TAGFC					TAGFC	Still working to address organizational issues related to constitution and management structure. Waiting for proactive



IR1 Sole Activities	FY13				Local Implement.	Quarter 2 Progress
	Q1	Q2	Q3	Q4		
						action from TAGFC by June or no time will be left for a seed grant.
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. Sent to Ministry of Justice to be put in legal language.
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					'	Current volunteer end service as of April 30, 2013. A replacement will come in May.
- Annual market/biological survey at sales points					'	Began March 1, with open season. Conducted by girls in the TRY skills training course.
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.
- Community meetings					TRY, DoFish	None in Q1. See above in Q2 1 meeting
- Larger stakeholder workshops					TRY, DoFish	None in Q1. None in Q2.
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	Pending.
Management planning 1 <sup>st</sup> 2 sites					TARUD	Plans completed but not yet signed.
Management planning 2 <sup>nd</sup> 2 sites					TARUD	Initiated and on-going.
Management planning 3 <sup>rd</sup> 2 sites					TARUD	Q3
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 following EMMP.
Site designs for 4 additional sites (2 in Q1 and 2 in Q4)					GAMWORKS	Final designs for 1 <sup>st</sup> 2 sites completed.
Contracting for construction of infrastructure at 2 additional sites					GAMWORKS	Contracting for 1 <sup>st</sup> 2 sites done in Q2.
Construction at 4 sites					GAMWORKS	Construction at 1 <sup>st</sup> 2 sites started Q2.
Handover of 4 completed infrastructure (2 in Q2 and 2 in Q4)					GAMWORKS	Handover of 1 <sup>st</sup> 2 sites infrastructure expected in mid-June.

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. Reviewing additional stock assessment analysis they produced in February.
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 February.
Support annual stock assessment (Najih)					DoFish	Reviewing additional stock assessment analysis they produced in February.
Support Cross Border Trade Cabinet Paper development (submitted to Permanent Secretary) 3 committee meetings + 1 validation workshop					DoFish, Committee	Nothing to report Q2.
Bilateral Co-Management (Gambia/Senegal) fishers and decision-makers annual workshop					NASCOM, DoFish, DPM, TRY	Nothing to report Q2. Planned for June.
Support Bilateral Co-Management Action Plan - Twinning (through NASCOM seed grant fisher level exchange visit (see IR1 above))					NASCOM, DoFish, DPM	Nothing to report Q2. Planned for June.
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 Q2 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	<ul style="list-style-type: none"> <li>• Meetings with local communities and officials (Sole &amp; Oyster)</li> <li>• Training in fish stock assessments</li> <li>• Sole stock assessment</li> <li>• TRY Oyster Association Standard Operating Procedures Manual developed.</li> <li>• Shellfish handling and hygiene training for TRY members</li> <li>• Literacy training for TRY members</li> <li>• Sanitary Shoreline Survey training</li> <li>• Training of facilitators for WASH Needs Assessment</li> <li>• PHE and Fisheries Leadership training at URI Summer Institutes and in Senegal</li> </ul>	The core content of most of these activities revolves around sound environmental management.
(iii) Analyses, studies, academic or research workshops and meetings	<p><b>Sole Fishery</b></p> <ul style="list-style-type: none"> <li>• Local Ecological Knowledge study of Catfish (a Sole bycatch)</li> </ul> <p><b>Oyster Fishery</b></p> <ul style="list-style-type: none"> <li>• Participatory rapid appraisal to compile local knowledge of cockle harvesting practices, spawning period, and growth at Kartong</li> <li>• Bi-weekly water quality testing reports</li> <li>• Sanitary Shoreline Survey of Tanbi Wetlands and other oyster harvesting areas.</li> <li>• Hotel market survey to better understand the needs of this market.</li> <li>• Biological sampling of oysters at sales points during the open season to contribute information on status of the stock.</li> </ul> <p><b>WASH</b></p> <ul style="list-style-type: none"> <li>• Needs Assessment of 16 fish/shellfish landing sites and validation/stakeholder workshop to select priority landing sites for WASH intervention.</li> </ul>	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.	<ul style="list-style-type: none"> <li>• Bilateral (Gambia-Senegal) Climate Change Vulnerability Assessment and stakeholder workshop</li> <li>• Bilateral (Gambia-Senegal) Fisher Level Co-Management Workshop to exchange experiences and best practices.</li> </ul>	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
<p><i>Copy from the IEE</i></p> <p>Sole: Value chain assessment Development of a sole management plan including managing access and gear Analyses of cost competitiveness of the export processing sector</p> <p>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</p>	<p><i>Copy from the IEE</i></p> <p>Observe conditions in section 4.2 of the IEE</p> <p><u>Conditions for fisheries management plans including managing access and gear</u></p> <p>Fisheries management activities must be conducted in full conformity with the following points:</p> <ol style="list-style-type: none"> <li>1. Areas for pilot fisheries management will be under an approved management plan.</li> <li>2. Fisheries management plans (FMPs) will:               <ol style="list-style-type: none"> <li>a. Be based on the best available site-specific information on marine species and marine ecosystem status (<i>e.g.</i> key animal/plant species, marine habitats and use and ecosystem importance) and local, indigenous knowledge;</li> <li>b. Establish explicit, data-based management objectives for marine and coastal biodiversity conservation;</li> <li>c. Establish site-specific sustainable production/utilization guidelines based on growth and</li> </ol> </li> </ol>	<p><i>Mitigative measures that were put in place</i></p> <p><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 <a href="#">approved plans and accompanying annexes</a>. Draft Management Plans were shared with Robert Buzzard, Acting AOTR on June 7, 2011. Gazetting of the plans is still pending.</p> <p>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,</p>	<p><i>If mitigative measures were not successful or not implemented, why?</i></p> <p>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 .</p> <p>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</p>	<p><i>Any follow-up actions/recommendations to meet these environmental requirements?</i></p> <p>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.</p> <p>Follow up to determine if oyster basket and rack culture</p>

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	<p>productivity estimates derived from the best available information;</p> <p>d. Demarcate and define marine resource access and use rights;</p> <p>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;</p> <p>f. Reflect a consultation process that allows the general public to comment and provide input on the management plan; and</p> <p>g. Include a monitoring plan of select ecological parameters.</p> <p>(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)</p> <p>3. Marine resource management activities will be implemented in accordance with criteria established in the USAID/AFR/SD publication</p>	<p>adaptive co-management. For example, the project supported a new stock assessment for sole, biological sampling of oysters at sales points and a gillnet study to test hanging ratios 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.</p> <p>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.</p> <p><u>Value chain assessments and improvements</u> Value chain assessments in Shrimp, Sole and Oysters have been conducted in</p>	<p>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.</p>	<p>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.</p>

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	<p><i>Environmental Guidelines for Small-Scale Activities in Africa</i> (Chapter 6: Fisheries – <a href="http://www.encapafrika.org">www.encapafrika.org</a>.)</p> <p>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.).</p> <p>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</p>	<p>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.</p> <p>A comparative cost study on sole fish between The Gambia and Senegal was conducted in Year 3 to better</p>		



Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	<p>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.</p> <p><u>Conditions for value chain assessments and improvements</u></p> <p>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.</p> <p><u>Conditions for enterprise development training – micro credit, loans and micro-enterprises</u></p>	<p>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.</p> <p>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 and environmental hazards as a means to improve the</p>		

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	<p>Activities relating to the expansion of micro-finance and or micro-enterprises shall be subjected to environmental review. The <i>Ba Nafaa</i> project will assure that in any support for micro-lending, financial intermediaries (FIs) fully implement an <u>environmental due diligence</u> process which:</p> <ul style="list-style-type: none"> <li>• enables ‘Environmentally Sensitive Activities’, as defined below, to be identified in loan applications;</li> <li>• bars funding to activities which are prohibited under the Sections 118 &amp; 119 of the Foreign Assistance Act;</li> <li>• 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</li> <li>• ascertains compliance with Gambian and Senegalese environmental statutes/regulations as a condition for loan-making.</li> </ul> <p>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.</p>	<p>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.</p> <p><u>Enterprise development training – micro credit, loans and micro-enterprises</u></p> <p>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. USAID does not have direct control over the provision of</p>		

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	<p><i>Environmentally Sensitive Activities</i> are defined as:</p> <ul style="list-style-type: none"> <li>a. Activities listed in 22 CFR 216.2.d “Classes of actions normally having a significant effect on the environment”;</li> <li>b. Activities prohibited or limited by Sections 118 and 119 of the Foreign Assistance Act; or</li> <li>c. Activities identified by host country environmental regulations as requiring environmental review, licensing or permits.</li> </ul> <p>(for a list of activities under a &amp; b, see the ENCAP factsheet on environmental compliance for DCA activities:  <a href="http://www.encapafrika.org/documents/ENCAP_AFR_DCA_Factsheet_3Feb2010.doc">www.encapafrika.org/documents/ENCAP_AFR_DCA_Factsheet_3Feb2010.doc</a>  )</p> <p>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).</p> <p>In cases where <i>Ba Nafaa</i> has direct control over the provision of credit and financial services, the project will ensure</p>	<p>these loans and financial services. This program is not expanding in Year 4, but working to complete active loan cycles.</p>		

Planned activities	Recommended mitigation actions	Status of mitigation measures/Actions taken	Outstanding issues on required conditions	Remarks
	<p>that the Environmental Screening Form (ESF) in the <i>Environmental Guidelines for Small-Scale Activities in Africa (EGSSAA) Part III, “Guidelines for Micro and Small enterprises”</i> (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 <i>Ba Nafaa</i> 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.</p> <p><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</p>			

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<p>Sub-grants:</p>	<p><a href="http://www.encapafrika.org/EGSSAA/Word_English/construction.doc">http://www.encapafrika.org/EGSSAA/Word_English/construction.doc</a>.</p> <p>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 (<a href="http://www.encapafrika.org/EPTM/AnnexG/EPTM_Mar2005b.pdf">www.encapafrika.org/EPTM/AnnexG/EPTM_Mar2005b.pdf</a>) of the Africa Bureau Environmental Procedures Training Manual (EPTM) (<a href="http://www.encapafrika.org/eptm.htm">http://www.encapafrika.org/eptm.htm</a>). Construction will not begin until such a review is completed and approved by the Mission Environmental Officer or REA.</p> <p><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.</p> <p>The AFR Environmental Review Form</p>	<p><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 &lt; 1000sq. m, Mangrove reforestation, wood saving oyster smoking oven demonstration model installed at one oyster</p>		

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<p>Water &amp; 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</p>	<p>and process, including supplemental NRM checklist, will be used for all <i>Ba Nafaa</i> small grants made after the effective date of this IEE. The form is available at <a href="http://www.encapafrica.org/documents/AFR-EnvReviewForm-20Dec2010.doc">www.encapafrica.org/documents/AFR-EnvReviewForm-20Dec2010.doc</a>.</p> <p><u>Conditions for WASH</u></p> <ul style="list-style-type: none"> <li>All water supply and sanitation activities will be conducted in a manner consistent with the good design and implementation practices described in <i>EGSSAA Chapter 16: Water Supply and Sanitation</i>.</li> <li>All construction activities will be conducted following principles for environmentally sound construction, as provided in <i>EGSSAA Chapter 3: Small Scale Construction</i></li> <li>Aquifer protection measures and proper design and maintenance will be undertaken to minimize</li> </ul>	<p>processing site. Mitigation measures, such as use of USAID guidelines Chapter 3: Small Scale Construction of EGSSAA, have been implemented.</p> <p>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.</p> <p><u>Water &amp; Sanitation</u>  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 impacts due to climate change. Staff and</p>		

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<p>connections to extensions of networked water supply distribution systems, including installation of tap stands</p> <p>Construct or rehabilitate water storage tanks</p> <p>Construct rainwater harvesting systems</p> <p>Construct or renovate sanitation facilities (latrines or other)</p> <p>Construct or renovate hand washing stations</p> <p>Improved solid waste handling</p> <p>Operate small-scale water supply and sanitation systems, including maintenance of pumps, pipes and other infrastructure</p>	<p>microbiological contamination of improved wells and springs.</p> <ul style="list-style-type: none"> <li>• Water quality testing is the responsibility of the <i>Ba Nafaa</i> 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 “<i>Guidelines for Determining the Arsenic Content of Ground Water in USAID-Sponsored Well Programs in Sub-Saharan Africa</i>” must be followed. The project will also build capacities and responsibilities that provide reasonable assurance that on-going water quality monitoring occurs.</li> <li>• 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.</li> <li>• 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. <i>Ba Nafaa</i> will establish and train</li> </ul>	<p>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 &amp; 4 were: 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 committees, who are developing by-laws, a</p>		

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	<p>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.</p> <ul style="list-style-type: none"> <li>• <i>Ba Nafaa</i> will provide training and education in sanitation and hygiene to local water and sanitation committees and to participating communities with the aims of : <ul style="list-style-type: none"> <li>○ Ensuring community mobilization and public awareness of human health risks associated with water-borne disease vectors;</li> <li>○ Encouraging the development of community responses that are environmentally sound, cost effective and safe; and</li> <li>○ 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.</li> </ul> </li> <li>• <i>Ba Nafaa</i> will: <ul style="list-style-type: none"> <li>○ Follow best engineering practices with qualified professional expertise including</li> </ul> </li> </ul>	<p>management plan and an EMMP for their site. Construction at 2 sites.</p> <p>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.</p> <p>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.</p>		



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<p>Global Climate Change Planning &amp; Adaptation: Adaptation planning and implementation</p> <p>Climate change adaptation measures such as coastal development setbacks and building standards</p> <p>Small-scale agricultural activities</p> <p>Beach and dune nourishment</p> <p>Structural shoreline stabilization</p>	<p>energy and water efficiencies;</p> <ul style="list-style-type: none"> <li>○ 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.</li> <li>● When feasible, the majority of materials used will be of local origin and will not contain any hazardous materials (<i>e.g.</i> asbestos or lead)</li> </ul> <p><u>Conditions for Climate Change adaptation measures</u></p> <p><i>Beach and dune nourishment, use of hard structures to combat erosion from sea level rise</i></p> <p>Use of hard structures or beach or dune nourishment to combat sea level rise will not be approved without additional screening prior to implementation.</p> <p>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</p>	<p><u>Climate Change</u></p> <p>Add-on funding received at end of Year 2. Bi-lateral Climate Change Vulnerability Assessment conducted in Year 3.</p> <p>Stakeholder workshop and adaptation planning resulting in submission of a Bilateral Climate Change Adaptation Add-On request submitted to USAID/WA in July 2012.</p> <p>Beach and dune nourishment, use of hard</p>		

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	<p>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.</p> <p><i>Small-scale agricultural activities that protect and carry out sustainable agriculture activities including tilling, cultivation, fertilization, harvesting, etc.</i></p> <p>All agricultural activities will be conducted according to the following principles:</p> <p>(a) emphasize and fully integrate environmentally sound practices substantially consistent with <i>ESGGAA Chapter 1: Small Scale Agriculture; Chapter 11: Livestock; and Chapter 12: Integrated Pest Management</i> (<a href="http://www.encapafrika.org/egssaa.htm">www.encapafrika.org/egssaa.htm</a>) and the Africa Bureau Fertilizer Factsheet (<a href="http://www.encapafrika.org/docs.htm#specificagriculture">http://www.encapafrika.org/docs.htm#specificagriculture</a>). This shall be an ongoing effort, and it is expected that <i>Ba Nafaa</i> guidelines and practices will be refined over time in response to field monitoring.</p> <p>“Environmentally Sound Practices” include basic good hygiene/animal waste management/biosafety practices as a part</p>	<p>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:</p> <p>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</p> <p>2: Diversified Livelihoods for Sustainable Resource Use</p>		

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	<p>of animal husbandry TA/training (if applicable), and cleaner production approaches, as appropriate, for agro-processing.</p> <p>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.</p> <p><b>(b)</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. <i>Refer to Section 5.1: General restrictions-pesticides.</i></p> <p><b>(c)</b> promote intensification of agriculture, while undertaking all feasible measures</p>	<p>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</p> <p>3: A Cross-cutting Communications Plan</p> <p>4: Shoreline protection  Activity 1:  Policy/regulatory level actions - both national and bi-lateral in scope.  Activity 2: Living Shorelines</p>		

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	to discourage the expansion of beneficiary agricultural production into non-degraded habitat or important ecological areas ( <i>e.g.</i> , mangroves, undisturbed wetlands, primary forest, <i>etc.</i> ). If such expansion is observed, the project shall immediately notify the AOTR and REA.			