Gambia-Senegal Sustainable Fisheries Project

Year 1 Work Plan

October 1, 2009 – September 30, 2010

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A partnership of:

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Coastal Resources Center, University of Rhode Island
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1. Introduction

The ***Ba Nafaa*** project is a five-year regional initiative supported by the American people though the U.S. Agency for International Development (USAID)/West Africa Regional Mission. It is implemented through the University of Rhode Island (URI)-USAID cooperative agreement on Sustainable Coastal Communities and Ecosystems (SUCCESS). The World Wide Fund West Africa Marine EcoRegional Program is the regional implementing partner. Project activities are carried out in partnership with the Department of Fisheries (DoFish) and stakeholders in the fisheries sector in The Gambia and in 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.

This document describes the planned Year 1 (October 1, 2009 – September 30, 2010) work activities of the *Gambia-Senegal Sustainable Fisheries Project (**Ba Nafaa**)*. The contents of this workplan were generated from discussions and output developed during two initial scoping trips and an initial stakeholders meeting held in Banjul in June 2009 and from subsequent stakeholder discussions and consultations during field visits undertaken by the Project Manager in July and August of 2009. The document is organized into five main components. First, background information as well as Project goals and key results expected over the life-of-the-project are described. This is followed by a brief summary of Project accomplishments to date, and a detailed description of Project activities to be implemented in Year 1. It includes a task implementation schedule as well as expected outputs and results per activity area. For each respective activity area, the workplan also identifies the responsible Project staff and participating partners to guide teams involved in implementation. In addition, the Project management structure, the monitoring and evaluation strategy, and the corresponding performance and reporting framework are described. Summary budget information is also included. Appendix 1 provides a summary of the performance plan targets and the results to be achieved for each performance indicator.

1.1 Background

The evolution of fisheries on a global scale can be characterized as moving slowly, but inexorably, from open access to regulated/restricted access, and to rights-based or "managed" access. Open and unregulated access has often led to overcapacity—too many boats chasing increasingly fewer and smaller fish. Globally, this and other factors such as subsidies are contributing to a crisis of fishing overcapacity, to the point where the world's fisheries actually contribute a net loss to total gross product. In other words, it costs more to catch, process, and bring the harvest to market than is generated in revenue returns. This is true for most fishing nations, and although reliable data are unavailable it is likely also true for The Gambia and Senegal. In addition, this also brings to light equity issues of who benefits. In many cases, artisanal fishers are loosing economic ground at the gain of commercial and industrial sector.

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. A significant portion of the fish is harvested by foreign vessels or industrial trawlers operating in an "offshore economy" and competing

directly with the artisanal small-scale sector. This aspect of fisheries (i.e., foreign access agreements, and industrial boats operating legally/illegally on the highs seas and exclusive economic zones/EEZs for markets in developed nations) is not within the scope of this Project. However, addressing conflicts between the industrial and artisanal sector may apply in some instances.

Artisanal fisheries in The Gambia and Senegal 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. Much of the artisanal landings, especially sole and shrimp are also key export earners in the fisheries sector. In both The Gambia and Senegal, most people live within the coastal zone and derive their livelihood, food security, and way-of-life from fishing. 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. Fisheries trade results in valuable foreign exchange earnings, revenue for government, and employment opportunities that go well beyond the labor directly involved in harvesting.

Fisheries products are especially critical to the rural poor. 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 parks and 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 to the Niumi National Park, the Baobolon Wetland Reserve, and the Tanbi Wetland Complex—all are designated Ramsar sites and contain globally significant wetlands.

Senegal and The Gambia are centrally located within the West African Marine Ecoregion (WAMER) that spans 3,500km of coast in western Africa (Mauritania, Senegal, The Gambia, Cape Verde, Guinea Bissau, and Guinea). Its most striking feature is the powerful coastal upwelling of cold water that create a tremendously productive food chain supporting incredible biodiversity in one of the most diverse and economically important fishing zones in the world. Over 1,000 species of fish have been identified, along with several species of cetaceans including dolphins and whales, and five species of endangered marine turtles. This immense productivity is further enhanced by several major river/estuary/delta complexes that provide additional influx of nutrients and sediments to the marine realm, adding to its biological productivity. The estuarine wetlands are globally significant breeding and over-wintering grounds for numerous migratory birds.

The ecoregion is also known as the Canary Current Large Marine Ecosystem. Fish that spawn in northern nurseries seasonally migrate southwards (as do the fishermen) and provide food for human fishing communities along the way. In addition, recent satellite tracking has confirmed that green turtles lay eggs along the remote beaches of Guinea Bissau and travel northwards through Senegalese and Gambian waters to graze in the rich sea grasses of Mauritania. In short, the unique combination of climate and upwelling supports species and habitats that represent critical resources locally, nationally, regionally, and globally. Areas of international, regional and local significance within the WAMER are shown in Figure 1. The stretch from the Saloum Delta in Senegal, The Gambia River and the entire coastline of the Gambia, as well as the Casamance river system is one contiguous area that has regional biodiversity significance.

High levels of fishing effort, however, puts unsustainable pressures on limited fish stocks—only further exacerbated by recent improvements in fishing gear that increase fishing efficiency. As more boats search for fewer and fewer fish, the use of destructive, habitat-destroying fishing techniques such as dynamite fishing, bottom trawling, and beach seining have increased dramatically. Increased fishing has also led to increased capture of endangered marine turtles, juvenile fish, and expansion of the trade in shark and ray fins.

To address these threats, more integrated management approaches are needed at the local and regional scale, including approaches that move toward more sustainable fisheries utilization with less impact on the rich biodiversity of this region. Reducing overfishing through more sustainable harvesting practices will result in a healthier marine ecosystem, including higher biomass of standing stocks and more balanced species assemblages. In addition, promoting more sustainable use practices will help address the wasteful problem of incidental bycatch and capture of endangered species.

In short, at stake in a successful ecosystem-based approach to fisheries management is the ability of millions of people to sustain a resource-dependent existence while at the same time protect the overall ecological integrity and biodiversity of the region. The Project workplan described below sets out to contribute to addressing this challenge.

1.2 The Gambia Fishery Context

The marine fishery of the Gambia is located in the highly productive upwelling zone of the Canary Current Large Marine Ecosystem (CCLME). Seasonal upwellings and the flow of nutrients from the River Gambia (an estuary attracting fish for feeding and spawning) make the marine waters a highly productive area with rich fishery resources, both pelagic and demersal. The River Gambia and its tributaries are about 2,500 km in total length with 480 km of its length in the Gambia. The upwelling phenomenon starts in Morocco and Mauritania and the northern plateau of Senegal in November moving south and attaining maximum effect on the Senegambia plateau in March/April.

There are two types of fisheries in The Gambia—artisanal and industrial. The total fish landed from both the artisanal and industrial sub-sectors were estimated at nearly 40,000 MT in 2006 and 47,000 MT in 2007. In 2006, the artisanal fishery contributed approximately 37,000 MT (93

%) with 3,000 MT (7%) from the industrial fisheries. *Bonga*/shad and round and flat sardinella are the main species landed by the artisanal fishermen—estimated at 18,000 tons in 2006.

In the mid 1960s The Gambia witnessed the transformation of the artisanal fishery from paddled canoes with simple fishing techniques to one with modern fish-capturing technologies and larger canoes with outboard engines, which resulted in an increase in fish landings. Decades of growth in the artisanal fishery combined with the activities of the industrial fishery has caused high levels of exploitation, especially of high-value fish, crustaceans and cephalopods. Production in the artisanal fishery has increased from 10,000MT in 1985 to approximately 40,000MT in 2007, while industrial production has been declining. Reports of dwindling catch per unit of effort indicate that high-valued demersal species are under threat from high levels of exploitation. Regular assessments carried out by the Demersal Working Group of the FAO's Committee for Eastern Central Africa Fisheries (CECAF) also indicate that the major fish demersal fish stocks are either fully or overexploited. Pelagic stocks are also considered to be fully or overexploited.

Industrial fishing primarily targets high-value species such as sole, snappers, shrimp, cuttlefish, and octopus. In 2007, a total number of 32 industrial fishing vessels operated with a license in Gambian waters—15 shrimp trawlers and 17 fish\cephalopod trawlers. All industrial vessels operating in Gambian waters are foreign-owned and foreign fishermen dominate. These vessels land their catches in foreign ports where the fish is processed, packaged and labeled as products originating from those foreign ports. The absence of a deep water port is the reason that the industrial fleet does not land their catches in The Gambia as is required by fisheries licensing regulations. A deep water landing dock in Banjul is now under construction. This construction project was developed and supported by the Gambia Artisanal Fisheries Development Project supported by the African Development Bank and BADEA (Arab Bank for Economic Development). Completion is scheduled for 2010.

The industrial fisheries sub-sector also includes industrial seafood processing plants that purchase fish from the artisanal fishery and provide permanent and part-time employment to between 1,500 to 2,000 people (mainly women). Presently, there are seven processing plants, three of which export to the EU. Two plants are temporarily closed due to lack of material (fish) and high operating costs. Lack of adequate fish for processing is an annual problem, especially when most Senegalese fishers return to Senegal for Ramadan and Tobaski (Islamic holidays). The Senegalese dominate the coastal fishery, so during these religious holidays the amount of fish from the artisanal fishery that is available for processing drops significantly and the processing plants close. It is expected that the new deep water port in Banjul will reduce the problem of lack of material and the need to operate below capacity. Processing factories also suffer from unreliable provision and high prices for electricity—electricity represents the greatest cost for processing plants with The Gambia having one of the highest kilowatt hour cost of electricity in Africa. Another problem is the high cost of financing.

The artisanal sector, which is the major supplier of both food fish for the Gambian populace and raw material fish for commercial fish processing plants, provides direct employment to 1,410 head fishermen and 4,694 assistant fishermen. Considering fish buyers, processors, boat builders, fuelwood collectors, and other ancillary activities it is estimated that over 200,000 people are directly or indirectly dependent on artisanal fisheries for their livelihoods. Of the 1,410 head

fishermen operating in the artisanal fisheries, 805 are Gambian nationals and 605 foreign. In the coastal area, however, foreign nationals—mainly Senegalese—form the majority with 249 head fishermen compared to 167 Gambians. These foreign nationals also form the vast majority of artisanal shrimp fishermen along the estuary of the River Gambia. The number of canoes and fishermen operating in artisanal fisheries steadily increased from 1983 to 1997, but thereafter and until 2006 declined. The artisanal subsector is highly diverse, incorporating marine, estuarine and freshwater fishing operations. The majority of the communities located along the Atlantic coastline and close to the River Gambia and tributaries engage in some form of artisanal fishing activity. The more prominent fishing communities are located along the Atlantic coast and include the coastal villages of Kartong, Brufut, Tanji, Sanyang, Gunjur and Bakau, and the riverbank villages of Albreda, Bintang, Kemoto and Tendaba.

Artisanal fishing crafts are predominantly dug-out canoes along the river, and planked open hull vessels (*pirogues*) of the Senegalese type along the marine coast. There is now one manufacturer of fiberglass fishing canoes on The Gambia coast, but there are still very few fiberglass boats in the artisanal fishery. Most fishermen (74 %) own their canoes followed by joint ownership (14%). The Frame Survey revealed that 94% of the fishermen use canoes for fishing and the most common type of canoe used is dug-out (50%) followed by planked-dugout (37%). There are also 1,082 un-motorized and 625 motorized canoes.

Pelagics are now the dominant catch of the artisanal fishery. Gear used in the pelagic fishery includes surround gillnets and purse seine nets and the main species that are caught are shads (*Bonga*), sardinella, anchovies, mackerel, barracuda and jacks. Demersal species are caught by artisanal fishermen using set/bottom gillnets, drift nets, traps, and hook and line. Various species of croaksers, solefish, catfish, cuttlefish, threadfish, grunts and groupers are captured with these fishing gears. Stow nets and drift nets (*fele-fele*) are especially used by artisanal fishermen for catching shrimps in the estuary and tributaries.

With regard to fish market outlets, about 60 percent of fishermen sell fish catches through *Banabana* (fish dealers) and 31 percent sell directly to consumers. The rest sell through bidding. The artisanal fish catch is either sold among the local communities for processing (drying and smoking) or is transported and marketed in major towns and villages in the interior. Post harvest losses are large due to a combination of oversupply, lack of preservation and lack of market. The processed fishery products are transported and sold in inland markets, and some are exported to neighboring countries. A proportion of the artisanal fish catch of high value (shrimps, soles, sea breams, lobsters) are purchased by industrial seafood processing companies for export abroad.

The Gambia's fisheries sector operates under the authority and responsibility of the Minister of Fisheries, Water Resources, and National Assembly Matters and 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 solefish 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.

The Fisheries Act empowers the Minister of Fisheries, Water Resources and National Assembly Matters and the Director of Fisheries to declare Special Management Areas for purposes of community-based fisheries management; establish open or closed seasons for specified areas and fish stocks; define minimum fish size regulations; and impose gear and fish method restrictions.

1.3 Program Goal and Key Results

The goal of the ***Ba Nafaa*** 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.*

Ba Nafaa builds on the on-going efforts of the Department of Fisheries in The Gambia, working with several 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 draft fisheries management plan for sole, sardinella, and shrimp. Shrimp and sole are important export commodities so this involves partnerships with export processing businesses as well. As gender equity is another important aspect of the project, ***Ba Nafaa*** 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 ***Ba Nafaa*** Project are to:

- Contribute to government objectives of sustained and increased social and economic benefits for artisanal fishing communities including food security, increased income and employment.

- Institutional capacity at all levels of governance to implement a fisheries co-management approach is strengthened in order to sustain socio-economic benefits for fisherfolk and other beneficiaries in the market value chain.
- Unsustainable and destructive marine resource use practices, including bycatch of marine turtles and juvenile fishes, are reduced.
- Key habitats and marine areas important in the life stages of commercially important fish as well as threatened and protected species of marine turtles and mammals are protected.

Within The Gambia, specific objectives are to:

- Strengthen the capacity of community fisheries centers to manage fisheries and engage in more effective enforcement of rules through training and learning-by-doing.
- Strengthen the capacity of the DoFish and community management committees to conduct fisheries stock assessments and implement community-based management plans.
- Identify and then implement opportunities for improvements in the value chain of the key species of economic importance, including export opportunities that provide socio-economic benefits to Gambians.
- Establish community-based protected areas to serve as critical habitats for marine turtles and mammals and as spawning and nursery grounds for commercially important fish.

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.

Regionally, the Project aims to:

- Strengthen regional management of shared stocks by addressing licensing and registration issues for domestic and foreign fishermen.
- Improve international trade competitiveness through harmonized policies.
- Increase regional cooperation for conservation of marine turtles and mammals.
- Promote bilateral exchanges of communities and government officials to share lessons and experience in improved management of fisheries.

Geographic Scope. The Project concentrates its activities 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 ***Ba Nafaa*** focuses on the artisanal nearshore fisheries along the Atlantic coastline as well as the estuarine- and mangrove-dominated portions of The Gambia River (see Figure 2 below). A sister project in Senegal, called 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.

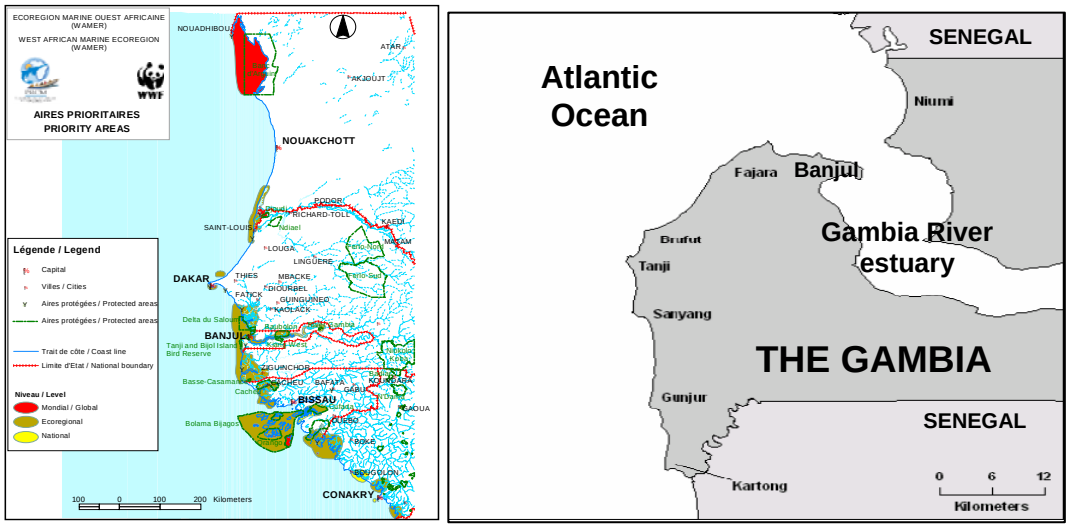


Figure 1. Areas of Biodiversity Significance in the WAMER and The Gambia River Estuary and Atlantic Coast

2. Accomplishments to Date

2.1 Administrative Start-up

A full time Project Manager was selected based on an extensive search process and personal interviews of finalist candidates in June and July 2009. The Project Manager, Mr. Ousman Drammeh, started employment in July. Drammeh is a former Director of DoFish in The Gambia and more recently has been a regional consultant to FAO and the African Development Bank. The Project has also secured office space in the office complex of GIFPZA House on Kairaba Avenue. This new WWF office is centrally located and within easy reach of Banjul and the coastal fishing villages. Office equipment and supplies, telephone and telefax lines, and internet connections are being installed with completion anticipated by late August/early September 2009. Tenders for internet connections at DoFish and Department of Parks and Wildlife Management (DPWM) have been received and will be evaluated shortly. Subcontracting arrangements between URI and WWF are in place, including wire transfer procedures for sending operational funds in-country. WWF has also hired a new Finance Officer for The Gambia Office. A memorandum of understanding (MOU) between the Ministry of Fisheries, Water Resources and National Assembly Matters, and WWF-WAMER for the implementation of the Project was finalized and signed in August. Among other things, the MOU will enable the Project to procure vehicles and motor bikes tax-free. Two field staffs are being recruited and are expected to start in October. One will be assigned to work directly with the oyster harvesters and one will be assigned to work with the sole fisheries.

During this start-up period, members of the CRC/URI team completed two trips to The Gambia and Senegal and were involved in interviewing candidates for the Project Manager position and in stakeholder consultations. The team also participated in briefings of the U.S. Embassy in The Gambia and the Senegal Ministry of Fisheries, and in the Project launch event. The CRC/URI team also oriented the senior management team in the WWF Gambia Office on USAID branding and marking policies and TraiNet requirements, and also engaged in joint work planning and detailed budgeting for the Project.

2.2 Project Visioning

A multipronged approach has been taken to developing a stakeholder-based Project vision and defining the key objectives to be achieved. This has included the following:

Inaugural Meeting of the Project Steering Committee. The inaugural meeting of the Project Steering Committee in The Gambia was held on June 17, 2009 at the Ministry of Fisheries, Water Resources and National Assembly Matters, and was chaired by the Permanent Secretary of the Ministry. The members/representatives of the Fisheries Advisory Committee attended the meeting. The Fisheries Advisory Committee was established under the Fisheries Act 2007 as an advisory body to the Minister on policy matters, management and development plans, and on the administration of the Fisheries Act. It is envisaged that the membership to the Project Steering Committee will be expanded to also include the Department of Parks and Wildlife Management,

Department of Forestry, and the Tourism Development Authority. Kathy Castro, Virginia Lee and Jim Tobey of CRC/URI were present at this inaugural meeting. The meeting chair made reference to the objectives for fisheries development in The Gambia, which the Project will need to address. These are food security, poverty reduction, and stakeholder involvement. Subsequent meetings of the Project Steering Committee will review and advise on the Project's annual workplans and progress.

National Stakeholders Workshop (June 22-23, 2009). The two-day workshop was held at the Kairaba Beach Hotel and was attended by representatives of artisanal fisheries operators of the Community Fisheries Centers (fishers including shrimpers, processors and traders), Fisheries Department staff, other Government officials, and local nongovernmental organizations (NGOs). Regional representation included USAID Senegal and the sister *Wula Nafaa* Project working in the Saloum and Casamance ecosystems. The workshop was officially opened by the Deputy Permanent Secretary, Ministry of Fisheries, Water Resources and National Assembly Matters on behalf of the Honorable Minister. He highlighted the importance of the fisheries sector to the economic and social development of The Gambia in terms of food security and improved nutritional standards, employment generation and poverty reduction, revenue and foreign exchange earnings. The Gambia government attaches high priority to the conservation and sustainable management and utilization of the fisheries resources and is deeply concerned about issues that may affect the continued availability of fisheries resources including: overfishing, illegal, unregulated and underreported (IUU) fishing, degradation of habitats and ecosystems. He lauded the USAID initiative and said the Project will enhance national efforts to achieve sustainable fisheries management. He made mention of the problems confronting sustainable management of transboundary resources and the urgent need to reorient policy towards ecosystem based management of fisheries resources that will require close collaboration/cooperation among and between countries in the region.

Several presentations were made about fisheries issues in the region and the efforts of on-going projects. Following these presentations, stakeholder working groups were asked to list and prioritize issues of greatest importance, and their vision for the future of fisheries in the region to which the *Ba Nafaa* could contribute. The working groups highlighted the following as being significant: depletion of commercial value fish species; destructive fishing gears, methods and techniques; high incidence of juvenile fish catch; high degree post harvest/production losses; destruction of habitats and the mangrove vegetation; difficulties in accessing finance; market access problems; and inadequate fish preservation and marketing facilities. As well, there is a lack of awareness-raising and sensitization programs; inadequate co-management and participatory decision-making; and a need for additional closed areas/seasons and improvements in monitoring, control and surveillance for effective enforcement.

Follow-up Consultations by the Project Manager. The Project Manager (PM) undertook field visits to the key coastal Community Fisheries Centers (CFCs) during the month of July. During these visits he engaged in informal discussions with the artisanal fisheries operators, including following up on the outcome(s) of the national stakeholder's workshop. The different operator groups highlighted the issues impacting positively/negatively on their respective activities, problems encountered and possible solutions. There is general consensus that fish is becoming scarcer and that certain fishing gears, methods and techniques are responsible for the current

state of affairs. In addition, fishermen were also able to identify the hotspots, spawning and nursery grounds of certain fish species (including rays and the green turtle)—for instance, from Denton Bridge point to Solifor Point (Tanji) onward to Howba (Sanyang point). In Bakau, some fishermen suggested that fishing be prohibited from the shoreline out to one nautical mile to protect juvenile fish, spawning and feeding areas. In Tanji, the fishermen suggested two nautical miles. These discussions continued in August and September in order to map out the hotspots, nursery and spawning grounds from Denton Bridge to Kartong, the last village before the border with Southern Senegal (Casamance). This will mean that hotspots for the entire southern coast of The Gambia will be mapped out, with nursery and spawning areas identified as additional inputs for subsequent planning of sustainable ecosystems-based fisheries management plans.

An important issue that emerged in both the national stakeholders workshop and the follow-up consultations by the PM, is that the fisherfolk communities do not have a clear understanding yet of the *Ba Nafaa* Project, the fisheries legislation (Act and Regulations) and the draft fisheries management plan for the sardinella, sole and shrimps. Additional awareness raising and sensitization activities are being implemented to increase stakeholders understanding and voice in implementation of the Project.

Informational Briefings with USAID/Senegal and Department of Fisheries Senegal and WWF WAMER Office in Senegal. Ousman Drammeh and Dr. Kathy Castro briefed Mamadou Goudaby, Head of the Artisanal Fisheries Division, in June on the Ba Nafaa Project. The Wula Nafaa project and USAID Senegal were similarly briefed through presentation and discussions at the Banjul Stakeholders workshop and again in Dakar during the regional fisheries workshop in August. The West Africa Trade Hub was also briefed on the Project during the August workshop and areas of coordination and cooperation among the three USAID projects were discussed (see description of coordination tasks under Year 1 Activities, Other). The US Embassy in The Gambia has also been briefed several times on the Project.

2.3 Project Launching Event

The official launching of the Project was held on August 18, 2009 and was attended by the Minster of Fisheries, Water Resources and National Assembly Matters, the Minister of Forestry and Environment, The Ambassador of the United States of America and Mr. Ibrahima Niamadio as the regional representative of the World Wide Fund West Africa Program. Additional government and fisherfolk stakeholders also participated in the launch ceremony, which included television and newspaper coverage.

2.4 Threats and Governance Assessment Reports

Threats and governance assessments have been drafted as part of the international visits of key technical support staff from URI. The assessment identifies key biodiversity assets at the regional and local scale and the main threats to these assets. The governance assessment provides a summary of The Gambia Fisheries Sector and institutional arrangements for its management.

Both of these reports are under review by the local team and will be completed in September 2009.

2.5 Environmental Review

The environmental review is being prepared in September based on the life-of-Project results expected and further identification of the types of activities that will be implemented to achieve those results.

3. Year One Activities

3.1 Introduction

The priorities for Year 1 will concentrate on the sole and oyster fisheries in The Gambia and regional exchanges with Senegal. The Project will only engage in a few limited activities this year in the shrimp fishery which is a bit more dispersed in terms of landings and more complicated in terms of the management issues. Additionally, the shrimp fishery recently suffered an economic collapse—not due to overfishing but due to the lack of buyers for export. Processors claim that operating costs, especially electricity rates, makes them uncompetitive with Asia shrimp in the European market.

While part of the original plan was to work with the sardinella fishery, which is part of the Gambia Fisheries Management Plan, this is being reconsidered. First, the stocks are shared from Guinea Bissau to Mauritania. The *Ba Nafaa* Project will not have the capacity to develop a comprehensive regional management plan at this scale. The Project may, however, be able to make a few inroads towards sustainability at the local scale—e.g., addressing bycatch issues and fish smoking impacts on the fuel wood supply and local forests. In addition, fishermen and DoFish recently raised concerns about marine catfish that aggregate at the entrance to the Gambia River before the rainy season, and then migrate inwards to spawn. This stock is being subjected to heavy fishing pressure as the gravid fish aggregate outside the mouth of the river. Fishermen have suggested a seasonal area closure during this vulnerable spawning aggregation period. The choice of additional emphasis and species focus other than sole and oysters will be discussed during the planned stock assessment workshop, and decisions deferred until there have been additional consultations regarding priorities.

3.2 Sole

Key Issues to Address

Total landings in The Gambia in 2006 were 1370MT—wedge sole 279MT, sand sole 186MT, and Senegalese sole 906MT. Burfut, Sanyang and Gunjur and Kartong, the four primary sole landing sites, were collectively responsible for approximately 50% of the total artisanal fisheries landings of sole along the Atlantic coast. In addition, a portion of the catch is taken in deeper waters by the industrial trawl fisheries that operate in Senegal and Gambian waters. None of this fish, however, is landed in The Gambia. DoFish estimates that the industrial fleets when in Gambian waters harvest 371 MT from The Gambia, (industrial fleet lands 27% of the total sole landings of the artisanal and industrial fleet combined).

The sole fishery already had a pre-audit conducted based on MSC (Marine Stewardship Council) criteria, so a clear road map of sustainability issues has already been formulated. In addition, sole is one of the key commercially important species and export earners, but is harvested primarily by artisanal fishermen. The DoFish has also drafted a management plan for sole, but there is a need for more participatory engagement with stakeholders in completing this plan. The majority of the catch is landed at only a few sites, making it relatively easy—as compared to other

fisheries that are much more geographically dispersed—to engage with fishermen in developing a management plan. Each of these major sole landing centers has established Community Fisheries Centers and management committees. While the management committees have previously dealt with issues pertaining to managing landing facilities, they also have the mandate to engage in resource management issues under the new fisheries law and regulations.

Under the 2008 Fisheries Act (Section 15), The Minister of Fisheries can establish Community Fisheries Centers (CFCs) for the purposes of community-based fisheries management, allocate fisheries management areas for which the CFCs are responsible, and prescribe rights and responsibilities of CFCs with respect to the Special Fisheries Management Areas. Community Fisheries Centers and their respective management committees have already been established at the key sole landing sites of Gunjur, Sanyang and Brufut, among other landing sites. As part of the formulation of a management plan for sole two things must happen. First, the fishing areas for sole needs to be designated as a Special Management Area. Second, a Sole Management Committee must be formed and include representatives from all the main landing sites as well as from the marketing and processing industry. Under the Act, the Minister (through the DoFish) can also determine total allowable catch for any stock of fish, and can allocate shares of the total allowable catch and designate these as property rights. Under the Fisheries Regulations of 2008, all fishing vessels must be registered and obtain fishing licenses as well. Therefore, the legal framework for effective management of the fishery, including managed access and/or allocation of property rights, is in place for this fishery. Also, the sole fishery is believed to have few bycatch issues. This combination of factors leaves the Project team optimistic that rapid progress is possible.

The *Ba Nafaa* goal in terms of the sole fishery is to assist the fishing industry associations—The Gambia Artisanal Fisheries Development Agency (GAMFIDA) and the National Association of Artisanal Fisheries Operators (NAAFO)—and the DoFish to meet the sustainability criteria required to be eligible for MSC certification. The fisheries associations and DoFish will be responsible to arrange and pay for an audit and required fees if they choose to be MSC-certified and use the MSC eco-label. If the eco-label is desired by the industry, the Project team can assist, if requested, in establishing the financial management mechanisms to pay the eco-labeling fees. The Project will also coordinate with WATH (West Africa Trade Hub) to assist in identifying markets willing to pay a price premium for the eco-labeled product. Regardless of whether or not the eco-label is pursued, *Ba Nafaa* will focus on the development and implementation of a sustainable fisheries co-management plan.

The MSC audit report identified very specific areas for improvement in order to meet sustainability criteria. Some of the key performance conditions and recommendations are summarized as follows:

- ***Harvest Strategy:*** There is a concern that the current system does not include an adequate mechanism for monitoring and control of the status of the stock, nor does it define the points at which management action will be taken, or indeed precisely what form such action would take. This should be written as part of a future management plan and evaluated with respect to likely success in achieving management objectives. Possible controls could include, but

not be limited to, agreed effort controls, an export quota for processors within the MSC certification, a minimum size and closed areas and seasons.

- ***Stock***: In order for fisheries managers to make informed and timely management decisions, it is necessary to improve the understanding of stock status and to identify reference points to inform the harvest control rule. A reasonable amount of information is available to enable appropriate analysis in the form of landings and effort data (from DoFish) and landings by species and size (from processing plants). This assessment indicated that there was sufficient likelihood that the stock was not overfished.

- ***Retained Species***: Landings data provided by DoFish did not enable retained species to be determined by specific gear type.

- ***ETP monitoring***: Improved integration between the various NGOs collecting information to provide a clearer picture of fishery/ETP (Endangered, Threatened and Protected species) interactions. Information must be recorded in gear-specific way.

- ***Ecosystem***: Relatively few ecosystem interactions of concern in the fishery. However, there is no place for disposal of waste at landing sites and at sea. A plan that could sensitize fishermen and development of a code of conduct would be helpful.

- ***Subsidies***: The report stated that subsidies are available to the artisanal fisheries sector. However, it is the understanding of the *Ba Nafaa* team that this is inaccurate. For instance, fuel mix subsidies were removed many years ago (in 1994), unlike Senegal where such subsidies remain. The plan also needs to ensure that *if* there are subsidies, they do not lead to increased fishing effort.

- ***Research***: It is clear that a useful amount of research is undertaken by DoFish. It is less clear how research is commissioned in a strategic fashion. The development of a research plan that informs the objectives of the fisheries policy would enable issue- and policy-relevant research to be undertaken when funds are available.

Audit Recommendations:

- ***More transparent decision- making***. At the time of the assessment, a regulation on minimum size was being passed. However, it is unclear what the decision-making process was and what information was used to make the rule.

- ***Monitoring, Control and Surveillance***. While recognizing that initiatives such as co-management should improve compliance, this has not yet been demonstrated. Landings need to be more consistently monitored.

In addition to the pre-audit findings, there is also a need for more information with which to ascertain whether the sole fishery is impacting on other marine species of importance. In particular, many dead marine turtles wash up on the beaches near some of the landing centers for sole. It is not clear what is causing these mortalities, but it is possible that certain fishing gears

could be part of the problem. The MSC pre-audit report suggests that the nets used for sole fishing are unlikely to be causing significant mortalities of marine turtles, but no specific studies have been done to confirm this.

Processing plants are not operating at full capacity for several reasons. One reason is their lack of enough product volume for export and market channels. Another is the high price of electricity, which hampers their ability to be competitive. While the latter factor impacts the sole fishery, it affects many other export commodities as well. For instance, shrimp is no longer exported as The Gambia cost structure for processing plants (electricity) makes it unprofitable.

Project Actions in Year 1

The Program will assist DoFish in implementing the recommendations in the sole pre-audit report. The geographic focal area will be the primary sole landing sites of Burfut, Sanyang, Gunjur and Kartong. While the emphasis will be on management of the artisanal fleet (the assumption is that this is much more important than the industrial fleet as all artisanal-caught sole goes to local Gambia processors), the industrial fleet may eventually be limited to an annual total allowable catch (TAC) and other measures as well. This would need to be linked to the on-board observers assigned to each industrial vessel. While there seems to be a well developed export market for sole to the EU, the Project will also look at the possibility of expanding potential market outlets (e.g., the US). However, most of the activity will initially concentrate on putting in place a sustainable fishery plan.

Undertake a training workshop on stock assessment for DoFish with a key focus on the sole fishery as the primary example and understanding the context of a data-deficient fishery. Participants will include on-board observers, representatives of the fisheries management committees at the fisheries centers, GAMFIDA, NAAFO, field enumerators and data processors/analysts of the statistics unit of DoFish. This workshop will be conducted by DoFish statistics unit of the research division with assistance from URI. Using the workshop as a starting point, we will assist DoFish and other stakeholders to develop an action plan that moves the fishery towards sustainability and which addresses the areas for improvement identified in the MSC audit. This will include a review of the draft fishery management plan for sole and identify revisions needed based on the MSC pre-audit report

Workshops for developing a sole management plan. Start implementation of an action plan to be developed in the stock assessment workshop that includes engagement of all stakeholders, including GAMFIDA, NAAFO, DoFish, the key fisheries centers where sole is landed, and the processing plants, to develop a management plan that addresses the MSC audit concerns. The management committees at the fishery centers have previously focused on managing the landing sites and marketing of fish, ice plants, etc. For this activity we will start to work through them to build their capacity to also engage in decisions concerning resource management, starting with developing a sole co-management plan.

As noted above and in the MSC pre-audit report, the sole fishery is likely not yet overexploited, so putting in place local capacity for effective management will establish one of the key enabling conditions for sustaining this fishery and preventing overfishing. As it may not yet be overfished,

if licensing can restrict further entry into the fishery, no dislocation of current fishermen will be needed. The management plan for sole will lay the groundwork for setting goals and measures to be put in place for a sustainable fishery. In subsequent years, the Project will assist in ensuring the implementation of the plan is moving towards the biological reference points established. The first year will be devoted to developing a sole co-management plan.

Meetings on management planning will be held at each landing site. There will also be coordination meetings between the landing centers as it is essential that regulations be consistent across the communities in order to manage the entire fishery.

Sole bycatch assessment. Plan and start a participatory bycatch assessment of the sole fishery with DoFish and the Community Fisheries Centers. This may also be incorporated as some of the standard information monitoring as part of the sole stock assessment, and built into management plan actions. However, a key issue to investigate is whether there are any bycatch issues with a particular concern for marine turtles and sharks, and the impacts/extent of impacts that the gears used in sole fishing may have on these threatened and endangered species. Although bycatch is considered low in this fishery, there is a need to confirm this by conducting an actual survey by gear type over a one-year fishing cycle.

Sole stock assessment. Relatively little is known about the status of the Gambian sole stock. Interviews with fishermen suggest that fish are becoming harder to catch, that they are fishing further from shore and that the average size has decreased slightly. However, this data is meaningless because there is no information about changes in effort, or effort distribution, and the size of the fish caught may have changed due to changes in mesh size. The MSC team performed a rapid stock assessment using available information to determine that the stock of red sole is not overfished. However, they had several recommendations for improving data collection and analysis. This includes the recommendation to collect data from multiple sources that can then be combined and form the basis of a co-management approach. Data needs and sources noted in the report include:

- Obtain grade quantities from the processing plants as a long term relative index.
- Ensure that representative samples of landings include species, length, weight, sex and maturity as well as scale and otolith collection (can also be done at processing plant).
- Develop separate growth models for red and black sole (collect otoliths and tag-recapture program)—currently, only data on red sole growth is available.
- Develop a research survey that will track relative abundance over a time series.
- Develop a tagging program—this would aid in determining stock areas, spawning behavior, fishing mortality, growth and abundance.
- Determine gill net selectivity.

The Project will work with DoFish and stakeholders of the sole fishery to develop a plan for collecting the needed data as listed above. The Project will then assist DoFish with collecting these data in a collaborative fashion. The first step will be to form a co-management team with representatives from the DoFish, processing plants, fishermen's organizations and the women buyers/processors. Once the amount of data that must be collected is ascertained, a monitoring program will be put into place that enables each group to participate.

Vessel registration/licensing. Vessel registration and licensing is a necessary step in understanding the total effort in the sole fishery and ultimately to achieve satisfactory scores for MSC certification. The Project will assist DoFish with registration efforts in the key ports for sole fishing and other landing sites along the south coast. This is necessary in order to keep track of all fishing vessel arrivals and exits as well as to establish a baseline for an eventual policy to limit entry. Vessel registration and licensing is required under the new Fisheries Act and associated regulations. However, since Project resources are not sufficient to conduct vessel licensing and registration throughout the country, *Ba Nafaa* efforts will initially concentrate on the south coast and the estuarine landing sites of Albreda, Bintang and Tendaba, where the majority of catch is landed. In subsequent years, the Project will assist in registration of canoes in other areas of the country. Once registration is complete, this will provide a basis for restricting additional access to the fishery (limiting entry), which will be one measure necessary to prevent overfishing. Ultimately, licensing can also pave the way to consider possible establishment of catch shares in this fishery. If appropriate information management systems are put in place, the fact that sole is only landed in a few centers means that a share system may be feasible. While this may not be part of the initial fisheries management plan for sole, the feasibility of a share system and discussions with fishermen concerning interest and willingness to experiment with such a system, will be activities in subsequent years of the Project—once other basic fisheries management measures are in place.

Coordinate with West Africa Trade Hub on exploring new markets for sole, shrimp or other possible export products (e.g. blue crab is found in the Gambia River and *bolongs*/water channels in the mangrove systems). However, neither the stock size nor the cost structures for profitable export are yet known.

Assess more carefully the Senegalese trawler/seine fishery. What are they catching? Where are they landing it? What are they marketing and what is the pricing? Can some of this catch can be directed more at local processors (especially the sole)? A key question is whether the industrial fishery can land sole in The Gambia—as required by law but currently not physically possible—once the new dock facility is completed. Related to this is the issue of IUU (Illegal, Unregulated and Under-reported) fishing, the extent of IUU fishing for sole (as well as for shrimp) also needs to be assessed.

Value chain assessment. A participatory value chain analysis provides a clear picture of the structure and functioning of the sole fishery. It will help to identify and understand both the major opportunities for upgrading and the driving constraints to market growth of the sector. All of the functions of the industry and their connections will be analyzed, including production, assembling at the beach, wholesale and retail trading, and processing for export and domestic. The enabling environment, inter-firm cooperation, supporting markets, and firm-level upgrading are reviewed to understand the opportunities and constraints for enhanced market value. Findings and recommendations from the value chain assessment will be vetted with the industry groups and other stakeholders and serve as the basis for selecting key actions.

Study tour to Kayar Senegal. Individuals from selected landing sites along the Atlantic South Coast will visit the landing site of Kayar Senegal. The fishermen in this location have

developed innovative and sophisticated means of both managing access (daily boat catch quotas) and gear, and establishing community-based marine protected areas (MPAs). Sharing lessons from this location is expected to help facilitate discussions in The Gambia about no-take reserves linked to hotspot mapping mentioned (below in the bio-diversity section), as well as on issues in the sole and sardinella fisheries. The Project team sees potential opportunities to introduce the idea of catch quotas to local fishermen in these two fisheries as a means to: 1) maintaining higher prices by reducing periods of over-harvesting, and 2) reducing post harvest losses that result when less than the full allotment of available product is sold and much of it spoils or rots on the beach. Eventually, such introductory quotas may be transformed into annual catch shares and even possibly transferrable quotas. However, the Project can only move on this *if and when* fishermen demonstrate an interest and a willingness to consider such management measures. The task in this first year will be to start introducing these ideas and educating all stakeholders on the possibilities and preconditions needed to make quotas work effectively.

Early actions at the landing sites. The Project has set aside a small amount of funds to address community-driven concerns within the initial targeted fishing areas. Selection of early actions will be based on several criteria: the selected actions have been proposed though a participatory process of prioritization by the communities themselves, they are relatively inexpensive, they can be implemented quickly, and they show tangible benefits for the community. The purpose of these early actions is to build community support for larger and longer term actions concerning sustainable fisheries measures, as well as build experience and capabilities of the community in participatory planning and decision-making that can also be applied to the fisheries management processes. It also builds trust and support between the community and the Project. Initial consultations with DoFish and NAAFO suggest that water and sanitation needs are likely high priorities (e.g., water supply and public latrine facilities at landing sites). Addressing such needs would lead to improved hygiene and improved quality of the fish supplies that enter the domestic and export markets. It would also be an important step in extending HACCP (Hazard Analysis and Critical Control Point) concerns beyond just the export processing plants and into the landing centers as well. In fact, there are initial indications that water and sanitation issues are much greater than the Project could possibly support only through early actions. Therefore, opportunities for USAID to support an add-on through Water Earmark funds will be investigated once preliminary needs assessments are complete.

Activity Implementation Schedule

Activity	FY 2010				Local Implement. Partners	WWF Person	CRC Point of Contact
	Q1	Q2	Q3	Q4			
Coordinate w/ West Africa Trade Hub					WWF, HUB	Ousman	Jim
Value chain assessment					WWF, HUB	Ousman	Jim
Workshops for sole management plan					DoF	Ousman	Kathy
Training workshop on stock assessment					DoF	Ousman	Kathy
Assess Senegalese trawler/seine fishery					DoF, Senegal DoF	Ousman	Kathy
Sole bycatch assessment					DoF	Ousman	Kathy
Sole stock assessment					DoF	Ousman	Kathy
Vessel registration/licensing					DoF	Ousman	Brian
Study tour to Kayar					WWF Senegal	Paul	Na

Early actions at the landing sites					WWF	Ousman	Na

Outputs

- 25 persons trained
- Action plan developed for achieving sustainable sole fisheries
- 500 persons/stakeholders engaged in sole management plan development and adoption
- Sole management plan drafted and adopted by DoFish and stakeholders
- Report produced on the issues of sole fishing gear bycatch
- Report produced on value chain for sole
- One small-scale facility improved, location to be determined during the community participation processes

Key Results

No.	Indicator	Target
2	# receiving assistance packages	1 facility improved and benefitting all sole fishermen
4	# of agencies or management bodies strengthened or created	4 (3 centers & DoF)
5	# of personnel trained in resources management	200
6	Improvements on a governance scorecard	# is increasing
8	# individuals participating in regional meetings and/or exchanges	25 (Kayar)
9	# of regional workshops/meetings on policy reform	
10	No of reports documenting transboundary issues	1 (electric pricing)
12	Hectares in areas under improved management: • Hectares covered by fisheries management plans	20,000 hectares
13	# of technological innovations adopted: • Sole nets set at 8cm mesh size	1 mesh size
16	# of vessels registered/licensed	475 fishers (# of unregistered boats estimated at 50)
17	Hectares under effective mgt • Sole 28.5-25 tot length	Baseline established

3.3 Oysters

Key issues to Address

The oyster fishery is somewhat unique as it is dominated by women gatherers. Women also dominate the processing and marketing of oysters. There is very little information on this fishery and official fisheries survey data do not even include it in the annual landing statistics. There is very little management of the growing areas other than a traditional seasonal closure during the rainy season as it is believed eating oysters during this season is harmful even though most oysters are shucked and boiled before sale. There have been no studies on whether there are

public health risks from contamination of the harvesting areas (e.g. contamination from *E. coli* bacteria in the water where the oysters are grown). Local knowledge from the gatherers suggests that size is declining and abundance less, especially in the Banjul area. Meanwhile, there is limited knowledge about the biology of the local oyster in terms of growth rates and spawning periods (other than linked to the rainy season).

From a marketing perspective, there is no adequate physical market point for the oyster gatherers so almost all of it is sold in the open along the road leaving Banjul. In addition, there is one small area of the central market used as a point of sale. Neither the size nor the sanitation conditions of either of these locations is adequate. Currently, both the markets and the products are limited as compared, for instance, to the industry in the Saloum Delta.

The oyster fishery offers similar opportunities as does the sole fishery for making rapid progress on establishing sustainable management plans. On the South Bank, in the vicinity of the capital of Banjul, nine communities make up the majority of harvesters in this sector with harvesting concentrated in the Tanbi Wetlands—a Ramsar site. They already have been organized into a duly registered producer association called TRY, which has a clear vision for many of the issues that need to be addressed. Most of these involve improved processing, quality and hygiene as well as plans to develop supplemental livelihoods for the women harvesters during the traditional closed season. The women harvesters have also proposed limiting access by establishing territorial use rights regimes (collective). This group and area offer opportunities to demonstrate ecosystem based management on a small scale as management of the adjacent mangroves can be incorporated into the oyster fishery management. This will take additional coordination with the Department of Parks and Wildlife Management.

The women oyster harvesters' producer association does not constitute a Community Fisheries Center as is found at the coastal landing sites. However, under the Fisheries Act of 2008, they can be organized into a community-based management committee responsible for management of the oyster fishery in the Tanbi wetlands, which can also be designated as a special management area for the purpose of oyster fisheries management. The Fisheries Act also allows for the allocation of property rights (Section 11) and catch share allocations.

Project Actions in Year 1

A key strategy for the oyster fishery will be to team up with the local foundation called TRY, and build on what this organization is already doing with the oyster gatherers. Priority focal areas in Year 1 will be the Kamaloh and Jeshwang areas around Banjul where TRY is working. The Project will take a comprehensive approach that should be able to quickly demonstrate an ecosystems-based approach at a small scale and include ecological sustainability as well as improved income generating opportunities for women oyster harvesters.

Conduct participatory rapid appraisals (PRAs) to compile local knowledge of the biology of the species, harvesting practices, local spawning period, and growth—to determine the best harvesting size and if/when closed season should be to put in place, including technically sound management measures. This will include community mapping of the current harvesting/collecting areas of each community and identifying spatial overlaps that could

potentially create conflicts concerning territorial use rights. Assess whether there are any defacto management measures in place as well. Identify both depleted areas as well as areas where resources are still in good condition. Assess the extent to which women still migrate seasonally from Casamance to sell oysters in Banjul. Also start to compile existing secondary information and scientific information on the local species.

Meetings and workshops to establish special area community management plans for oysters. Start to discuss the concept of community-based (CB) no-take zones, closed seasons and size limits, and exclusive use rights as have already been proposed by some of the oyster communities. Explore the possibility of rotating annual closures of some areas to build up stock size (abundance and individual sizes). These meetings will start the planning process to put a management regime in place for the Banjul area. The goal will be to establish a management plan for the nine communities in the Banjul area (for the entire Tanbi wetland complex) as a pilot, and then expand this example to other locations such as the north bank in subsequent years. Since mangrove wood is also used for boiling and processing oysters, the management plan will work to include sustainable harvesting of mangrove fuel wood through community-based mangrove use rights schemes. This will require coordination between DoFish, Forestry, and Parks and Wildlife Management. The planning process will start with individual community meetings and also include consolidation workshops where representatives from each community can share ideas and develop a consensus as to measures to put in place. This is a similar process to the strategy for stakeholder engagement in the sole fishery.

Conduct a water quality study with DoFish of all the main oyster harvesting areas in the Gambia River to determine whether or not growing areas are contaminated. This is a necessary step in considering the possibilities for marketing fresh raw oysters to restaurants or exporting them. The water quality study will help assess the feasibility of developing a shellfish sanitation management plan with DoFish in subsequent years, which is required for growing/harvested areas that export to the US and the EU, and recommended if the goal is to establish local markets for raw oysters targeted at tourists. As DoFish already has the laboratory and staff capabilities for this work, it will conduct this assessment. The Project will provide technical backstopping and supervision, while the Ministry of Health will be consulted and participate as needed/desired.

Feasibility study on improved landing and marketing facilities and outlets. Conduct a feasibility study on developing better marketing strategies and plans. This will need to include a value chain analysis of current markets and potential expanded markets. For example, while Gambians seem to prefer plain boiled oysters, the dried and smoked products may have outlets in Senegal.

Construct improved small scale processing/marketing facilities. Based on the feasibility study, provide oyster gatherers with improved processing center(s) in the Banjul area that provide for cleaner and more sanitary processing and sales location(s).

Study tour to the Saloum and local extension on oyster aquaculture. The study tour will focus on the development of aquaculture as one means to take some of the pressure off wild harvests. If there are individual women interested in aquaculture, the Project will then assist them by providing direct extension support for pilot farms.

Training activities to build resource management capacity and entrepreneurial capacity of oyster harvesters. Conduct enterprise development training and develop micro-credit schemes for women oyster harvesters. Assess literacy rates and provide literacy training if needed for improved entrepreneurship and microcredit schemes.

Value Chain in cooperation with Wula Nafaa. The Wula Nafaa project will be conducting a value chain analysis of the oyster and cockle fisheries in the Saloum Delta. The *Ba Nafaa* Project will coordinate with them and provide additional financial resources to the effort in order to document the value chain in The Gambia as well.

Participatory stock assessment. A baseline of current stocks in the vicinity of the Banjul area and in the Tanbi wetlands will be conduced. It will include samples in high harvest pressure areas and low harvest pressure areas. This will involve participatory monitoring between DoFish and the oyster harvesters and use simple techniques—e.g., random sampling using standard sized quadrats to measure abundance (individuals/sq. m.) and length frequency data (mean length of individuals in various area).

Peace Corps Placement: The Project has had discussions with US Peace Corps about a possible Peace Corps Volunteer (PCV) placement with WWF for the oyster activities. A job description will be prepared and oyster harvesting communities contacted about interest in a volunteer placement as a community must provide housing for a PCV.

Activity Implementation Schedule

Activity	FY 2010				Local Implement. Partners	WWF Person	CRC Point of Contact
	Q1	Q2	Q3	Q4			
Conduct PRAs	■				TRY	Mat	-
Conduct study tour to the Saloum	■				TRY	Mat	-
Conduct value chain analysis in cooperation with Wula Nafaa	■				WWF, WN	Ousman	Jim
Conduct participatory stock assessment	■				DoF, TRY	Ousman	Kathy
Conduct a water quality study		■			DoF	Ousman	Virginia
Conduct feasibility study on landing/marketing facilities		■	■		WWF	Ousman	Virginia
Hold meetings for community management plans		■	■	■	DoF, TRY	Ousman	Virginia
Design and conduct training activities of oyster harvesters		■	■	■	TRY	Ousman	Virginia
Place a PCV		■	■	■	Peace Corps	Mat	Brian
Construct small scale process/market facilities.				■	WWF	Ousman	-

Outputs

- 450 oyster harvesters participating in oyster management plan development and adoption
- 1 market/landing facility improved

- 15 individuals trained in resource monitoring
- Oyster co-management plan drafted and adopted by DoFish and stakeholders
- 50 people trained in entrepreneurship, oyster aquaculture, other livelihood activities

Key Results

No.	Indicator	Target
1	# of businesses and persons economically benefiting	50
2	# receiving assistance packages	50
3	# of people with improved access to loan capital	Year 2
4	# of agencies or mgt bodies strengthened or created	One oyster management committee created
5	# of personnel trained in resources mgt	15
6	Improvements on a governance scorecard	yes
7	# of harvesters with use rights	450
8	# of individuals participating in regional meetings and/or exchanges	25 (Saloum exchange)
12	# hectares in areas under improved management: • Oyster mangrove area as community-based management zones	200 hectares
13	Number of technological innovations adopted • Oysters, 7cm length	1
17	Hectares under effective management • Oyster 7cm minimum size, increased density in no-take areas	200 hectares (biological baseline conducted this year to track change)

3.4 Shrimp

Key issues to Address

Artisanal shrimp fishermen operate in the estuary and tributaries of the Gambia River and target mainly the pink shrimp species, *Penaeus notalis*. There are over 225 shrimp fishermen that are widely dispersed at multiple landing sites and communities along the river. Two gear types are used and there seems to be some debate and conflicts between the stow net (stationary gear) and drift net (mobile gear) fishers. Some of the industrial trawl vessels also target this species as well. While there is a small domestic market, this shrimp has also an important export commodity. Recently, fishermen have been complaining about a lack of buyers for the shrimp they are catching and export processers have also stated that they are no longer exporting this species as the world market price is too low to make it profitable at this time.

Shrimp is covered under the draft artisanal fisheries management plan. One of the key issues is small mesh size of nets and related bycatch issues, as well as gear conflicts. The conclusion of the CECAF (Committee for Eastern Central Atlantic Fishery) Working Group is that pink shrimps are overexploited. However, given the current market situation it is unclear whether that is currently the case. This widespread distribution of fishers will also make management of this

species a bit more difficult and complicated. Given the complications of addressing management and market issues surrounding this fishery, the Project will defer any substantive work here until Year 2. However, Year 1 will be used to start compiling some preliminary information that can help to more clearly understand the current issues. The Project will partner with the Wula Nafaa Project, which will be carrying out a value chain assessment of the shrimp fishery in the Saloum and Casamance River. The *Ba Nafaa* Project will fund and coordinate an extension of this work for the Gambia River. This will help in better understanding some of the current problems of export marketing and possible opportunities for alternative markets. In this regard, the Project will work with WATH to identify potential new market channels and determine why a similar market situation is not occurring in Senegal.

Activity Implementation Schedule

Activity	FY 2010				Local Implement. Partners	WWF Person	CRC Point of Contact
	Q1	Q2	Q3	Q4			
Value chain assessment					WWF, WN	Ousman	Jim
Coordinate with the Hub on shrimp market research					WWF, HUB	Ousman	Jim

Outputs

- Report on issues in the shrimp value chain

Key Results

No.	Indicator	Target
10	# of reports documenting transboundary issues	1

3.5 Sardinella

Key issues to Address

Sardinella is the other main fishery included in The Gambia artisanal fisheries management plan. The main landing site is at Tanji and consists of two main species that range from Morocco to Guinea Bissau. These fish are important for local food consumption and in the West African regional export trade. CECAF has recommended that harvests should not exceed 200,000MT annually and effort should be reduced by 50 percent. The Gambia lands approximately 5,000MT annually so comprises only a small fraction of the total regional harvest. Management of this fishery will take regional cooperation well beyond the borders of The Gambia and Senegal. In The Gambia, sardinella is landed almost exclusively by the artisanal fisheries.

The *Ba Nafaa* Project will concentrate on several local management issues while supporting efforts of the sub-regional commission to harmonize policies and measures to reduce overall effort. In The Gambia, the local issues include a need to register and license artisanal fishing vessels, capture of juvenile fish, and the extensive use of wood in the smoking and drying process. Almost 50 percent of the bycatch is estimated to consist of juveniles or sub-adults. Wood used for smoking and drying the fish, which is then transported inland and to other countries, is reportedly becoming scare and more expensive.

Project Actions in Year 1

The Project will support DoFish in the establishment of a participatory action research effort with fishermen to assess the bycatch issue. Licensing will also be addressed for this fishery as previously described under the sole fishery. Meetings will be held to capture local knowledge as to whether bycatch levels varies seasonally and spatially, and as to the species composition including possible bycatch of endangered and threatened species. As the participatory action research takes place, the Project will elicit ideas and recommendations from fishers as to how the bycatch problem could be reduced—what measures they think would be feasible and practical, and that they would be wiling to implement. The Project will also conduct outreach campaigns on the impact of the capture of juveniles on the fishery and livelihoods of fishermen

Activity Implementation Schedule

Activity	FY 2010				Local Implement. Partners	WWF Person	CRC Point of Contact
	Q1	Q2	Q3	Q4			
Conduct by-catch assessment					DoF	Ousman	Kathy
Hold meetings to address bycatch issues					DoF	Ousman	Na

Outputs

- Report on bycatch issues in the sardinella fishery
- 400 persons participating in outreach events on by-catch issues

Key Results

No.	Indicator	Target
5	# of personnel trained in resources management	50 participants in bycatch survey

3.6 Export and Trade Promotion

Key issues to Address

Fish export competitiveness. There are a number of issues that broadly fall under a heading of fish export competitiveness in The Gambia and that transcend all of the export fisheries including sole, shrimp, and a few others. One of these issues, which has been raised by the industrial fish processors, is the concern over the current pricing of shrimp on the world market—an issue that cannot be controlled locally. Thus, a comprehensive management strategy must address how to sustain local economic benefits for the fishermen, marketers and exporters in this fishery. While it will be important to put in place sustainability measures for the key export fisheries (i.e., sole and shrimp) to prevent biological overfishing, stakeholders will only be interested in such measures if they also lead to sustained economic benefits, which now seem under serious threat from world competition.

Since the price of fish commodities is determined on the world market, the only factor that can be locally controlled is the cost of capture, processing and marketing of these export products. That said, the high price of electricity—the highest cost factor in fish processing (for maintaining

freezing facilities, etc.)—makes this difficult. Processers are asking for reduced electricity rates to make them more internationally competitive. Processers in The Gambia also face higher costs of fuel, ice and packaging materials as compared with Senegal, making it difficult to maintain profitability and compete against other exporters including but not limited to Senegal processers. Another issue is supply. Exporters cannot get enough big, higher-value shrimp (tiger prawns) so it may take up to two months before they have enough supply to fill a container. Until that time, the product must be kept frozen for long periods—further increasing electricity costs before the product can be exported. Even for the smaller pink shrimp, it may take up to three weeks to fill a container. Another cost complication is the dispersed nature of the artisanal fishery. Transporting ice and product from many isolated locations is expensive. Other challenges facing processers are: 1) a lack of working capital and financing for export; 2) physical plants with old technology that is less energy efficient than more modern processers elsewhere; and 3) underutilized capacity—i.e., not enough product is landed in The Gambia. This last problem *may* be solved when the new fishing port facilities in Banjul are completed in 2010.

Project Actions in Year 1

In this first year of the Project, a thorough assessment of the issues described above will be conducted. It will document in more detail the relative costs in The Gambia *vis-a-vis* other exporters in the region. The goal is to prepare a policy brief that can clearly document the issues and provide a number of policy alternatives for consideration. Options, for instance, could be to charge processers a lower electricity rate to help make them more competitive. Other options could include allowing fresh iced shrimp to be shipped directly to Senegal for export processing (current law requires fish to be processed locally first before being trans-shipped). From the fishery management side, it may be possible to work with fishers to consider harvest measures such as larger mesh sizes and closed seasons to produce a bigger and more valuable shrimp and to provide periods of higher volume of landings that allow containers to be filled more quickly. From a regional perspective, removal of Senegalese subsidies (such as the premix fuel subsidy) may also make The Gambia more regionally competitive. An additional alternative for processers includes looking at other potential export commodities and products. For instance, one exporter is servicing the niche Senegalese markets in the US and UK, concentrating on smoked fish such as catfish, barracuda, bonga, small barracuda, cuttlefish and shrimp.

Activity Implementation Schedule

Activity	FY 2010				Local Implement. Partners	WWF Person	CRC Point of Contact
	Q1	Q2	Q3	Q4			
Conduct analysis of cost competitiveness of the export processing sector					WWF	Ousman	Jim

Outputs

Report on competitiveness issues for fish export processers in The Gambia

Key Results

No.	Indicator	Target
1	# of businesses and persons economically benefiting	None in Year 1, some

		anticipated in subsequent years
2	# of individuals receiving assistance packages	None in Year 1, some anticipated in subsequent years
10	# of reports documenting transboundary issues	1

3.7 Biodiversity Conservation

"Hotspot" mapping. Some of the initial fishing community consultation processes conducted as part of start-up activities included collection of local knowledge on "hotspot" areas in the Atlantic coastal nearshore marine zones. This work has already identified critical locations of turtle nesting and feeding locations and has identified areas important in the critical life stages of commercially important fishes. For instance, just prior to the start of the rainy season, marine catfish are found in large quantities near channel buoy number 5 just outside the mouth of The Gambia River. They congregate in this spot until the rainy season begins and then move upriver to spawn. Large numbers of gravid catfish are caught at this time. Many but not all fishermen are aware of the danger of harvesting large numbers of gravid catfish before they have the ability to spawn and many have already suggested a seasonal area closure to protect them during this vulnerable period. This activity will be continued so that a full picture of the entire Atlantic coast is complete. This task will be integrated with fishermen meetings concerning bycatch assessments and issues and with activities to develop the sole management plan. This work will complement WWF activities in mapping and monitoring marine turtle nesting and dolphin feeding locations, which is part of the match support being provided to the Project.

This work will also help contribute important information related to planning of the proposed Numi Marine Park and associated fishing no-take areas, and also provide a basis for consideration of other potential no-take fishing areas (either seasonal or permanent). The Numi Marine Park is important given its proximity to the Northern Senegal border and ecological linkages with the Delta de Saloum Reserve on the other side of the border in Senegal.

Activity Implementation Schedule

Activity	FY 2010				Local Implement. Partners	WWF Person	CRC Point of Contact
	Q1	Q2	Q3	Q4			
Hotspot mapping along South Coast					WWF	Mat	Na
Turtle monitoring					WWF	Mat	Na
Dolphin monitoring					WWF	Mat	Na

Outputs

- Report on hotspots along the Atlantic south coast of The Gambia
- Reports on Dolphin and Turtle monitoring (associated with issues of transboundary management)

Key Results

- None anticipated this year

3.8 Capacity Building, Communications, Outreach and Coordination

Capacity Building for DoFish and DoE. Building a critical mass of mid-level professionals with key government institutions is an essential task for building sustainability to implement fisheries and MPA plans. This will be achieved in several ways. First, senior Project staff and counterparts in DoFish and one of the National Fisheries Associations (either NAAFO or GAMFIDA) and DoE will attend two intensive international training courses implemented at URI.

Leadership for Fisheries Management is a three week intensive course for professionals working on issues concerning fisheries resources and fishing communities. It is offered by CRC in conjunction with the Fisheries Institute at URI, and with support of other partners of the USAID funded Alliance for Sustainable Fisheries and Aquaculture. The Institute provides professionals with a unique opportunity to understand the science of fisheries biology, stock assessment and population dynamics; how to develop management objectives, and apply basic and innovative management tools for these objectives; and how to develop and implement an effective co-management strategy. The Institute is designed to encourage peers from around the world to share experiences and learn from one another. The program is unique in offering technical content, professional skills and post-course coaching.

The Coastal Resources Center's *Institute in Coastal Management* is a three week long, intensive training course for a diverse range of individuals who share the common goal of trying to improve the management of the world's coasts. Participants include coastal management practitioners, policymakers, government officials, scientists, community organizers, members of NGOs, and university faculty or students. The course is a survey of integrated coastal planning issues and approaches. The course focuses on the planning and implementation challenges associated with place-based coastal management. Examples include bays, islands and watersheds. The program provides mid-career professionals with a unique opportunity to understand emerging issues; learn about good practices; and gain practical skills to help them design, implement, and evaluate integrated coastal management programs. The format provides ample opportunities to share experiences and reflect on future challenges with peers from around the world. An emphasis is placed on effective coastal planning and implementation, building partnerships, governance analysis, and program assessment. The upcoming program will also provide a particular emphasis on global climate change adaptation strategies for coastal regions.

Another strategy of the *Ba Nafaa* Project is to provide degree training for mid-career 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. This year two individuals from DoFish will be selected to continue degree training to a four year level (i.e., the Project will provide support for an additional two years of education). The costs to do this through universities in Ghana or Nigerian universities is very cost effective. These individuals will begin their continued education with the September 2010 semester. Since the lack of adequate local degree programs is a problem, the

Project will also engage in meetings and workshops with the University of The Gambia to assess the feasibility of, and the interest and demand for creating local fisheries degree-level programs either as part of existing programs or as an independent degree offering.

Coordination with other regional fisheries projects. Previous sections of this workplan have identified a number of activities that will be coordinated with the Senegal-based Wula Nafaa Program as well as with the West Africa Trade Hub. This includes cooperation on value chain analysis of shrimp, oyster, and sole, and cooperation on oyster aquaculture training for Gambian oyster harvesters. Contacts have also been established with the Sub-Regional Fisheries Commission and other regional projects that have mandates to address harmonization of policies and legislation between countries in the region. WWF Senegal staffs are involved in some of these activities and will provide excellent liaison with *Ba Nafaa*. Two issues of particular regional concern that the Project will be working on this year are artisanal vessel licensing and export competitiveness in the Gambia *vis-a-vis* neighboring countries The Project is minimizing engagement in regional policy harmonization in this first year until there is a more solid footing on-the-ground in The Gambia and a better sense of priorities *vis-a-vis* the mandates of these other projects. As proposed during the recent USAID regional fisheries workshop, *Ba Nafaa* will participate in an annual learning/sharing event scheduled in August prior to each year's annual work planning period and will volunteer to act as the host for the 2010 event.

Communications and outreach. The Project will produce several outreach and communications products in Year 1. This will include a Project brief, prepared in English and French. Other potential outreach materials, currently in the concept stage, include a poster on overfishing and the need for sector reform and/or a poster or fact sheets on selected fishery bycatch issues in relation to threats to marine biodiversity. Where appropriate, materials will be bilingual (English-French) or produced in local dialects (e.g. Wollof, Mandinka) depending on intended audiences.

Activity Implementation Schedule

Activity	FY 2010				Local Implement. Partners	WWF Person	CRC Point of Contact
	Q1	Q2	Q3	Q4			
Select candidates for continued education toward diploma					DoFRish	Ousman	Brian/ Kathy
Select candidates for Fisheries Institute training					DoFish	Ousman	Brian/ Kathy
Select candidates for Coastal Management Institute training					DoE	Mat	Kim
Design and deliver Fisheries Institute training					DoFish	Ousman	Brian/ Kathy
Design & deliver Coastal Management Institute training					DoE	Mat	Kim
Participants begin Ghana/Nigeria Bachelors degree training					DoF	Ousman	Kim
Coordination with Wula Nafaa						Mat	
Communications and Outreach					DoFish/CFCs	Mat/ Ousman	

Outputs

- 2 persons from DoFish trained regionally at Diploma or Bachelors level
- 5 persons trained internationally in fisheries and coastal management
- 5 persons sharing experience with related fisheries projects through annual coordination workshop event
- 2 outreach documents produced

Key Results

No.	Indicator	Target
5	# of personnel trained in resources mgt	6
8	# on individuals participating in regional meetings and/or exchanges	5
9	# of regional workshops/meetings on policy reform	1

4. Project Management

4.1 Strategic Partners

Since this Project is an Associate Award under the Leader with Associates Cooperative Agreement for *Sustainable Coastal Communities and Ecosystems* (SUCCESS) Program, the Coastal Resources Center (CRC) at the University of Rhode Island (URI) is the lead institution responsible for overall Project management and implementation including programmatic and financial reporting to the USAID/West Africa Regional Office. The World Wide Fund (WWF) West Africa regional office and its program located in Dakar, Senegal with a field office in The Gambia is the primary regional and in-country implementation partner.

Several other organizations play critical partnership roles in implementation or as primary clients who benefit from the Project (see Figure 2). The Gambia Department of Fisheries (DoFish) is the primary national institution slated for institutional strengthening as well as the Department of Parks and Wildlife Management. Also targeted are the National Association of Artisanal Fisheries Organization, and the Fisheries Management Committees at the Community Fisheries Centers. Each will contribute resources (e.g. staff time, equipment, etc.) to implementing a unified vision for the Project. Additional partners with substantive roles include the USAID West Africa Regional Office and USAID Senegal. At the regional scale, the USAID Wula Nafaa II Project and other ongoing donor regional initiatives also play a role. The Project also coordinates with other U.S. government-funded initiatives in the region as appropriate.

4.2 Operational Staffing and Lines of Authority

CRC and the WWF West Africa regional office are the primary Project management and implementation partners. CRC will supervise WWF in their role in the Project. The in-country Project Manager (PM) is a full time position contracted by and housed in the WWF field office in The Gambia. He is the primary liaison with the USAID/West Africa Regional Office in Accra, Ghana. The PM develops detailed terms of reference, contracts and supervises local consultants and other local partners contracted to provide Project services. All full time local staffs are contracted by WWF. Both WWF and CRC provide short-term foreign technical assistance and consultants as needed. The PM directs and supervises in-country field staff and activities, and is responsible for day-to-day field operations in The Gambia.

The WWF Country Executive Director in The Gambia serves as a senior advisor and provides operational supervision of the PM (Ousman Drammeh). The Director of International Programs at CRC/URI also serves as a senior advisor and is the URI staff with overall responsibility and oversight of the Project. Since URI is the legally entity in charge of the Project, Crawford is also the URI staff responsible to USAID. Extension staffs are supervised by the PM and serve as the lead organizers, facilitators and liaisons with community-level government, civil society organizations and local NGOs. The PM will also act as the main liaison with strategic partners in The Gambia at the national level and in the region, especially with the DoFish in The Gambia

and Senegal, and with key private sector stakeholder groups. Figure 3 depicts the internal operational structure of the Program.

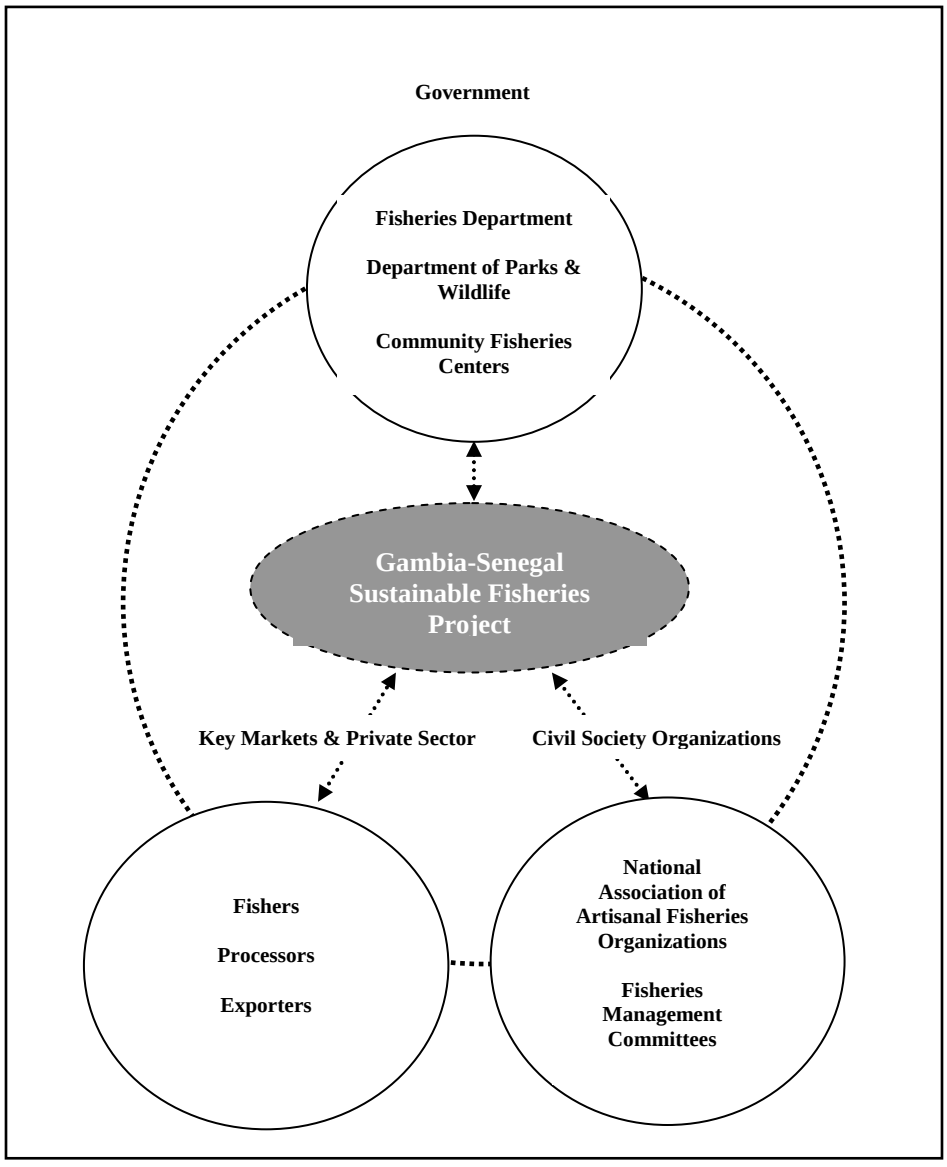


Figure 2. The Gambia Project Key Partners

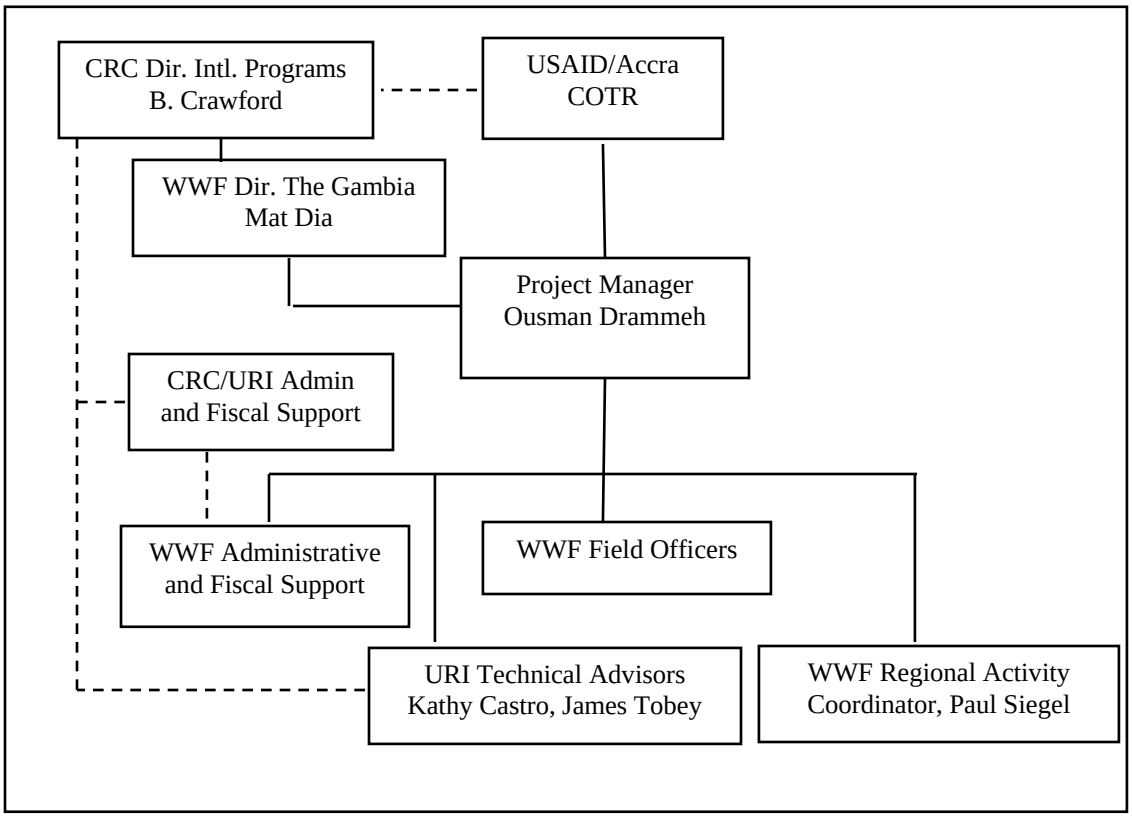


Figure 3. Operational Structure of the Program

Staff responsibilities for key management activities are depicted in the table below.

Program Areas	Local Implementing Partners	WWF Person	CRC Point of Contact
Project Management			
PMP reporting	WWF	Ousman	Kim
TraiNet	WWF	Ousman	Kim
Quarterly reporting	WWF	Ousman	Brian
Annual work planning	WWF	Ousman	Brian

4.3 Performance Management and Reporting

The goal of performance management and evaluation is to encourage adaptive management and learning within the Project and to report results to USAID/West Africa. This requires collecting timely information using indicators selected to provide meaningful information on progress towards stated objectives. In Year 1, the Project developed a Performance Management Plan (PMP), a summary of which is presented in Appendix 1. The PMP includes key results, refined performance targets disaggregated by year, specific monitoring parameters, and source(s) of data for each indicator. Time-bound targets were refined through the work planning process in consultation with local partners and beneficiaries. These targets will be reviewed annually and adjusted as necessary based on Project progress, experience and lessons learned.

Quarterly performance monitoring reports document progress on achieving results. These reports include: 1) a comparison of actual accomplishments against the targets established for the period; 2) explanation of quantifiable outputs generated by Project activities; 3) reasons why goals were or were not met. The data reported is supported by evidence collected and filed by the PM, or his designee, who will serve as the in-country PMP coordinator. The CRC provides quality control measures to ensure the PMP system is properly implemented.

The *Ba Nafaa* Project invests resources in monitoring and reporting to foster learning and adaptive management. Learning and sharing occurs across implementation sites and with other projects and programs. An internal self- assessment is conducted annually in conjunction with the work-planning meeting.

Regular Project management and annual reporting activities are carried out by the CRC and WWF senior management team and coordinated by the PM. Main tasks and reporting requirements include:

- Preparation and submission of quarterly progress reports to USAID/West Africa CTO (Cognizant Technical Officer) and DoFish
- Timely and regular input of data into the USAID TrainNet system for all Project training activities
- Annual self-assessment of progress and annual workplan preparation and submission by CRC/WWF for approval by USAID
- Collection, analysis and reporting of data to USAID on Project indicators and targets for Project performance monitoring, submitted quarterly as part of the standard quarterly progress report
- Monthly accounting reports sent from WWF to CRC
- Expenditure reports submitted to USAID from URI

The schedule for producing the above listed tasks and reports are provided in the table below.

Management and Administration Activity Implementation Schedule

Activity	2010												Responsible Person
	O	N	D	J	F	M	A	M	J	J	A	S	
Routine reporting													
Monthly activity updates to CRC	■	■	■	■	■	■	■	■	■	■	■	■	OD
Monthly key staff (WWF-CRC) Skype conference calls	■	■	■	■	■	■	■	■	■	■	■	■	BC
Quarterly PMP reporting	■			■			■			■			OD
Draft quarterly report to URI for review	■			■			■			■			OD
Review comments from CRC	■			■			■			■			BC
Quarterly reports to USAID	■			■			■			■			OD
Input PMP training data into the USAID TraiNet	■	■	■	■	■	■	■	■	■	■	■	■	KK
Regional USAID fishery projects meeting										■	■		
Stakeholder progress reporting and annual planning											■		OD
Workplan to USAID											■		BC
Workplan approval by USAID												■	RR
Financial Management													
Monthly account reports from WWF to CRC	■	■	■	■	■	■	■	■	■	■	■	■	MG
Expenditure reports to USAID from CRC/URI			■			■			■			■	KK

BC-Brian Crawford (CRC), KK-Kim Kaine (CRC)
OD - Ousman Drammeh (WWF), MG - Mamadou Gaye (WWF)
RR - Ron Ruybal (USAID)

4.5 International Travel Schedule

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.

1st Quarter

- Crawford and Ousman (dates TBD w/ Cisco) to Ghana to present and discuss workplan
- Tobey (late October/early November). Governance score card on sole and oyster fishery. Start value chain work for sole. Coordinate value chain work with Wula Nafaa for oyster and shrimp. Contract a local consultant for the value chain of sole. Start work on assessment of expert processor cost competiveness.

2nd Quarter

- Lee (January). Follow-up on oyster component, design of water quality study.
- Castro (January). Assist with bycatch assessment survey design, management planning for sole.

- Castro and De Alteris (March). Fish stock assessment training with special emphasis on sole. Castro to assist in stock assessment training, review of bycatch assessment surveys and management planning.

Third Quarter

- Ousman and Mat and counterparts(May-June) to URI. Attend Sustainable Fisheries Institute and Coastal Management Institute.
- Tobey (June). Follow–up and complete work on value chain assessments and exporter cost competiveness survey.

Fourth Quarter

- Crawford. Project review and FY 2011 work planning

4.6 Environmental Monitoring and Compliance

Based on the initial environmental evaluation (IEE) under preparation for the Project, monitoring schemes will be put in place to ensure no significant environmental impacts are occurring for those actions or projects which are identified as possibly causing minor environmental impacts. In Year 1, almost all of the activities fall under categorical exclusions (e.g. trainings, meetings, bycatch assessments, environmental surveys). There are no plans at this time to implement gear exchanges, which in some instances can have an impact on endangered species of marine mammals or marine turtles depending on the type of gear exchanged and the type of new gear provided. Several activities are anticipated to require some monitoring and may require minor mitigation measures to avoid any significant impacts. These are any early actions taken at some of the coastal landing sites—e.g., possible construction of water and sanitation systems or other minor infrastructure improvements, and/or construction of small scale marketing facilities or landing facilities for oyster harvesters. Possible mitigation measures include actions to reduce erosion or sedimentation into adjacent water bodies during and after construction, to ensure proper siting of wells or bore holes dug, and to ensure there is water quality testing at the well sites. The specific actions will depend on results of the participatory appraisals, the needs identified by the communities, and the results of the feasibility studies.

4.7 Branding

The *Ba Nafaa* Project provides information through many existing channels. This includes through presentations at meetings, conferences, outreach sessions and other forums as well as through 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 Planned Communication Items Affected by USAID Marking/Branding Regulations (ADS 320/AAPD 05-11)

Item	***Type of USAID marking***	***Marking Code***	***Locations affected/ Explanation for any 'U'***
Press materials to announce Project progress and success stories	USAID logo (co-branded as appropriate)	M	Primarily a Gambian audience
Project brief / fact sheet	USAID logo (co-branded as appropriate)	M	Primarily a Gambian audience
PowerPoint presentations at meetings, workshops and trainings	USAID logo (co-branded as appropriate)	M	Primarily a Gambian audience
Brochures/posters on environmental issues	USAID logo (cobranded where/as appropriate)	M	Primarily a Gambian audience
Landing or marketing site facility improvements	USAID logo / stickers (cobranded where/as appropriate)	M	Primarily a Gambian audience
Project Office/room within WWF/Gambia office in Banjul	Project sign in English and local dialect name as well *(Ba Nafaa*) but no USAID identity used	M	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

5. Budget

The Year 1 summary budget of USAID funds is shown below by: (1) major accounting (object class) line items, and (2) estimates of funds allocated by major activity category. URI and WWF cost share is not included.

BY OBJECT CLASS CATEGORY	URI	WWF	Total
Personnel	114,753	106,700	221,453
Fringe	37,803		37,803
Consultants		20,000	20,000
Other Direct Costs	47,966	126,296	174,262
Travel	64,961	53,336	118,297
Indirect Costs	69,026	38,292	107,317
TOTAL	**334,510**	**344,624**	**679,133**

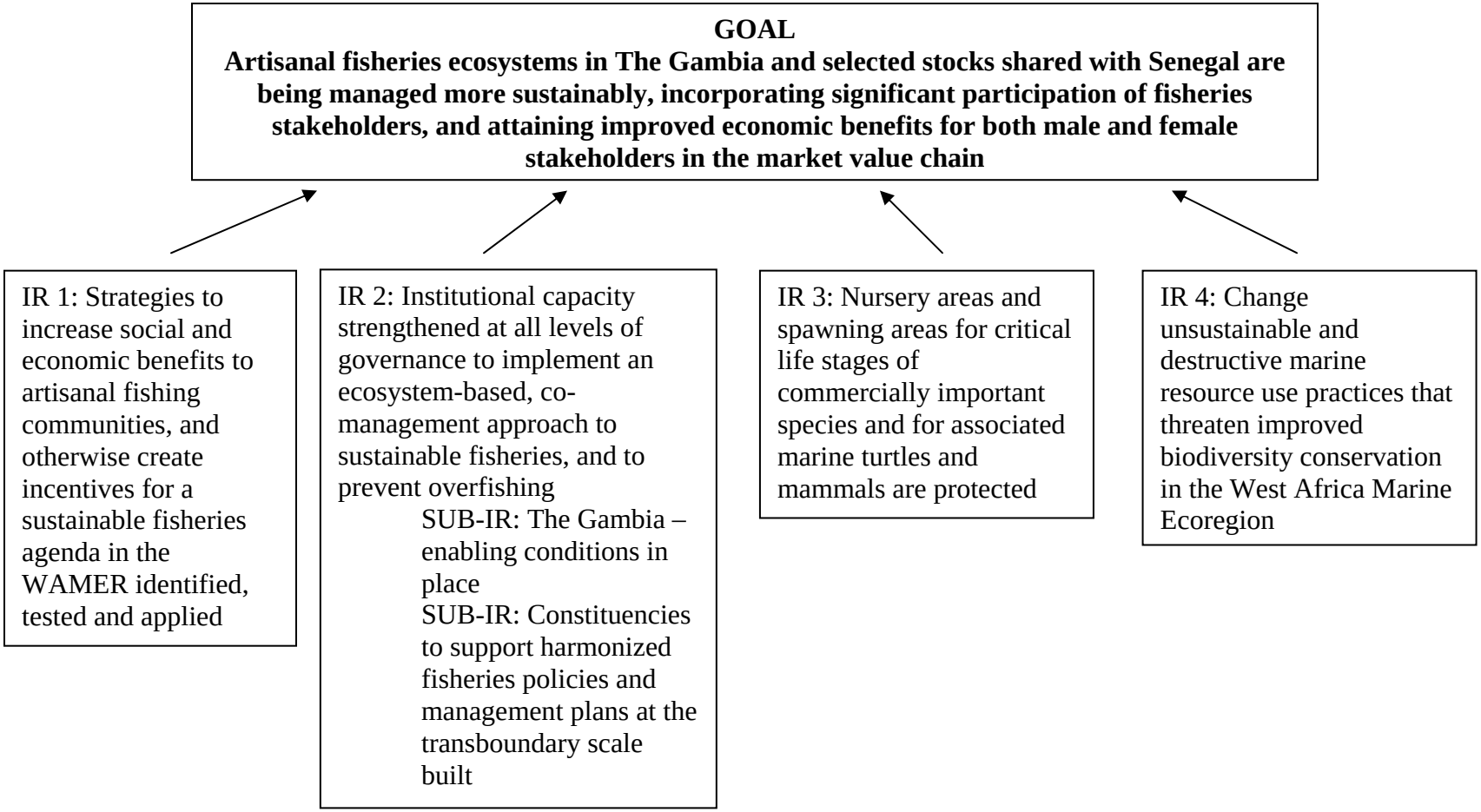
BY ACTIVITY	URI	WWF	Total
Sole	110,110	112,336	222,445
Oysters	40,822	89,978	130,800
Biodiversity	64,140	14,625	78,765
Shrimp & sardinella		9,000	9,000
Capacity building	67,894	44,920	112,814
Project management	51,543	73,765	125,308
TOTAL	**334,510**	**344,624**	**679,133**

The following table shows anticipated obligations, estimated expenditures by fiscal year period in relation to Agreement start and end dates. An initial obligation has already been received in FY 09 of $500,000. Carry over of unexpended FY obligations into subsequent years are also shown.

PIPELINE/ PROJECTED BUDGET	May 09-Sept 09 (start-up)	Oct 09-Sept10	Oct 10-Sept11	Oct 11-Sept 12	Oct 12 - Sept 13	Oct 13-Apr 14 (close-out)	Total
Anticipated Obligations	500,000	500,000	500,000	500,000	500,000		2,500,000
Projected Expenses and Budget	200,000	679,133	500,000	500,000	500,000	120,867	2,500,000
Estimated Carry Over	300,000	120,867	120,867	120,867	120,867	0	0

Appendix A. Results Framework & Life-of-Project (LOP) Targets

The Results Framework below is organized by Project Goal and IR. Each IR has one or more indicators and LoP Targets that are show in the table on the following pages. Targets will be reviewed and adjusted annually.



	Indicator	LOP Targets
IR 1		
1	Number of businesses economically benefiting	50 businesses (gender disaggregated)
2	No persons receiving economic assistance packages (assets, grants, training, etc.) [1]	200 persons
3	Number of people with improved access to loan capital (e.g. benefiting from new or strengthened savings & credit associations)	100 people w/ access to capital (gender disaggregated)
IR 2		
4	Number of govt. agencies or management bodies strengthened or created	4 committees (Gunjur, Burfurt, Sanyang,Tanji),
5	Number of government personnel, community leaders and private sector stakeholders trained in resources mgt	200 people trained (gender disaggregated)
6	Improvements on a governance scorecard covering, goals, constituencies, commitment and capacity dimensions, including measures that legislation and regulations are being implemented and complied with, and budgetary investments by government in fisheries management[2]	Qualitative increases on score card criteria for Gambia EB-fisheries mgt
7	Number of fishermen and women with collective or individual use rights (collective quotas or territorial use rights, saleable licenses)	600 people w/ use rights (gender disaggregated)
8	Number of stakeholders participating in regional meetings and/or exchange visits	100 persons (gender disaggregated)

[1] Business income is difficult and costly to measure so a qualitative definition of benefiting will be used. Benefiting defined as reduced costs or increased prices (e.g. reduced fuel wood used in processing, price premium for MSC certified sole), or facility infrastructure improvements, or improved product quality, packaging or labeling, or training and/or certification in HACCP.

[2] Scorecard based on governance indicators in UNEP/GPA Ecosystem Based Management Guide

	Indicator	LOP Targets
9	Number of workshops/meetings on policy reform for the artisanal fisheries sector held between Senegal and the Gambia	3 events
10	Number of reports documenting transboundary issues and alternative solutions	4 reports
11	Number of policy changes made by national governments to harmonize policies	3 national policy changes • Sole foreign boats limited and improved info systems • Sardinella local and foreign boats w/ limited licenses • TBD – Casamance oyster harvesters to Gambia(?)
IR 3 & 4		
12	Hectares in areas of biological significance[3] under improved management: • Hectares covered by the fisheries management plan defined as the range of fishing fleets targeting these species	FMP Areas: • Sole -10km seaward X 20 km coastline (20,000 hct) • Sardinella – same as for sole • Shrimp – Gambia estuary (10,000 hct)
12	Hectares in areas of biological significance under improved management: • Oyster fishery estuarine and mangrove areas designated and allocated as community managed zones, including no-take areas	• Community managed oyster zones • Tanbi wetlands 200 hct • Numi 300 hct
12	Hectares in areas of biological significance under improved management: • Area in hectares of any officially designated MPA (Marine Park or fishery no-take reserve)	• Numi National Park MPA – 30 sq. km (3,000 hct) • Numi no-take area 3X10 km -30sq km (3,000 hct)

[3] The entire area from the Saloum Delta in Senegal, The Gambia and Casamase rivers, and adjacent marine coastline has been identified as an area of regional bio-diversity significance in the West Africa Marine EcoRegion (WAMER)

IR 4		
13	• Number of technological innovations (gear or fisher behaviors) developed and/or effort restrictions that reduces bycatch.[4] <u>Sardinella</u> • TBD <u>Shrimp</u> • Fishermen not to exceed 400 from current baseline of 225 • Cod end mesh from 18mm present to 25mm <u>Sole</u> • Mesh size of 80 mm <u>Oysters</u> • TBD (i.e. minimum size limit of 7cm., use rights established)	At least three innovations and/or 3 effort restrictions (e.g. min. mesh size, size limit)
14	Number of fishing units that adopt by-catch reduction devices	20% of vessels for shrimp and sardinella fisheries
15	Number of processers that reduce fuel wood consumption	At least two reduce wood consumption by at least 20%
16	Number of vessels registered/licensed[5]	100 coastal vessels targeting sardinella and sole

[4] Indicators here are behavioral/regulatory target reference points (TRPs) that are put in place to achieve Biological TRPs.

[5] Vessel registration/ licensing is an important precursor of managed access/limited access. However as vessels are unregistered, exact numbers are estimates only.

GOAL		
17	Hectares under effective mgt (Key biological reference points in the FMPs for sardinella, shrimp, sole, oyster)[6] <u>Sardinella</u> Reduction in bycatch from below current 50% (BRP is 5%) <u>Shrimp</u> Carapace length not less than 3.5 mm or 100 indiv/kg from current baseline Bycatch reference points TBD <u>Sole</u> Avg. total length not less than 25 cm from baseline of 28.5 cm. <u>Oysters</u> Minimum size of 7cm., increasing density inside no-take zones	This will be a subset of the LOP Targets for the previous indicator No targets set but progress towards BRPs will be tracked.

[6] Criteria for effective management will be evidence of progress towards Biological Reference Points (BRPs) established in the fisheries management plans and to be collected by The Gambia Dept of Fisheries and Fisheries Management Committees.

The following table shows the indicators and targets for the BaNafaa Project disaggregated by Year.

N0	Indicator	FY 10 Target	FY 10 Result	FY 11 Target	FY 11 Result	FY 12 Target	FY 12 Result	FY 13 Target	FY 13 Result	FY 14 Target	FY 14 Result	LOP Target	Cumulative Results to Date
1	Number of businesses economically benefiting	50		25		25		25				125	
2	No persons receiving econ. assistance packages (grants, training, etc.)	50		50		50		50		20		220	
3	Number of people with improved access to loan capital			25		30		30		30		115	
4	Number of govt. agencies or mgt. bodies strengthened or created	3		2		1						8	
5	Number of stakeholders trained in resources mgt	60		40		50		50				200	
6	Improvements on a governance scorecard	Oysters improving				Sole improving		Sardinella improving		Srimp improving		improving	
7	Number of fishermen w/ use rights (collective quotas/territorial use rights, saleable license)	450		100				30		20		600	
8	Number participating in regional meetings and/or exchange visits	55		30		25		20				130	

N0	Indicator	FY 10 Target	FY 10 Result	FY 11 Target	FY 11 Result	FY 12 Target	FY 12 Result	FY 13 Target	FY 13 Result	FY 14 Target	FY 14 Result	LOP Target	Cumulative Results to Date
9	Number of workshops/meetings on policy reform between Senegal and The Gambia	1		1		2		1		1		6	
10	Number of reports documenting transboundary issues and solutions	1		1		1		1				4	
11	Number of policy changes made by national govts to harmonize policies					1		1		1		3	
12	Hectares of biol significance under improved mgt: • fisheries mgt plan	20,000 (sole)						10,000 (shrimp)				30,000	
12	Hectares of biol significance under improved mgt: • Oyster CB-mgt zones	200				200				100		500	
12	Hectares of biol significance under improved mgt: • MPAs or fishery no-take reserves					3000				3000		6,000	
13	Number of tech innovations and/or effort restrictions that reduces bycatch.			1		1		1				3	

N0	Indicator	FY 10 Target	FY 10 Result	FY 11 Target	FY 11 Result	FY 12 Target	FY 12 Result	FY 13 Target	FY 13 Result	FY 14 Target	FY 14 Result	LOP Target	Cumulative Results to Date
14	Number of fishing units that adopt bycatch reduction technologies			10%		15%				20%		20%	
15	Number of processers that reduce fuel wood consumption			1				1				2	
16	Number of vessels registered/licensed	50		30		20						100	
17	Hectares under effective mgt (progress towards BRPs) for sole					Sole BRP progress						No target but tracked	
17	Hectares under effective mgt for oyster					Oyster BRP progress						No target but tracked	
17	Hectares under effective mgt for sardinella							Sardinella BRP progress				No target but tracked	
17	Hectares under effective mgt for shrimp									Shrimp BRP progress		No target but tracked	