

An Overview of Marine Fisheries in The Gambia and Preliminary Governance Baseline

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Gambia-Senegal Sustainable Fisheries Program (Ba Nafaa)



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Citation: James Tobey, Kathy Castro, Virginia Lee, Ousman Drammeh, Mat Dia Ibrahima, Brian Crawford, Tanvi Vaidyanathan, 2009, An Overview of Marine Fisheries in the Gambia and preliminary Governance Baseline, Coastal Resources Center, University of Rhode Island. pp.26.

Disclaimer: This report was made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of the authors and do not necessarily reflect the views of USAID or the United States Government. Cooperative agreement # 624-A-00-09-00033-00.

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ABBREVIATIONS AND ACRONYMS

ADB	African Development Bank
AFDP	Artisanal Fisheries Development Project
BADEA	Arab Bank for Economic Development
CCLME	Canary Current Large Marine Ecosystem
CFC	Community Fisheries Center
CMC	Central Management Committee
DOF	Department of Fisheries
FAO	United Nations Food and Agriculture Organization
GEF	Global Environment Facility
LME	Large Marine Ecosystem
NAAFO	National Association of Artisanal Fisheries Operators
GAMFIDA	Gambia Fisheries Development Association
NEA	National Environment Agency
DoF	Department of Fisheries
SUME	Sahelian Upwelling Marine Ecoregion
TURF	Territorial User Rights Fisheries

1. Introduction

This baseline assessment of the fisheries sector and governance in The Gambia was prepared by the USAID Gambia-Senegal Sustainable Fisheries Project (the “Ba Nafaa” project). Ba Nafaa is a 5-year initiative, launched in June 2009. The assessment was carried out to provide an initial overview of the fisheries sector and to identify strengths, weaknesses and opportunities in sustainable fisheries management.

The assessment is based on a desk-top review of existing literature, expert consultations in the Gambia and Senegal, a two day stakeholder workshop, and meeting of the National Fisheries Advisory Committee. A list of individuals consulted is included in Appendix 1 of this report.

2. Political and Socio-Economic Context

The Gambia is the smallest country in continental Africa, situated in West Africa along the Gambia River, completely surrounded by Senegal except for a 60 km border on the Atlantic Ocean (see Figure 1). The Gambia has a population of 1.7 million, of which an estimated 400,000 are Senegalese (World Bank, 2007). Another half million Gambians reside abroad, many of them in Senegal. The Gambia’s unusual geographic situation makes cooperation with Senegal imperative. The two countries have much in common in terms of culture, peoples, economic structures and even language (such as “Wollof”).

Even more than for most African countries, The Gambia’s situation as a very small English-speaking enclave within francophone Senegal reflects the accidents of colonial history. The British took control of a sliver of territory running along the Gambia River at the end of the 19th century. The British colonialists understood the benefits of the strategic location of The Gambia as a potential gateway to West Africa. For decades, The Gambia has served as a regional trading center, using the river as a transportation link to the interior. Relatively open trade policies and limited administrative barriers reinforced The Gambia’s position as a trading center over time. This position has now changed due to a combination of erratic policies in The Gambia, tensions with Senegal, and reduced trade barriers and improved trade facilitation in neighboring countries as the latter seek a larger share of regional trade. The river transportation system up and down the Gambia River generated many population centers along the river. This system ended two decades ago following the sinking of the only passenger boat and people have moved along road routes instead of along the river.

For three decades following independence from the UK in 1965, the Gambia was led by President Dawda Jawara. A military coup by Yahya Jammeh in 1994, together with the devaluation of the CFA franc in neighboring francophone countries that same year, led to a dramatic downturn in the economy. Subsequent constitutional and presidential elections have restored political stability, and economic growth has resumed. President Jammeh and the Alliance for Patriotic Reorientation and Construction (APRC) have remained in power. President Jammeh was re-elected in September 2006 by a large margin.

The country has made considerable progress in restoring its image of peace and stability following the 1994 coup, but concerns about governance remain. The Gambia’s suspension from the United States Millennium Challenge Account (MCA) on account of alleged human rights abuses, political repression, suppression of the freedom of press and worsening corruption, sends

a negative signal to investors. The Gambia's score on Transparency International's Corruption Perception Index in 2006 is a low 2.5 out of 10, a ranking of 121st out of 163 countries. There is a frequent reshuffling of high-level officials in government departments that hampers the effectiveness of policy implementation.

Figure 1: Map of The Gambia



The Gambia has an overall poverty rate estimated at 58 percent (in 2003). Rural and urban poverty rates are similar, except in Banjul where the rate is much lower at 10.6 percent (World Bank, 2007). Table 1 compares selected economic and social indicators in The Gambia to those of a few other small coastal countries in West Africa.

Table 1. Development Indicators for The Gambia and other West African Countries

	Gambia	Senegal	Ghana	Togo	Benin
Per Capita GDP at PPP	\$1,300	\$1,600	\$1,500	\$900	\$1,500
Male Life Expectancy (years)	53.43	57.12	58.98	56.56	57.83
Female Life Expectancy (years)	57	61	61	61	60
Male Adult Literacy (%)	47.8%	51.1%	66.4%	75.4%	47.9%
Female Adult Literacy (%)	32.8%	29.2%	49.8%	46.9%	23.3%
Inflation Rate (CPI, %)	6%	6.6%	16.4%	9.8%	5.2%
Real GDP Growth Rate	5.5%	4.7%	6.3%	0.8%	4.8%
Foreign Aid, (% of GNI)	16	13.9	15.4	3.0	9.3

Source: CIA Factbook and World Bank/World Development Indicators

The Gambia has a liberal, market-based economy characterized by traditional subsistence agriculture, a historic reliance on groundnuts (peanuts) for export earnings, a re-export trade built up around its ocean port, and a significant tourism industry. Agriculture accounts for roughly 30% of gross domestic product (GDP) and employs about 70% of the labor force.

The fishing sector accounts for 4% of GDP, which is large compared to most other countries. This figure understates the importance of the sector for food security and livelihoods (US Dept of State, 2009). Fish is the main source of animal protein for the average Gambian family and fish and fish products account for approximately 15 per cent of merchandise export earnings (ENDA, 2007).

3. The Gambian Fisheries Sector

The territorial sea of the Gambia extends to 12 nautical miles with an Exclusive Economic Zone (EEZ) extending to 200 nautical miles. The seas off Gambia are located where two major oceanic currents converge along the coast of West Africa. One is the highly productive upwelling zone of the Canary Current Large Marine Ecosystem (CCLME). Cold and nutrient rich water flows southward starting from the seas off Mauritania and Senegal, attaining maximum effect on the Senegambia plateau in March/April. The other is the eastward-flowing warm Guinea Current. The effects of these currents together with the trade winds which blow dominantly from the Sahara Desert westerly out over the Atlantic create intermittent upwelling along the coast of The Gambia. These upwellings, combined with the outflow of the Gambia River provide the nutrients that fuel a bountiful marine ecosystem.

There are two types of fisheries in the Gambia: artisanal and industrial. There are three fishery administrative areas: Atlantic/Marine Coast Stratum, Lower River Stratum and, Upper River Stratum. The Upper and Lower River Stratums are further divided into North and South Banks. The percentage of total artisanal fishery landings in the five stratums in 2007 are shown in Table 2.

Table 2. Distribution of Total Artisanal Landings by Stratum

Stratum	Percentage of Total Landings
Lower River Sough Bank	8.9%
Upper River South Bank	0.6%
Lower River North Bank	1.8%
Upper River North Bank	10.6%
Atlantic Coast	78.1%

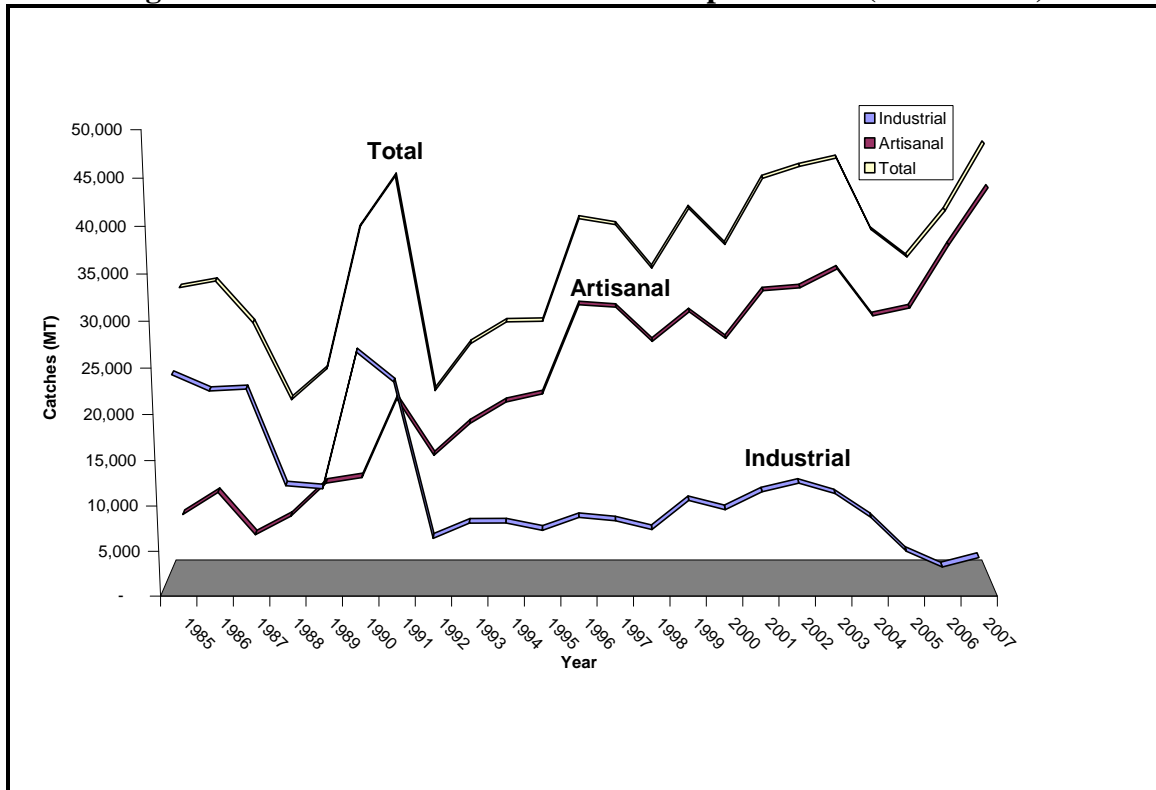
Source: Gambia DOF, 2007

The total fish landed from both the artisanal and industrial sub-sectors were estimated at nearly 40,000 tons in 2006 (FAO, 2007) and 47,000 tons in 2007 (Gambia DOF, 2007). Out of this, the artisanal fishery contributed approximately 37,000 tonnes (93 %) with about 3,000 tonnes (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 (FAO, 2007).

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 have caused high levels of exploitation of high value fish, crustaceans and cephalopods. Fueling growth of the artisanal fishery sub-sector has been population growth, a high level of unemployment particularly among youth, and migration and new entrance into the fisheries sector as agriculture continues to decline. Figure 2 shows the surge in growth of fish landings in the artisanal fishery in the 1980's up to 2007, and the decline in the industrial fishery.

Figure 2. Artisanal and industrial fisheries production (1985 – 2007)



Source: Gambia DOF, 2007, p. 16

The Gambia does not have a research vessel and the last survey of the country's demersal fish stocks was in 1986 but reports of dwindling catch indicate that high valued demersal species are under threat from high levels of exploitation. Fish production in the industrial sub-sector is recorded by the Fisheries Observer Programme (each vessels carries an observer). Annual industrial production has been declining in recent years. (FAO, 2007). Regular assessment carried out by the Demersal Working Group of the FAO's Committee for Eastern Central Africa Fisheries (CECAF) also indicates that the major fish demersal fish stocks are either fully or over exploited thus implying a need to reduce the fishing effort being exerted on these stocks by both industrial and artisanal operators. (Table 3).

Each year a surveys of small pelagic fish resources is conducted with the research vessel R/V Fridjtof Nansen by scientists from the Institute of Marine Research, Norway, in collaboration with the FAO Working Group on Small Pelagic Fish off Northwest Africa. The surveys have reported high, though fluctuating levels of biomass of small pelagics in Gambian marine waters at 212,000 tons in 2004, 284,000 tons in 2005 and 153,000 tons in 2006 (Plan for the Management of Fisheries Resources, unknown). Despite high biomass, the Institute of Marine Research and

FAO Working Group on Small Pelagic Fish also conclude that the major small pelagic stocks are fully or over exploited (Table 3). By contrast, the Department of Fisheries considers that the pelagic fishery is underfished.

Table 3. Status of main stocks

Species/Stock	Status	Year of assessment	Reference
Small Pelagics			
Sardinella aurita/NW Africa	O	2008	FAO SPWG NWA (2008)
Sardinella maderensis	NA	2008	FAO SPWG NWA (2008)
Ethmalosa fimbriata	NA	2008	FAO SPWG NWA (2008)
Scomber japonicus	O	2008	FAO SPWG NWA (2008)
Trachurus trecae	F	2008	FAO SPWG NWA (2008)
Caranx rhoncus	O	2008	FAO SPWG NWA (2008)
Demersals			
Pagellus belottii	O	2007	FAO/CECAF DEM_WG (FAO, 2008)
Arius spp	O	2007	FAO/CECAF DEM_WG (FAO, 2008)
Pseudotolithus spp	F	2007	FAO/CECAF DEM_WG (FAO, 2008)
Epinephelus aeneus	O	2007	FAO/CECAF DEM_WG (FAO, 2008)
Penaeus notialis	F	2007	FAO/CECAF DEM_WG (FAO, 2008)
Octopus vulgaris	O	2007	FAO/CECAF DEM_WG (FAO, 2008)

Notes: O – over-exploited; F – fully exploited; and NA – inconclusive assessment

Source: Mendy, 2008

A. Industrial Fisheries

Industrial fishing fleet. Industrial fishing primarily targets high value, bottom-feeding demersal fish (sole, shrimp, snappers, cuttlefish, and octopus). In 2007, a total number of 32 industrial fishing vessels operated with a license in Gambian waters; 15 were shrimp trawlers and 17 were fish/cephalopod trawlers (FAO, 2007). 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. The 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). It is expected to be completed in 2010.

Development of the industrial fisheries is left mainly to private sector initiative, although Government has provided incentives in the form of duty free exports and import duty exemption on fishing related equipment. The privilege of duty-free fuel for the fisheries sector was suspended in 1994.

Industrial seafood processing plants. The industrial fisheries sub-sector also includes industrial seafood processing plants that rely exclusively on the purchase fish from the artisanal fishery for processing and export. The processing plants provide permanent and part-time employment to between 1,500 to 2,000 people (mainly women) (Mendy, 2008). Presently, there are 7 processing plants, three of which export to the EU. Two plants are temporarily closed due to lack of raw material (fish) and high operating costs. Lack of adequate fish for processing is an annual problem. The Senegalese dominate the coastal fishery, so the amount of fish from the artisanal fishery available for processing drops significantly when most of the Senegalese fishers return to Senegal for Ramadan and Tobaski (religious festivities) causing closures of most processing plants.

It is expected that the new deep water port in Banjul will reduce the problem of lack of raw material supply and need to operate below capacity.¹ Processing factories also suffer from unreliable provision and high prices for electricity, and the high cost of finance. The greatest cost for processing plants is electricity. The Gambia has one of the highest kilowatt hour cost of electricity in Africa.



Atlantic Seafood Processing Plant

The Atlantic Seafood Processing Plant is one of the major industrial seafood processing companies. Located in Banjul, it exports to Netherlands, Germany and Spain. What it processes and sells depends on the season and market prices. This firm presently ships by boat about 70 frozen containers of fish per year of sole and cuttlefish (not processing shrimp now because price is too low). Maximum capacity of the plant is about 6 tons/day for cuttlefish and 3-4 tons/day of sole filets.

B. Artisanal Fisheries

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 (Gambia DOF, 2006). 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 (DOF estimate).

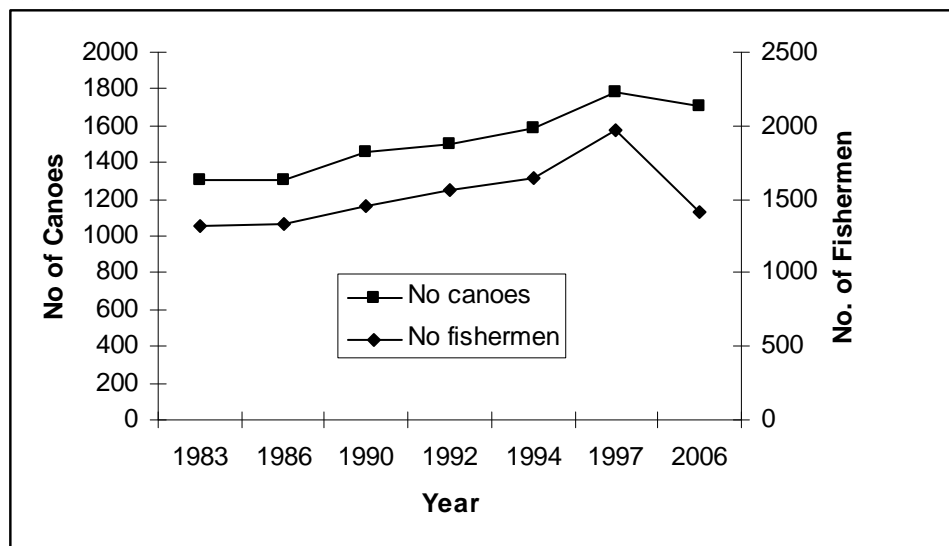
Although the Gambian artisanal fishery has been supported through various programs that have provided credit facilities, training for Gambian youths in fishing operations, and subsidized fuel until 1994), the most productive coastal fishery is still dominated by non nationals, mainly Senegalese. The 2006 FRAME survey results revealed that of the 1,410 head fishermen operating in the artisanal fisheries, 805 are Gambian nationals and 605 foreign but in the coastal area foreign nationals, mainly Senegalese form the majority with 249 head fishermen compared to 167 Gambians (Gambia DOF, 2006). These foreign nationals are the key players in the highly productive coastal fisheries and they form the vast majority of artisanal shrimp fishermen along the estuary and brackish waters of the River Gambia (Gambia DOF, 2006).

¹ Although the land dock will also be used by other commercial ships and there is also a need for a shipyard. A Malaysian investment company was negotiating to finance a shipyard, but they subsequently pulled out.

The Government of The Gambia accords high priority to development of the artisanal fisheries for the obvious reasons that the sub-sector provides virtually all the fish for domestic consumption; creates substantial employment for nationals and produces export fish for foreign exchange earnings. Over the last decades, Government has therefore concentrated much effort to assist the development the artisanal fisheries providing infrastructure, credit, training and organizational support.

Figure 3 shows that the number of canoes and fishermen operating in artisanal fisheries steadily increased from 1983 to 1997, but a decreasing trend was observed from that time on to 2006 (Gambia DOF, 2006).

Figure 3. Growth Trend of Artisanal Fishers and Boats from 1983-2006



The artisanal subsector is highly diverse, incorporating marine, estuarine and freshwater fishing operations (FAO, 2003). 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 communities include the coastal villages of Kartong, Brufut, Tanji, Sanyang, Gunjur and Bakau, and the riverbank villages of Albreda, Bintang, Kemoto and Tendaba (Gambia Fisheries Sector, Unknown).

Artisanal fishing crafts are predominantly dug-out canoes along the river, and planked dug-out canoes of the Senegalese type along the marine coast. There is now one manufacturer of fibreglass fishing canoes on the Gambia coast, but there are still very few fibreglass boats in the artisanal fishery. Most fishermen (74 %) are sole owners of the canoes they use in fishing operations followed by joint ownership (partnership) with 14 percent (Gambia DOF, 2006). The Frame survey revealed that 1,329 (94%) fishermen use canoes for fishing and the most common type of canoe used is dug-out 696 (50%) followed by planked-dugout with 37 percent (Gambia DOF, 2006). There are 1,082 and 625 Un-motorized and motorized canoes respectively.



Fishing Gear at Brufut

Pelagics are now the dominant catch of the artisanal fishery (Gambia DOF, 2006). 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, catfish, barracuda and jacks. Demersal species are caught by artisanal fishermen using set/bottom gillnets, drift nets, traps, and hook and line. Various species of croakers, solefish, 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.



Cooked oysters for local sale

Overall, the two most important fishing gears employed in the artisanal fisheries are encircling/surround gillnet and set/bottom gillnet. These gears are used in fishing operations all year round and are responsible for most fish landings (Gambia DOF, 2007). The 2006 FRAME survey found that in total, 1,291 fisherman use 9,397 gill nets with an average of 7 gill-net per fisherman (Gambia DOF, 2006). This is followed by 436 fishermen using 1,256 cast nets (average of about 3 nets per fisherman) while 205 fishers use hooks and lines (1,717 hooks and lines).



Smoking Fish at Brufut CFC

With regard fish market outlets, about 60 percent of fishermen sell fish catches through Bana-banas (fish dealers) and 31 percent sell directly to consumers (Gambia DOF, 2006). The rest sell through bidding. The artisanal fish catch is either sold in fresh state for daily consumption among the local coastal communities but the bulk is for processing (drying and smoking). Fresh fish is transported and marketed in major towns and villages in the interior. Post harvest losses are high due to a combination of oversupply, lack of preservation and lack of markets. Another issue is the high proportion of juveniles that are caught and sold at all landing sites.

The processed fishery products are transported and sold in inland markets, and some is exported to neighbouring 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.

4. Fisheries Policy and Regulatory Framework

The Gambia's fisheries sector operates under the authority and responsibility of the Ministry of Fisheries, Water Resources and National Assembly Matters and its Department of Fisheries (DOF). The Department of Fisheries has a staff of 64 and 22 vacant posts with 33 located in Banjul and 31 extension officers located at fish landing sites.² DOF is organized with the following structure of divisions: Directorate and Administration Division (15 staff and one vacant post), Research and Development Division: 7 staff and 11 vacant posts), Extension Services Division (36 staff and 5 vacant posts), Inspectorate Division (6 staff and 5 vacant posts).

² Funding for fisheries extension workers in fishing communities expires in December 2010.

The policy, legal and management framework for fisheries in The Gambia is provided by: Fisheries Policy (2007 prepared with FAO support), 2007 Fisheries Act, 2008 Fisheries Regulations, Fisheries Strategy (drafted and also prepared with FAO support), and 2009 Fisheries Management Plan for shrimp, sardinella, solefish and catfish.

The Fisheries Act mandates a Fishery Advisory Committee and Community Fisheries Centers as the institutional structure for inclusive oversight of the sector and 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 the following: 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 eradication of poverty and national development.

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.

The industrial fishery is regulated through mesh size restrictions, licensing, nearshore fishing limits, and surveillance. These are described in Table 4 below.

The artisanal fishery is not restricted to the 9 nautical mile limit and there are no closed areas or seasons, however, there are restrictions on gear, mesh size and minimum fish size.³ The new Fisheries Regulations imposes a license fee on artisanal fisheries. The fee depends on the size of boat and gear/technology used. The more a boat can catch and the higher the value the fish the greater is the fee. On average, it will amount to about 500 Dalasis (about US\$16). To apply the system, boats will be numbered at the time the annual license fee is assessed, paid, and permit given. This system will be introduced at every landing site. Not since the 80's have artisanal boats been licensed.

³ Some tributaries and marine areas may traditionally be declared "closed grounds" during certain seasons/years by communities. For example, there is a closed fishery for catfish in the Central Region (Jarreng).

The artisanal fishery also self-regulates itself, including rule-making, arbitration and conflict resolution in the shrimp fishery. Rules are applied in these communities regarding exclusive rights to fish a certain area by an individual fisherman. These users' rights are obtained by placement of an anchor by the fishermen themselves at preferred fishing spots. The value of the rights is indicated by the fact that they can be sold, inherited or leased. Thus they are transferable and exclusive to the owner. Conflicts are rare among shrimp fishermen and when they arise they are usually resolved among the fishermen themselves, or arbitrated with the help of village authorities, elderly shrimpers or a combination (Gambia Fisheries Sector, unknown).

Table 4. Industrial fishery regulations

Management Measure	Description
Mesh size regulations on trawlers	<ul style="list-style-type: none"> • demersal fish species – 70 mm • pelagic fish species: 40 mm • shrimp: 50 mm • tuna seine nets: 40 mm • tuna gill nets: 60 mm
Licensing	The bilateral Agreement with Senegal has a limit on the total tonnage of fishing catch capacity. When the maximum allowable catch capacity for each fishery is reached, no other vessel can be registered.
Surveillance	Fish production is recorded by the Fisheries Observer Program (each vessels carries an observer) and industrial fishing vessels are monitored by the Gambia Navy.
Nearshore fishing restriction	For the purpose of resources management and to reduce conflict between the industrial and artisanal fishing fleets, the legal nearshore fishing limit for industrial vessels less than 250 gross tons in the waters of the Gambia was in the past 7 nautical miles. ⁴ In January 2009, the allowable nearshore fishing limit for industrial boats (less than 250 tons) was extended from 7 to 12 nautical miles. This was amended to 9 miles in February 2009 when it was clear that none of the Senegalese boats would obey because the 12 nautical miles restriction would require costly new fishing technologies. The regulations prohibit vessels of gross tonnage over 250 tons from operating within a 12 nautical mile zone from the shoreline.

Bilateral Fisheries Agreement. An important feature of fisheries management in The Gambia is its bilateral agreement with Senegal. Gambia and Senegal have had a bilateral agreement since 1982. Every 2 years it comes up for readoption (it is due for renegotiation in 2010). According to the agreement, fishers can fish in either country provided they abide by the laws of the country where they are fishing. For industrial fishing vessels there is a limit on the total maximum tonnage of fishing catch capacity but since The Gambia does not have an industrial fleet, only Senegal benefits from the reciprocal fishing agreement with all of its catch delivered to Senegal processors and the revenues from the exports of these fish not reflected in the Gambian economy.

⁴ The regulation does not include industrial purse seiners that are allowed to fish within the artisanal fishing zone. This is a source of conflict between the artisanal fleet and purse seiners.

5. Fisheries Co-management and Community Fisheries Centers

The Artisanal Fisheries Development Project (AFDP) implemented between 1979 and 1982 with funding from the European Union under the Lome Convention introduced a network of Community Fisheries Centers (CFC) and provided institutional and infrastructure support services with the goal of strengthening the artisanal fisheries. The first CFC was established in Gunjur village in 1982. The Government of Gambia and other external assistance has continued to support the CFCs up to the present time. Another EU funded project was launched in 1987 with a focus on six coastal fishing villages: Brufut, Tanji, Batokunku/Tujereng, Sanyang, Gunjur and Kartong. At almost the same time period, the Government of Italy provided funding to support development of CFCs in eight inland fishing villages: Barra, Albreda, Jurunku and Salikene (North Bank Lower River Stratum) and Bintang, Kemoto, Tankular and bTendaba (South Bank Lower River Stratum). In 1993, the Government of Japan funded the development of artisanal fisheries in the coastal fishing village of Bakau. In 2003, the Government of Taiwan provided funding for the construction of fisheries infrastructure (ice plant and coldroom) and refrigerated vehicles at the fishing landing site of the capital city Banjul. The development objectives of all the projects were similar to those of the first AFDP (UNCTAD, unknown).

By 1996, CFCs were established in all the 7 fishing villages located along the South Atlantic coast and 11 CFCs were established in the major inland fishing villages along both banks of the River Gambia.

The Government gradually devolved management responsibility of the CFCs to the communities and fishing sector to create a structure for co-management. The CFCs are now managed and operated by the beneficiaries (villagers) themselves, with the Department of Fisheries extension staff only providing guidance, training, and technical assistance. For example, the Barfut CFC has 3 permanent and full-time DOF extension staff assigned to provide assistance.



Fish Drying at Tanvi Community Fishery Center

The CFCs are all structured with a Central Management Committee (CMC), Sub-Committee, and Management Committee. The CMC meets every 6 months. The Sub-Committee meets every 2 months. The Sub-Committee appoints the Management Committee.⁵ The Management Committee reports to the Sub-Committee, which reports to the CMC. Presently, the four largest CFCs (Gunjur, Tanji, Brufut, and Bakau) are restructuring to give the Management Committee more independence in decision making.

The CFCs promoted the organization of the fishing industry into user group associations (e.g. fishers, fish traders, fish smokers and fish dryers) following the traditional model of the “Kafo” (a group of people in the same trade) to address common concerns and pursue common interests. The members of the Sub-Committee comprise representatives of the different fishing industry groups, a representative of the Village Development Committee, and the Village Head (Alkalo) as Chairperson. Inclusion of fish industry group representatives in the Sub-Committee was a deliberate move to ensure that fisherfolk are in the majority.

⁵ It was pointed out to the study team that in many CFCs the Manager of the Management Committee who is appointed by the Sub-Committee is not qualified.

The Management Committees employ people from the community on casual or permanent bases including a secretary, a watchman, a cleaner and a pump mechanic. Many CFC services are provided free of charge, but some facilities are rented to users and charges are levied against certain other services (e.g. water). These fees and service charges are collected and used for the upkeep, maintenance, and expansion of the facilities and part of the profits generated are used to support other development activities in the villages (UNCTAD, unknown). Each Management Committee operates a bank account into which excess monies are deposited and withdrawn (Njie and Mikkola, 2001).

Before Management Committee meetings, user groups discuss their own agenda and proposals involving finance of the CFC and expenditures on repair and maintenance, which they submit to the Management Committee through their representatives. Representatives report back to the groups the major decisions and actions taken (Njie and Mikkola, 2001).

The Management Committees also administer a revolving fund of loans to artisanal fisherfolk. The loans are channeled through the user group associations to individual members. Peer group and other social pressures help guarantee satisfactory and timely repayments of loans (UNCTAD, unknown). The funding level of the revolving funds is about 300,000 Dalasis (about \$US9,000) per CFC.

Overall, the CFCs have brought about profound physical, social and economic changes to the artisanal fish landing sites. Many of the CFCs have been transformed into business points for various socio-economic engagements giving rise to other economic spin-offs such as restaurants, canteens, mechanical workshops, petty trading in basic household commodities, transportation and fuel stations.

While critical to the development of the artisanal fishing industry, the CFCs have not been involved in fisheries resource management and sustainable fishing practices.

6. Other Fishery Organizations and Stakeholders

National Association of Artisanal Fisheries Operators (NAAFO). This organization was formed in 2004 to better represent and defend the interests of all groups of the artisanal fishery. Actors in all areas of activity are represented: fishing, marketing, artisanal processing of fish and fishery products, and boat construction and repair. The NAAFO office is located in Bakau. The structure of the organization included the following full-time and part-time positions: 1) President; 2) Vice-president; 3) Executive Secretary; 4) Assistant Secretary; 5) Treasurer; 6) Assistant Treasurer; 7) Organizer; and 8) Three Advisors. NAAFO is partly funded by the Fisheries Development Fund and the National Assembly budget. The Fisheries Development Fund is managed by the Department of Fisheries and is funded by levies from fishing fines, registration of vessels and other sources.

Gambia Artisanal Fisheries Development Association (GAMFIDA). GAMFIDA aims to encourage and promote the development of artisanal fisheries in the Gambia; strengthen cooperation among artisanal fisheries economic operators through sensitization and training; and resolve conflicts arising from fisheries resources exploitations (GAMFIDA, unknown). GAMFIDA was originally established in 1997 to run a savings and credit scheme for artisanal fisheries operators in the fishing communities in Banjul, Old Jeshwang village, Kartong village

and Foni Bwiam. As conflicts and violence ensued between fishing communities, it introduced a conflict management program and partnered with conflict management and peacebuilding organizations to intervene in managing and resolving conflicts over natural resources.

TRY. TRY is a NGO based in Banjul that works to organize and strengthen women's oyster groups.

7. Regional Initiatives and External Support

West Africa Trade Hub (WATH). The WATH program is a USAID funded activity that was spurred by President Clinton's African Growth and Opportunity Act (AGOA). It includes 21 countries from Cape Verde to Camaroon. The main office is in Accra. It was started in 2004 and ends in 2011. The goal is to promote exports from the region to USA. An office in Dakar was opened in 2006 with a focus on seafood exports. The program works with "export ready" companies. In Gambia they are working with Kerewan Fishing Company Limited.

Areas for possible collaboration with Ba Nafaa include:

- Definition of fisheries that are sustainable and ready to export
- Promotion of niche markets of smoked and dried fish products (Asian market for sardinella in New York City, for example)
- Participation of Gambian seafood exporters in the March 2010 International Boston Seafood Show
- Membership in the West Africa Sustainable Seafood Development Alliance (WASSDA). This is a regional seafood alliance created by WATH
- Gambia-Senegal export and re-export to U.S. in products such as canned oyster and shrimp

PRCM. The Regional Coastal and Marine Conservation Program (PRCM in French) started in 2004 as a way to better coordinate the NGO conservation community. It currently involves some 50-60 government and NGO groups. There is a Steering Committee and funding at \$8 million Euros for 4 years. Website: www.prcmarine.org. The home office is Mauritana.

Canary Current Large Marine Ecosystem (LME). This is a seven country GEF project (Cape Verde, Gambia, Guinea, Guinea-Bissau, Mauritania, Morocco, Senegal) with main office in Dakar, Senegal. The overall objective of the project is to secure global environmental benefits by reversing (over time) the depletion of fisheries resources and conserving nursery and reproductive habitats of the Canary Current Large Marine Ecosystem.

Abidjan Convention. The Abidjan Convention is the Regional Seas UNEP program for the West Coast of Africa.

Sub-Regional Fisheries Commission. This is an intergovernmental organization comprising seven member countries: Cape Verde, Gambia, Guinea Bissau, Guinea Conakry, Mauritania, Senegal and Sierra Leone. The organization was established in 1985 for the purpose of sub-regional cooperation and integration in fisheries resources management. The organization has three organs: Council of Ministers, Coordinating (Technical) Committee, and Permanent Secretariat. The headquarters are in Dakar, Senegal. The Strategic Plan of Action of the organization focuses on strengthening resources management; harmonization of policies and

legislation; research, data and information exchange; and cooperation in monitoring, control and surveillance.

World Bank/GEF GIRMaC I and II. GIRMaC (Integrated Management of Coastal and Marine Resources) is a World Bank/Global Environment Facility (GEF) and World Bank/International Development Association program focused on Senegal. With \$8 million in funding, the first phase was from 2003 to 2007. A second phase that adds a regional component will continue the program for four more years. GIRMaC aims to integrate the principle of sustainable development in the management of marine and coastal resources. The program has two components: 1) conservation of vulnerable species and habitats; and, 2) sustainable fisheries. The latter contributes to improved fisheries governance by promoting co-management and developing fisheries management Plans. GIRMaC intervenes in four sites in Senegal where Territorial User Rights Fisheries (TURFs) are being piloted.

West Africa Regional Fisheries Project (World Bank/GEF). This US\$65 million program of the World Bank/GEF will be implemented through the Commission Sous-Régionale des Pêches (CSRFP). It serves eight countries in the region (Gambia, Senegal, Guinea Bissau, Guinea, Cape Verde, Mauritania, and West Africa) and has three objectives (World Bank, 2009):

1. Provide support to efforts to eliminate illegal fishing activities; curtail damage to resources and the loss of economic rent from the fishing sector; and create the conditions for the implementation of access rights and fishing capacity control.
2. Implement the governance and management structures necessary to control the use of marine fish resources, and prepare for a transition to an economic approach or wealth-based fisheries management system.
3. Support the implementation of a system of fisheries management based on access rights, which would have value and could be capitalized; encourage investments to increase the domestic value-added to seafood products; create mechanisms to capture and utilize a greater share of the value generated to finance social and public benefits.

USAID/West Africa would like to see the Ba Nafaa project contribute to the WB/GEF project objectives and, influence the direction of some of the downstream investments of this multi-year project.

Previous external projects and programs

Sustainable Fisheries Livelihoods Programme (SFLP). This US\$43 million program of the Food and Agriculture Organization (FAO) and the United Kingdom's Department for International Development (DFID) targeted 25 countries in the West Africa region. The program aimed to reduce poverty in artisanal fishing communities through livelihood development and capacity-building for fisheries-dependent-communities. It utilized participatory management approaches and included a policy reform and institutional development agenda.

The Gambia Artisanal Fisheries Development Project (GAFDP). This US\$14 million program of the Government of The Gambia was funded by the Africa Development Bank and BADEA (Arab Bank for Economic Development). It sought to establish a fisheries port in Banjul and a Central Fish Market in Serekunda; improve monitoring, control, and surveillance of The Gambia's territorial waters; strengthen the Department of Fisheries capacity; and, establish a credit scheme for those in the artisanal sector, especially women.

Japan International Cooperation Agency (JICA). This program constructed community fisheries centers, ice-making and cold-storage facilities, and fiberglass boats for training purposes in target fishing sites in Bakau, Tanji and Gunjur. The construction of a fish market in Brikama is in progress. In 1982, JICA constructed a 10 ton/day ice plant and 20 ton cold storage facility at Pakalinding in the Lower River South Bank; the facility is no longer operational. JICA has also provided technical assistance via a grant-in-aid program, benefiting Gambian youths through various training activities.

8. Key Issues and Constraints in the Fisheries Sector

Issues and constraints facing fisheries development in the Gambia can be classified under five headings, namely: infrastructure, technical, financial, institutional and resource management.

Infrastructure	<ul style="list-style-type: none"> • Absence of an industrial fleet fishing harbor and lack of Gambian registered coastal trawlers and purse seiners to harvest the resources • Lack of adequate infrastructure with appropriate fish handling and storage facilities for the artisanal sub-sector to reduce post harvest losses and meet international sanitary standards • Lack of patrol boats and other means of effective monitoring, control and surveillance of illegal fishing in the country's territorial waters • Need better space and organization of retail fish marketing centers • Lack of fuelwood for smoking fish and absence of other fuel options • Artisanal canoes do not have life preservers and other safety equipment reducing safety at sea
Technical	<ul style="list-style-type: none"> • Poor fish processing quality in the artisanal sub-sector
Financial	<ul style="list-style-type: none"> • Access to micro-finance for artisanal operators is constrained by high interest rates on loans • The industrial sub-sector is constrained by the lack of access to both working capital and long term lending. High interest rates at the commercial banks unfavourably affect the development of the sector in general • High costs of electricity impair operations of industrial seafood processing factories and ice making in the artisanal fishery
Institutional	<ul style="list-style-type: none"> • Inadequate budget limits the capacity of the Fisheries Department to implement the provisions contained in fisheries regulations, carry out research and provide statistics, advance product development and quality control, and mobilize extension staff for monitoring, control and surveillance of artisanal landing sites. DOF, for example, does not have the capacity to implement the new artisanal licensing rule alone. • Insufficient number of trained and qualified personnel (75% are not qualified) in the Fisheries Department
Resource Management	<ul style="list-style-type: none"> • Lack of experience and understanding of resource co-management and sustainable fishing practices • Catching, landing, and marketing of juvenile fish • Protection of MPA's and identification of new MPA's • By-catch in industrial fisheries, especially the shrimp fishery. It is estimated that every haul of a shrimp trawl is 60 to 70 percent by-catch comprising major target species (FAO, 2008). This reduces the fish that would have normally been available to the artisanal fisheries and demersal finfish trawlers. Currently, the market for shrimp and shrimp fishing effort are so depressed that this may not be an issue. • Ecosystem degradation. Some of the industrial and artisanal fishing and fish processing practices have negative impacts on habitat and the marine environment. For example, limited fuel wood for fish smoking has contributed to the depletion of mangrove vegetation even though mangrove cutting is not permitted except for one specific species that can be cut after acquiring

	<p>permission. The unregulated and excessive removal of the high value demersal species could lead to depletion of these species causing imbalances in the ecosystem and the damages caused by bottom trawls contribute to the degradation of seabed habitats and subsequent loss of critical recruitment mass and biodiversity. In the artisanal shrimp fishery the nets are now so long they cross the river and go down to bottom. Everything in the water column is taken.</p> <ul style="list-style-type: none"> • Illegal industrial fishing and conflict with artisanal fishers. The Gambia lacks the capacity to effectively monitor and control the activities of industrial vessels operating illegally. In spite of restrictions, industrial fishing vessels, equipped with echosounders and fish finding devices follow fish and encroach on more productive artisanal fishing grounds usually by night, causing considerable damage to artisanal fishing gears and violating fisheries regulations. Night fishermen (usually driftnet fishermen) who drift by night without safety equipment (torches, lanterns, whistles etc.) are exposed to dangers of being run-over or colliding with encroaching industrial fishing vessels. Such accidents can be fatal and result in considerable losses to artisanal fishermen (Momodou Njie, unknown). • Resource use conflicts within artisanal fisheries. Artisanal fishermen employing different or similar fishing gears and fishing within the same area run into conflicts. Driftnet fishermen often accidentally pass over poorly marked set gears belonging to other fishermen. Nets get entangled and where the owner of the nets is not present drifters may cut through and destroy the gear. Accusations and confrontations ensue from such accidents and can extend to hostilities involving fishermen of different communities, within the same community or involve fishermen of different nationalities. Accusations of theft of set gears and catches found in nets have also been reported sources of conflict. Along the River Gambia and its tributaries, shrimp fishermen often confront set gillnet fishermen using the same fishing area(s). The set gillnet fishermen complain that shrimpers deliberately cut apart their nets in order to create fishing space for themselves. Gillnet fishermen complain that the small size mesh of shrimp fishermen destroy many juvenile fish of high economic importance and which are targeted species of gillnet fishermen.
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The results of a two-day fisheries stakeholder workshop, which also identified issues and constraints in the artisanal fishery are presented in Appendix 2.

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Appendix 1. List of people consulted

Name	Institution
1. Lamin Nyabally	Permanent Secretary of the Ministry of Fisheries, Water Resources, and National Assembly Matters
2. Amadou Saine	Deputy Permanent Secretary of the Ministry of Fisheries, Water Resources, and National Assembly Matters
3. Jabai Suwareh	Ministry of Fisheries, Water Resources, and National Assembly Matters
4. Manding Sindykhan	Ministry of Fisheries, Water Resources, and National Assembly Matters
5. Manding Saikyhan	Ministry of Fisheries, Water Resources, and National Assembly Matters
6. Nfamara Dampha	DoF, Director
7. Ebou M. Mbye	DoF
8. Matarr Bah	DoF
9. Asberr N. Mendy	DoF
10. Lamin Bojang	DoF
11. Borry Marong	DoF
12. Babanding Kanyi	DoF
13. Filly Sanneh	DoF
14. Anna Cham	DoF
15. Yusupha Jassey	DoF
16. Lamin Dampha	DoF
17. Gibril Gabis	DoF
18. Amadou Tijan Secka	DoF
19. Nyanko Ceesay	DoF, Gunjur
20. Ebou Mass Mbye	DoF, Banjul
21. Gibril Gabis	DoF, Abuko
22. Ousman Jobe	DoF, Serekunda
23. Buba Manjang	DPWM/TWNP
24. Lamin Saine	DPWM
25. Sarjo Jarju	DPWM
26. Saffie Njie	DPWM
27. Patrick Mendy	DPWM
28. Samba Jawo	DPWM
29. Lamin Bojang	Forestry Department
30. Momodou Suwareh	NEA (National Environmental agency)
31. Aruna Jobe	NEA
32. Sarjo Fofana	Commodore, Gambia Navy
33. Rohey Samba-Jallow	Gambia Police Force
34. Dawda F Saine	NAAFO
35. Ousman Bojang	GAMFIDA
36. Idrissa Sanyang	Fisheries Industry
37. N. Jallow	Atlantic Seafood Company
38. Ousman Drammeh	Fisheries consultant and ex-Director of DoF
39. Sheikh Tijan Toure	USAID Wula Nafaa
40. Ibrahim Mat Dia	WWF/The Gambia
41. Arona Soumare	WWF/Senegal
42. Ebrima Njamadio	WWF/Senegal
43. Alassana Dieng	WWF/Senegal
44. John Heermans	Wula Nafaa, Chief of Party
45. Vaque Ndiaye	WWF/Wula Nafaa Project
46. Paul Siegal	WWF International/Senegal
47. John Eichelsheim	IDEE, Casamance

48. Aaron Brownell	USAIO/Senegal
49. Tim Stein	West Africa Trade Hub (WATH), Dakar, Senegal
50. Tashawna Bethea	American Embassy, The Gambia
51. Karamo Jammeh	Essau NBR
52. Anna Manja	Abuko CFC
53. Abdoulie Chareh	Old Jeshwang, CRC
54. Omar Jeng	Jeshwang, CRC
55. Amie Jatta	Fajikunda CFC
56. Eliman Sarr	Gunjur CFC
57. Sibby Jaiteh	Gunjur CFC
58. Eliman Sarr	Gunjur CFC
59. Eliman Sarr	Gunjur CFC
60. Badara .N. Bajo	GEPADG, Gunjur
61. Alieu Sarr	Brufut CFC
62. Janko Bojang	Brufut CFC
63. Haddijatou Jallow	Brufut CFC
64. Babacarr Sarr	Tanji CRC
65. Modou Gibba	Tanji CFC
66. Sally Sarr	Tanji CFC
67. Mariama Jeng	Bakau CFC
68. Mariama Chore	Bakau CFC
69. Omar Bojang	Bakau CFC
70. Samba Jawo	Mandinary Fisher
71. Ebou Secka	Mandinary Fisher
72. Alasan Jah	Mandinary Fisher
73. Alasan Palm	Mandinary Fisher
74. Bintou Kolley	Tanji Fisher
75. Pap Daffeh	Fisherman
76. Ousman Jobe	Fisherman
77. Borry Jammeh	Fish Dryer
78. Edrissa Sarjo	Director
79. Fatou Mboob	TRY Women's Association
80. Fatou Sambou	TRY Humboneh
81. Kumba Jasseh	Oyster Collector
82. Sainabou Sambou	Oyster Collector
83. Sally Jarju	Oyster Seller
84. Sabe Jatta	Oyster Seller
85. Pateh Baldeh	Foroyaa News Paper

Appendix 2. Proceedings of Fisheries Stakeholder Workshop

June 22-23, 2009

Banjul, Gambia

Shrimp farmer group	
Where are we now	Vision for 5 years in the future
<ul style="list-style-type: none"> • Ghost fishing (derelict nets) • Closed areas not respected • Fishing in tributaries should be prohibited • Need for research on spawning grounds and protection of spawning grounds • Regulations not enforced (illegal fishing) • Lack of fish storage to avoid spoilage. High perishable nature of shrimp and lack of ice is problem • Shrimp fishing previously was stationary. Now shrimp nets are so long they cross the river and go down to bottom. Everything in the water column is taken • The main shrimp grounds are on the North side of the river Gambia 	<ul style="list-style-type: none"> • Availability of high quality materials (e.g. nets) • Local and external markets well established • Safety at sea equipment • Low interest credit • Availability of fiberglass boats (since wood will not be available) • Co-management in place and backed by legislation • Flake ice availability • Fish training for youths • Closed seasons of fishery areas • Mesh size regulations enforced • Awareness and sensitization communication campaigns • Eco-labeling of products for certain species
Oyster Women's Group	
Where are we know	Vision for 5 years in the future
<ul style="list-style-type: none"> • Oysters not as plentiful as before • Lack of means for harvesting...no tools or proper clothing • Rack culture system was tried with a study tour to Senegal • Lack of fuelwood to cook oysters • A need for oyster closed seasons • Need for oyster closed seasons • Cutting of mangroves to get oysters • Cockles not as abundant due to climate change • No fixed place in the market to sell their produce. Need an oyster specific market 	<ul style="list-style-type: none"> • Increased benefits • Every harvester with their own equipment and boat • Established markets • Oysters large enough to be able to smoke them (currently so small, can only boil them) • Closed seasons established for oysters to grow larger • Mangrove restoration • Oyster exposition to show people the harvest day and to sell directly
Fish Processors	
Where are we know	Vision for 5 years in the future
<ul style="list-style-type: none"> • There is a fine for throwing out fish guts and remains (50 dilasi) in Brufut. Remains are to be placed on a tarp and properly disposed of a end of day • Smoked fish require 3-4 fires to eliminate all the moisture • Need access to markets, storage facilities, and fuel wood • Loan rate is in the range of 25%. This is too high. There is lack of adequate capital • Lack of land for woodlots. Nowhere on the coast where you can find 1 ha of land (need alternative to firewood) • Fishermen go fishing without ice. Sometimes the time between the net goes in and fish is pulled is too long • Need better coordination between CFC's to market 	<ul style="list-style-type: none"> • Good quality fish landed. Fishers should take ice to sea • External markets and processors able to export directly • Development of sustainable energy sources outside of wood • Seafood market established specifically for seafood. Not enough space at markets right now • Healthier working environment • Sub-regional exchange program • A return of some of the species that have disappeared from abundance • No litter on land or sea • Overfishing and encroachment of industrial fleet to artisanal areas controlled

fresh fish	<ul style="list-style-type: none"> • Closed areas • MPA's and fish havens established • Solar dryers so fish dryers can work if it rains • Better fish storage facilities
Government	
Where are we now	Vision for 5 years in the future
<ul style="list-style-type: none"> • Have a Fisheries Policy; Fisheries Management Plan addressing shrimp, sardinella, solefish and catfish; Fisheries Act; and Fisheries Regulation • Demersals over-fished; pelagics underfished • Illegal fishing (wrong mesh size) and juveniles are being landed • Fishers not licensed/registered • Too many artisanal fishing boats • High value species are not landed in Gambia • Data collection on small pelagics and monthly reporting • Have done a market survey • Operating in resource degraded environment (fuelwood for smoking; timber for boat building, etc.) • Limited financial capital for fisheries • Inadequate trained personnel • Fishing Centers under reorganization • Inadequate preservation facilities (ice, storage, etc.) 	<ul style="list-style-type: none"> • Improved health and nutritional standards • Generation of employment and improved standards of living of fish sector • Communities mobilized for sustainable livelihoods • Improved relationships with communities and partnerships forged with stakeholders • Establishment of baseline • Sensitization and training • Law enforcement • Implementation of the management plan • Monitoring and evaluation
Fishers	
Where are we now	Vision for 5 years in the future
<ul style="list-style-type: none"> • Need vehicles to market fish • Want more self-management empowerment and less reliance on government • Need exchange visits to other countries • Want to process and market their own fish (to marketing centers) • Need closed seasons • Need access to credit • Want enforcement of illegal fishing • Want participatory surveillance • Want to identify spawning areas and mark them • Want to prohibit fishing in tributaries • Want fishing matters decided by fishers, not local leaders (fisheries centers often hijacked by political heads) • Want strong fisheries association established 	<ul style="list-style-type: none"> • Reduce overfishing • Control access • Stop encroachment in artisanal fishing grounds by trawlers • Reduce juvenile fish catch • Introduce closed fishing areas and closed seasons for the different fisheries • Establish prohibited fishing areas (nursery areas and spawning grounds) • Improve fishing areas through establishment of Marine Protected Areas fish havens • Improved processing facilities and techniques • Introduce solar drying during rainy season • Modern selling/marketing areas established • Improve fisheries co-management • Empowerment of fisherfolk communities to be fully involved in planning, implementation and decision-making