

The Gambia Sole Fishery: Towards MSC Certification and Use of an Eco-label —An FIP-like Process



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Background

The artisanal fishing sector is the dominant fishery in The Gambia. Total fish caught from both the artisanal and industrial sub-sectors was estimated at nearly 40,000 tons in 2006 (FAO, 2007). Out of this, the artisanal fishery contributed approximately 37,000 tons (93 percent) with the remaining 3,000 tons (7 percent) being landed by the industrial fishery.

Sole fish is one of the most important commercial species caught year round in Gambian waters by artisanal fishers. They are found in both maritime and brackish riverine waters. The sole fishery in The Gambia occurs along the entire coast of the country and in the River Gambia. Sole is harvested using mainly bottom gill nets. Once harvested, sole is mainly supplied to fish processing plants that transform the catch into value-added products, such as fillets, which are exported primarily to EU markets. Small amounts of sole landings are also sold domestically to hotels and restaurants or consumed locally. However, it is not the locally preferred fish. The mainstay for Gambians is the small, pelagic sardinellas.

In 2006, the harvest of sole accounted for 1,559 MT out of the 40,000 total fish landed in The Gambia, or less than 5 percent. The artisanal sector provides direct employment to 1,410 head fishermen and 4,694 assistant fishermen (Gambia DOF, 2006). Of this amount, there are approximately 475 sole fishermen, or about 10 percent of all fishermen (Gambia DOF, 2006). According to the Department of Fisheries, about 200,000 people derive their livelihood from fishing and related activities, so the number of people benefiting from the sole fishery extends well beyond just the number of fishers engaged. There is no adequate estimate of the number of marketers or people involved in the export processing plants, but a substantial portion of these beneficiaries are women.

The fisheries legislation of The Gambia (Fisheries Act 2007) provides the legal basis for co-management of artisanal fisheries. Section 14 of the Act gives power to the Minister of Fisheries to declare “Special Management Areas” for the purpose of community-based fisheries conservation and management. Section 15 of the Act also gives power to the Minister to establish Community Fisheries Centers (CFCs) for the purpose of community-based fisheries conservation and management of Special Management Areas or parts of it. However, despite this legislative framework, as of 2010 these provisions were never implemented. Stakeholder involvement in regulatory decision-making was weak and there were no functioning co-management committees at that time.

In 2009, at the request of The Gambian Department of Fisheries (DoFish), the CRC-led, USAID-funded, *Ba Nafaa* Project incorporated a component on improving the management of the sole fishery and implementing co-management provisions of the recently amended Fisheries Act and associated regulations. Since good enabling policies were in place to support a co-management approach, the project was able to establish a specific action agenda and move quickly towards implementation without the need for any policy or legal changes at the onset. While not formally termed an FIP (Fishery Improvement Project), the initiative had all the elements of the

Sustainable Fisheries Partnership FIP process and will be summarized using the [FIP Framework](#) (see below). Prior to the start of this process, DoFish had internally developed a draft management plan. This was a very brief document of only a few pages in length that suggested a change in mesh size for the fishery. There was no provision in this draft for any co-management institutions to be established, nor was any stakeholder process started at the time this draft was written.

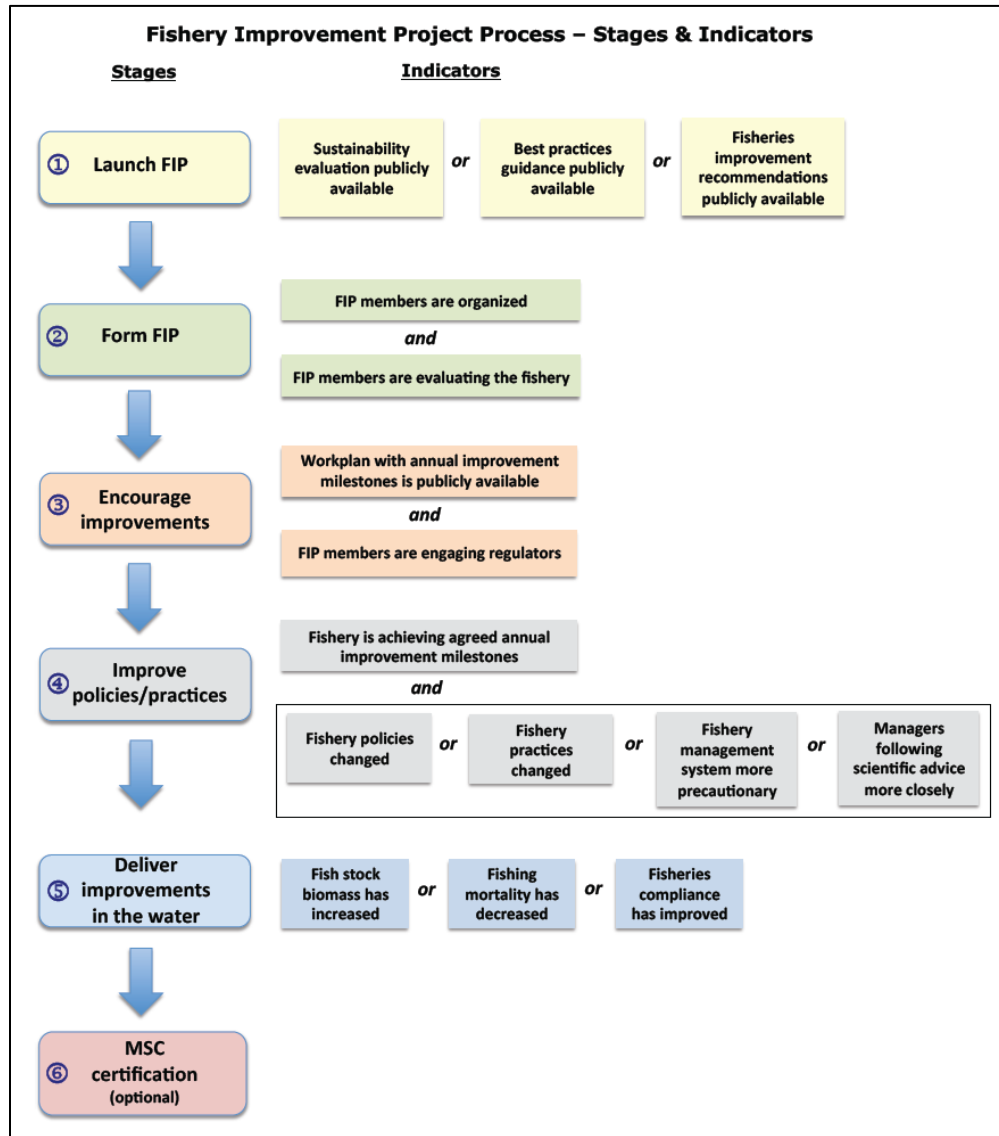


Figure 1. The Fishery Improvement Project Framework

Launching the FIP-like Process

The process was initiated by GAMFIDA (Gambian Artisanal Fisheries Development Association), which was interested in obtaining MSC certification of the artisanal-caught Gambian sole fisheries. A MSC pre-assessment was conducted in 2007. The fishery did not pass the pre-assessment phase. Nine action items were identified that would improve the fishery and bring it to a level where it would meet the criteria established under the three MSC principles (sustainability, ecosystem management and effective management system). The nine action items were:

- Incentives for sustainable fisheries
- Written research plan
- Retained by-catch management
- ETP management
- Waste management
- Data collection
- Stock assessment
- Harvest control rules
- Sole management plan

Formation of an FIP-like Process

One of the first steps was creating an MOU. The MOU was signed among the Department of Fisheries, *Ba Nafaa*, Atlantic Seafood and GAMFIDA. The MOU provided a basis for an action plan to implement the nine points identified during the MSC pre-assessment. The plan was implemented by the USAID-funded *Ba Nafaa* Project implemented by The University of Rhode Island in partnership with the WWF West Africa Marine Program Office (WWF-WAMPO). Key actions for the sole fishery were identified and incorporated into the project's annual work plans.

The action plan and nine activities were implemented under three broad areas:

- a) Build a foundation and process for co-management (build and capacitate co-management institutions; develop a sole management plan; define use rights and harvest controls)
- b) Build capacity for short- and long-term sustainability.
- c) Develop information for action items (Atlantic Seafood was essential in this process and was a source of data collection for improved stock assessments.).

Improving policies and practices

It took approximately three years to build capacity in DoFish to conduct stock assessments, develop and adopt a co-management plan for the sole fishery and set up the co-management structure necessary for a more sustainably managed sole fishery. The key stakeholders in the process were the DoFish, local fishermen and the export processing plants. Activities implemented by the project included:

1. Build a foundation for co-management

- a. Development of the National Sole Fishery Co-management Committee (NASCOM).
- b. Developing a sole fishery management plan, which included defining use rights, harvest control measures and defining roles and responsibilities of management committees, government agencies and establishing a forward-looking research agenda for more informed decision making.

2. Capacity building

- a. Leadership trainings (at URI) of government personnel, fishing industry leaders and locally based NGO staff.
- b. Trainings in stock assessment and fisheries biology via in-country courses, an online course and short-term training at URI.
- c. Providing computer infrastructure and improving data management systems at the Department of Fisheries (DoFish).
- d. Capacity building of the NASCOM as an organization, including developing a structure, process, priority setting, and establishment as a legal entity in The Gambia.

3. Information gathering

- a. Collect local knowledge on life history of sole species including migration patterns and spawning seasons.
- b. Biological sampling as a cooperative effort of Atlantic Seafood and DoFish and stock assessments conducted by DoFish Statistics Division staff with training and mentoring provided by URI, including length frequency studies for stock assessment, and collection of otoliths to improve understanding of age length relationships, also important for stock assessment purposes.
- c. By-catch and ETP (endangered, threatened and protected species) studies required for MSC certification and studies on gill net handling methods and mesh size changes that could reduce vulnerable species by-catch and capture of juveniles.
- d. Value chain studies and studies of the trans-border shipment of sole and comparative pricing between The Gambia and Senegal
- e. Synthesized research priorities included in the management plan.

The Fishery [Co-management Plan](#) for The Gambia Sole Complex with a focus on the artisanal fishery was signed on Jan.17, 2012. Enforcement of the 1 nm closed area was implemented in 2013 even before the plan was officially gazetted (given weight of law), which occurred in early 2014.

Delivering improvements in the water

The sole fishery management actions have broad support in The Gambia, and the progress is encouraging. The management plan is in place and stocks are routinely monitored. However, the last stock assessment showed that stocks are still over-exploited and the fishing mortality is greater than both the growth and recruitment overfishing reference points. Too many juveniles

are caught, and NASCOM recently approved an increase in the allowed mesh size to address this issue (from 80 mm to 92 mm stretch length). Together with an area closure, scientific opinion suggests this may be sufficient at this time to control the current over-fishing problem.

NASCOM has also been discussing a potential managed-access program that would charge access fees to Senegalese fishermen and boats fishing in Gambian waters for sole (there are a significant number of Senegalese fishermen engaged in this fishery in The Gambia), modeled after a similar access fee which Mauritania charges to Senegalese fishermen that are fishing in Mauritanian waters.

The sole fishery management became a multi-species management plan when it was adapted to include catfish, which are considered a “by-catch” in the sole fishery. This revised plan to include catfish (and an increased mesh size) was approved by NASCOM, DoFish and signed by the Minister on Dec. 17, 2013. This action followed an annual plan review meeting in December during which new information was provided to the committee on catfish by-catch issues, including results of a revised stock assessment that indicated overfishing was still occurring and results of several studies on proposed gill net modifications. Catfish is actually caught in similar volume and may be of more value when sold locally and regionally (smoked) than the sole caught in the same nets. Catfish is important to the local and West Africa market and for local food security. Therefore, the evolution of a sole plan into a multi-species plan benefits other fish stocks that are not an important South-North export commodity.

Kaufland Seafood, based in Germany, recently made a 100,000 Euro commitment to help implement the sole fishery management plan: 50,000 Euros were given to NASCOM to strengthen enforcement capacity (purchase of a patrol boat and engine); while the other 50,000 Euro has been set aside for payment of a formal assessment that may result in certification, once The Gambia is ready to undertake the certification process. Under advisement by MSC, the next step is to conduct a second pre-assessment to determine whether the fishery is ready to enter the formal MSC “fishery in assessment” process. NASCOM is currently seeking funding support to conduct this pre-assessment.

While the fishery has not yet been certified, the fishery improvements and goal to obtain certification have started to result in additional inquiries by potential seafood buyers about when the fishery will achieve certification. Therefore, there is good anecdotal evidence that once certified demand for the product will be ample. What is not known yet is whether the certified fishery will result in a price premium for the current main exporter, Atlantic Seafood, or whether the certification will trickle down price premiums to middlemen or fishers.

There is an opportunity here for a carefully tailored set of interventions to quickly pilot the Rockefeller Foundation Ocean and Fisheries Initiative change model and associated scale-up ideas. This could include actions such as:

- Assisting with financing the next pre-assessment and facilitating the full assessment if the fishery is deemed ready; facilitating Chain of Custody certification,

- Providing marketing assistance to exporters to try to obtain a price premium,
- Working through NASCOM and its LACOMs (Local landing site co-management committees) to develop an improved business plan which considers the feasibility to become a marketing cooperative, and
- Organizing fishermen and assisting them in negotiating improved prices for the certified sole from the middlemen and exporting factories.

Price of sole paid to fishers has remained constant for many years. This could also be an opportunity for exporters to encourage (and incentivize) fishers to increase the quality of their product by training fishers with improved on-board handling practices and through a better provision of ice and ice boxes that fit inside the local “pirogues.” Improved sanitary conditions at landing sites where fish is transferred from boats to trucks for transport to the processing plants will also improve the integrity of the product. Therefore, The Gambia could also be a location where long-term price agreements and innovative financing ideas discussed in the Change labs workshops could also be piloted and used to help fund other needed investments in improved handling and marketing infrastructure. Since the number of current sole exporters is limited to Atlantic Seafood at present, monopoly conditions prevail.

Towards MSC certification

The Gambian Sole fishery is now at a point where it might be able to obtain certification relatively quickly, within 12 months if all goes well and if the next pre-assessment provides a green light for a formal assessment. However, critical issues on whether The Gambia sole fishery is ready for full assessment will in part hinge on whether the new management measures recently put in place are sufficient to end overfishing and return the fishery to a more healthy status. In addition, and as revealed by the local knowledge studies, the sole stock seems to move between Senegal and The Gambia. Since artisanal-caught sole is seen as a viable management unit, The Gambian management plan may need to be broadened to include Senegal management before it obtains certification. However, not all MSC-certified fisheries include the entire range of the biological stock unit, so even if the stocks are shared, and the Senegal management is not yet up to standard, The Gambian portion could still be certified. The pre-assessment will provide clarity on the status of this shared stock.

Ba Nafaa sponsored a bi-lateral meeting during which the issue of a shared sole stock was discussed. There is interest on both sides of the border on moving to bilateral management arrangements of sole. While it is uncertain whether this expanded stock perspective will mean that the fishery does not pass the MSC certification until bi-lateral management arrangements are put in place, the fact that The Gambia and Senegal are talking about this may be sufficient at this stage to certify The Gambian sole, with expanded certification of a Gambian-Senegal sole fishery to come later. This is a likely trajectory for management anyway, and a bilateral-certified fishery would substantially increase the volume of sole exported from West Africa as certified and boost the number of potential fishing communities benefiting from scaled-up certification.

Once The Gambia artisanal sole fishery becomes MSC certified, the next step would be to work on traceability. This is necessary for seafood companies to use the eco-label when selling the fish. It is possible to obtain certification as a sustainable fishery, but for buyers and retailers not to use the MSC eco-label in marketing.

Chain of custody

Once certification is obtained for the fishery, Chain of Custody (CoC) certification is also required before the MSC eco-label can be used. Firms using the eco-label (e.g. Atlantic Seafood or Kaufland Seafood) would need to obtain chain of custody certification. While Kaufland Seafood is probably in a good position to finance the assessments and CoC system improvements, Atlantic Seafood probably does not have this capacity. Therefore it is likely that some technical assistance will be needed in-country to work out CoC between landing sites and processing plants before assessments and audits are conducted. (For more information on CoC certification, see: <http://www.msc.org/about-us/standards/standards/chain-of-custody> and <http://www.msc.org/documents/scheme-documents/msc-standards/msc-coc-standard-v3>)

There are reports of illicit trans-border trade between The Gambia and Senegal in sole, and this would need to be addressed in the CoC certifications systems. In addition, the recently opened commercial fishing port in Banjul, The Gambia, would also mean that a certified artisanal caught sole would have to be kept separate from industrial/commercial trawler caught sole via strict chain of custody systems to avoid potential for co-mingling of certified and non-certified fish exported from the country. Prior to the construction of this port, there was no adequate industrial fishing port facility in The Gambia, which is one reason it has remained a primarily artisanal caught product.

Costs

The following numbers are based on existing data about The Gambian sole fishery, which could help in calculating a West African example of a first approximation of ROI estimate, based on the current change model and assuming investment in FIP-like processes for the O&F Initiative. It includes a look at the current artisanal sole fishery in The Gambia, the costs associated to date to get it close to MSC certification and estimated costs to achieve that aim. Since scale-up is also a significant concern for the O&F Initiative, two potential scale-up examples are suggested for ROI estimations as well: Gambian shrimp as well as cross-border scale-ups into a Gambia-Senegal sole fishery and Senegal shrimp fisheries.

The Gambian Sole Fishery

Potential impacts

- Beneficiaries: 475 sole fishermen (~10% of all fishermen in The Gambia)
- Landings: 1,300 metric tons (2009). Sole constitutes about 4% of total landings
- Export value: ~\$300,000 to 500,000
- Marine ecosystem under improved and effective management – sole management area in The Gambia is 9 nm X approx. 80 miles coastline length = 720 sq. miles = 186,480 hct

Costs

- Pre-assessment to launch FIP and get recommendations: ~\$30,000-50,000 (2009)
- USAID project costs to address 9 points that needed to be addressed \$1,250,000 over five years (\$250,000 per year)¹
- Second pre-assessment, NASCOM needs to come up with \$30,000 to 50,000
- Full assessment that would likely cost between \$40,000 and \$70,000
- Costs to obtain traceability certification and working with processors and middle men: \$100,000-200,000 of technical assistance, assessments, etc. (The seafood companies might be able to help.)
- Once the fishery is certified and the Export companies have the traceability certification, there is an ongoing cost to maintain the label. Approximately \$1,000 in annual fee + 0.5% royalty fee per value of product sold.

Replication and scale

The Gambian Shrimp Fishery

Potential impacts

The Gambian shrimp production is about 420 metric tons (258 artisanal and 162 industrial). The Gambia has about 500 traditional dugout shrimp fishing boats measuring 3 to 4.5 m in length during the low season and about 1,000 boats during the peak season. If you certify sole and shrimp, you have certified over 90% of all seafood exports from The Gambia.

¹ This included funding external technical assistance via URI, paid full-time project manager and a full-time sole extension agent, and associated infrastructure (vehicles, office, computers, etc.). Activities included: stakeholder meetings at landing sites and nationally, capacity building — short- and long-term (international training events – fisheries leader institute, stock assessment trainings, data collection trainings). Small grants for implementing management plan, small grant to NASCOM to hold meetings and develop a business plan. They now have legal status. Funding used to get plan gazetted. Studies conducted were: ETPs, by-catch, assessments of impacts of changes in mesh-size and gears to see how it would reduce by-catch. In-kind contributions were made by Atlantic Seafood for data collection for stock assessments. In total there were three stock assessments.

Costs

There is an opportunity to replicate the work done with the sole fishery for shrimp fisheries in The Gambia. Since the USAID project has improved institutional infrastructure and built capacity, likely half the project budget would be needed to implement the same sort of actions for the shrimp fishery (~750,000). However, the costs for pre-assessments and assessments and royalties and fees would remain the same.

The Gambia-Senegal Sole Fishery

Potential impacts

Other scale-up could be to a Gambia-Senegal artisanal caught fishery. (For the moment we can assume that there would likely be a 2-3 fold increase in volume and number of beneficiaries if this was certified, as the Senegal fishery and fishermen numbers is much greater than The Gambia.) Country scoping studies could help assess the magnitude of this scale up potential more fully.

CRC could in the short-term dig up some first approximation numbers more quickly if needed.

Senegal Shrimp Fishery

Potential impacts

A previous study in Senegal assessed opportunities for eco-labeling several years ago. Casamance shrimp was ranked as most likely first and easiest candidate in Senegal. Casamance is the large hypersaline estuary found just south of The Gambia. The Senegal shrimp fishery in the Casamance and north of The Gambia in the Saloum delta of Senegal are substantially larger than The Gambian fishery. Senegal shrimp fishery has both offshore industrial trawling and artisanal caught components, so perhaps a bit more complicated than The Gambia. In addition, these shrimp fisheries are probably shared stocks with The Gambia, so eventually, coordinated and complementary management plans for Senegal and The Gambia shrimp could lead to bi-lateral certification. As with sole, this would also make the potential illegal trans-border trade in sole and shrimp between the two countries a non-problem for CoC certification.

CRC could in the short term dig up some first approximation numbers more quickly if needed on the Senegal shrimp fishery where there is a good information base.

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