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Final Report
Follow up of SFP AWA Project, to Introduce the Present
Programme Approach and to Identify Further Needs
Mission Reference: ART014GMB

October 2009, The Gambia



Strengthening Fishery Products Health Conditions in ACP/OCT Countries



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October 2009

R. Shotton

**Cardno Agrisystems Ltd in Association with
Megapesca Lda and MacAlister Elliott and Partners Ltd**

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Secretariat of the ACP Group of States or the European Commission**

The picture on the cover shows Tanji Beach fish landing site during afternoon unloading.

**Strengthening Fishery Products Health Conditions in ACP/OCT Countries 8ACPTPS137
Module 4: Strengthening Small Scale Fisheries
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ABBREVIATIONS

ACP	African, Caribbean and Pacific States (Lomé Convention IV)
ACP-OCT	African, Caribbean and Pacific States Overseas Territories and Countries
AWA	Anglophone West Africa Project 2005-2007
CA	Competent Authority
CAP	Common Agricultural Policy
D	Dolars (1€= D37.5; 1\$US = D26.5 at the beginning of August 2009)
EEZ	Exclusive Economic Zone
EU	European Union
FAO	Food and Agriculture Organization
FVO	Food and Veterinary Office
GA FDP	Gambia Artisanal Fisheries Development Project
GRP	Glass Reinforced Plastic
GRT	Gross registered tonnage
HACCP	Hazard analysis and critical control point
IUU	Illegal Unreported and Unregulated Fishing
JICA	Japanese International Cooperation Agency
MOU	Memorandum of Understanding
NGO	Non-governmental organization
PMU	Project Management Unit
SANCO	DG Health and Consumer Protection
SFP	Strengthening Fishery Products
SME	Small and Medium Enterprise
TOR	Terms of Reference
U.K.	United Kingdom

LAYMAN'S OPINION

The artisanal fisheries of The Gambia are of great social and economic importance. Thus, it is necessary that the country derive the maximum benefit from these fisheries. This would provide them with safe fish and considerable nutritional value and also foreign exchange earnings by ensuring that those species of fish that can be sold at high costs on export markets are sold on those markets. Assistance from the European Union (EU) is thus important to ensure that Gambians realise these benefits.

EXECUTIVE SUMMARY

The artisanal fisheries sector provides small pelagic fish for local drying and smoking that are then shipped onward to national and regional markets. Methods used are consistent with traditional practice and demand is driving an expansion of this activity. Temporary constructions in undesirable conditions are being built to undertake fish processing. Fish quality from this type of processing would be unacceptable on European markets. This activity will be limited by the supply of firewood, which is already trucked considerable distances.

The other major activity of the artisanal sector is the targeting of high-value species (shrimp, cuttlefish, lobster, sole and several percid species) that have a ready market in Dakar and could be sold to great benefit in Europe. This type of fishing may involve trips of up to a week and in these cases icing of the catch is essential. While these boats must use ice boxes, none were of suitable construction. These species are also taken during shorter trips during which no ice may be used.

The fisheries associations play an essential commercial and social role in The Gambia's fishing communities. However, in most cases their management is weak and through failure to make appropriate financial contingencies, two associations are now unable to produce ice. In the case of Banjul, this is the sole function of the association. Nearly 90% of landings go through the top five landings centres, four of which are on the Atlantic coast.

The national export-processing sector is moribund and suffers from undercapitalization and risk of product rejection if they attempt to target European markets – a risk none can afford. Only one plant was operating at the time of the visit of the mission. None have the underlying profitability to upgrade their operations. The withdrawal of processors from buying fish from the artisanal sector – essentially their sole source of product – has consequentially changed the artisanal fishery market with some main landing centres sectors having been forced to stop operations.

Assistance can be provided to (a) increase the management capacity of the fishing associations; (b) to provide plant workers with training on fish quality and safety issues; (c) make available insulated containers for pirogues and landings sites; (d) implement a pirogue registration scheme (as required by the *Fisheries Act (2007)*) and (e), develop a model fish landing and auction site.

RÉSUMÉ OPÉRATIONNEL

Le secteur des pêches artisanales fournit un peu de poisson pélagique pour le séchage et le fumage expédié ensuite vers les marchés nationaux et régionaux. Les méthodes utilisées sont consistantes avec une pratique traditionnelle et la demande mène à l'expansion de cette activité. Des constructions temporaires sous des conditions indésirables ont été érigées pour la transformation du poisson. La qualité du poisson de ce type de transformation serait inacceptable sur les marchés européens. Cette activité sera limitée par la fourniture du bois à brûler déjà transporté par camion à des distances considérables.

L'autre activité majeure cible les espèces à valeur élevée (crevettes, seiches, homard, sole et autres espèces de percidés) qui ont un marché actif à Dakar et qui pourraient être vendues en Europe avec un grand profit. Ce type de pêche peut impliquer des voyages d'une semaine et dans ces cas, le

glaçage de la prise est essentiel. Bien que les bateaux doivent utiliser des casiers frigorifiques, l'expert n'a pas vu aucune construction appropriée. Le transport de ces espèces peut également être court, ne nécessitant pas de glace.

Les associations de pêche jouent un rôle commercial et social essentiel dans les communautés de pêche gambiennes. Cependant, dans la plupart des cas, leur administration est pauvre et en raison d'erreurs commises dans la création de contingents financiers appropriés, deux associations sont désormais incapables de produire de la glace. Dans le cas de Banjul, il s'agit de la seule fonction de l'association. Presque 90% des débarquements ont lieu via les cinq premiers centres de débarquement, dont quatre sont situés sur la côte Atlantique.

Le secteur national du traitement de l'exportation est moribond et souffre de la sous-capitalisation et du risque de rejet dans leur tentative visant à cibler les marchés européens – un risque que personne ne peut se permettre. Seule une usine était exploitée au moment de notre visite. Aucune n'avait la rentabilité sous-jacente pour la mise à niveau des exploitations. Les fabricants ayant cessé d'acheter du poisson au secteur artisanal – essentiellement sa source unique de produit – ont modifié en conséquence le marché de la pêche artisanale, quelques centres de débarquement principaux ayant été forcés d'arrêter les exploitations.

Une aide peut être fournie visant à l'augmentation de la capacité d'administration des associations de pêche ; (b) pour assurer la formation des travailleurs de l'usine à la qualité du poisson et aux problèmes sanitaires ; (c) pour la mise à disposition de conteneurs isolés destinés aux pirogues et aux sites de débarquement ; (d) mise en place d'un système d'enregistrement des pirogues (comme exigé par les *Lois sur la Convention en matière de pêche (2007)*, ainsi que (e), d'un modèle de débarquement de poisson et d'un site de vente à la criée.

1 INTRODUCTION

This report attempts to address the deficiencies in the way artisanal fisheries are undertaken in the Gambia that result in fish product that is of unacceptable quality for European markets. The commonly poor-quality product that is produced also has domestic costs arising from 'post-harvest losses' and poor food safety, though lack of dietary substitutes and traditional dietary practices means that domestic demand for fish, no matter its condition, remains strong in The Gambia. Further, the strong markets in nearby Senegal mean that those species in greater regional demand can be easily sold on to that country's markets and at higher prices that are offered in The Gambia. It was claimed that some of this product would then be re-exported to Europe. This report both supplements and complements the much more extensive diagnoses reported by Lamans (2006 a, b, c and 2007) but whose focus was mainly on fish quality and fish safety; this report takes a more strategic view and addresses different terms of reference. In general, the experience of this mission endorses the diagnoses reported by the two veterinarians who undertook the Lamans' work. However, it is hoped that this report provides a more detailed analysis of the strategic reasons for the failure of the industry to improve the quality of its product, and more lately, the much diminished activity of certain sectors of the industry.

It is the view of the expert that it will be impossible to address the problem of inadequate fish quality and safety in The Gambia outside of the wider context of the marginal, if any, profitability of the fisheries as they currently occur and the operational and policy factors that result in their poor financial and economic performance. Indeed, it is most likely that the means of improving fish quality and safety will be found only through changes that improve profitability across the sector, possible only through reconsideration of existing government practices and policies. Changes are necessary, through higher prices, to create the market incentives to improve fish handling techniques both prior to the point of first sale and in the subsequent distribution of the product, whether on domestic or export markets. What appear to be generally deteriorating economic conditions in the country will exacerbate the difficulties in resolving these issues.

At the time of visit of the expert, the domestic 'industrial' processing sector had essentially stopped buying fish from artisanal fishermen. A common reason cited was rising fuel costs but it was apparent that the sector in general is severely under-capitalized¹ and probably had low profitability even during past conditions of good market demand. It was reported that several companies had stopped operations while owing artisanal fishermen for previous deliveries of fish. Of the local and socially important operations of fishing associations, those of the Banjul Association had stopped as of June this year with the failure of their ice manufacturing plant. The central activity of provision of ice by the Baikau Fishing Association had also stopped because of lack of funds to repair its ice manufacturing equipment and power generators. Thus, only two fisheries associations remain active, on the Atlantic Coast at Tanji and Gunjur.

This report describes:

1. reporting in relation to the terms of reference
2. observations on the general state of the fishery as they relate to the objectives of the visit
3. relevant Fisheries Department practices and
4. draft feasibility studies that are presented as separate Terms of Reference documents for future technical activities.

¹ Bank financing rates were cited as being from 27% - 29%.

2 CONTEXT OF THE ASSIGNMENT

2.1 The Gambian context

2.1.1 The Fisheries

The Gambia is one of the smallest West African states with a coastline of 80 km and a correspondingly small European Economic Zone (EEZ). However, this general region of the Canary Current has extremely productive fisheries deriving from upwelling zones in the region, especially to the north, that drive enhanced primary productivity. The types of fish harvested include species highly sought on international markets – shrimp, lobster and a variety of demersal and benthic-pelagic species. These species are supplemented by even more abundant small and medium-sized pelagic clupeid species. The small pelagic species are readily accepted into a West African-wide regional trade: in the case of Gambia, as a smoked product that can be transported, stored and sold without refrigeration. This product is also highly accepted, if not preferred, as a food item and is well received even in urban markets. Other larger pelagic species, e.g. barracudas, are also abundant. The estuary that The Gambia surrounds has even greater productivity and small subsistence-scale fisheries are to be found in all areas of the estuary, though the principle fisheries occur in the most westerly quarter of the country.

Although an important part of the fishery is referred to as ‘artisanal’, it is misleading to consider it as structurally simple or undeveloped. While the non-industrial sector uses wooden vessels that are without, e.g. radar or echo sounders (at least not yet), the vessel designs used are the result of a lengthy evolution to best suit their operating situations. Use of mobile phones, even for fishermen in dugout canoes, seemed almost universal and many vessels are reported to be using global positioning systems. Similarly the marketing arrangements include activities on a global-scale as well as important West African-wide trading practices.

The inevitably-used pirogue is of planked construction and may be scaled up to 20 m or more in length. It is capable, by pushing over rollers, of being taken up surf beaches and can be launched, reasonably safely, through breaking surf and thus they do not need a harbour from which to operate, an important attribute on the African Atlantic coast. These boats have an elongated form and their small cross-sectional profile made them easy to paddle and now, efficiently propelled by outboard motor. Similar designs, provided by donors and capable of construction in the Gambia, made entirely of fibreglass, are now being used. Crew sizes can vary from around two up to 25 depending on the type of fishing gear being used – hand-lines and small gill nets or ‘purse seining’ using surround nets. A ‘foreign’ community of Ghanaian fishermen, now resident 40 years in “Ghana Town” used a large dugout canoe of a type that could not be made in the Gambia, and also planked pirogues. Voyages, when sufficient ice is available, can last up to 5 – 7 days but 4 days is commonly the length of a trip. If the vessel is salting fish at sea, trips of 2 – 3 week are undertaken.

Most catch is sold to traders (banabanas) on the beach and individual fishermen often have a close and long-standing relation with these traders who may provide credit and other assistance when needed. Some product is bought by women for immediate processing by smoking, especially bonga – the regionally-abundant small pelagic fish; catfish is another species highly sought for smoking. Once smoked, the product may be sold throughout The Gambia and neighbouring countries. The fisheries association in Gunjur, along with individual traders transport iced fish to internal markets. Smoked fish has a characteristic strong flavour and is a preferred dietary item in The Gambia. Ethnic markets exist in Europe for the product, which is transported by air-freight.

There is a complicated fisheries relationship between The Gambia and neighbouring Senegal. Many fishermen, a majority on the Atlantic coast, are Senegalese. Often they sell directly to Senegalese buyers in the Gambia who trade in CFA and transport the product to Senegalese (usually Dakar) markets. Being Senegalese, there is considerable convenience when this trade is

entirely in CFA, though evidently in these cases the benefits to The Gambia are minimal. It was reported that other Senegalese fishermen transport or transfer their catch at sea for sale outside of the Gambia. Senegalese fishermen may migrate considerable distances, e.g. back and forth to the Casamance and many return to their homes in Senegal during the monsoon season. Overall, their activity is the cause of considerable national angst as it appears to provide little, if any, economic benefit to The Gambia.

Above this, there is an open-seas bilateral agreement between The Gambia and Senegal whereby each others' fishermen can fish reciprocally in the waters of the other, though subject to relevant national laws and regulations. However, the Gambian perspective commonly expressed to the expert is that this is an almost entirely unidirectional process with few, if any, Gambian fishermen fishing in the waters of its neighbour. There is a cap on the gross registered tonnage (GRT) covered by the agreement and vessel participating in the scheme must be licensed. The lack of perceived benefits of the bilateral arrangement to The Gambia was constantly referred to.

2.1.2 The Fisheries Department

The Fisheries Department appears to be adequately funded; there was no lack of vehicles and staff had air conditioning, computers and access to the Internet. The structure of the Department follows the traditional past British model with a Permanent Secretary, Director and staff in the usual functional activities. This structure was reflected in the nature of their operations. There was no specialization by fishery (i.e. species-directed management plans or process) or, more importantly, species working groups, which, in the opinion of the expert, was a serious institutional deficiency that should be rectified. The general functional relation in regard to the industry was that of 'command and control' though it was reported that there was excellent communication with the industry who have more-or-less open access to senior departmental staff.

The absence of a species-specific management focus has important consequences for the limited success of fishery management in The Gambia, whose fisheries resources, in the main, go unmanaged. Only in 2007 was the legislation amended to require registration of all fishing vessels and collection of a registration fee.² This legislation has yet to be operationally implemented and may act as a cornerstone of an over-due policy of limited entry into the fisheries. An effective and useful form of staff appraisal may assist in ensuring that critically important functions, in particular, ensuring product safety and quality, may be given greater attention.

Despite the existence of a functional department (full suite of staff, regular coordination meetings, etc.) The expert was concerned by some practices. For example, the policy of open access to the fisheries, which is common in West Africa, reflects a view that there is plenty of fish still available in the sea for capture –this is an issue that urgently must be addressed. The use of trammel nets to harvest lobster with the result of growth-overfishing³ indicated lack of enforcement of conservation regulations. While unhygienic fish handling practices were not uncommon the fisheries inspection service has neither been regularly reporting on this, nor making recommendations and enforcing regulations.

No fisheries management plans exists though there is a need at least for programmes for lobster, shrimp, gastropods, small pelagics (bonga and sardinella), barracuda, Sciaenid and catfish resources. The type of fish smoking (Choco technique – from Ghana) uses considerable amounts of firewood and better Ghanaian (Fanti) techniques may exist, though the local view was that the technique in use was a superior method. While licensing and registration of boats has been part of the law/regulations since 2007, as yet no action has been taken to implement this essential management step.

² D300 for small vessels; D500 for large.

³ Capture of individuals before they have a chance to reach a larger more-valuable size, if not sexual maturity as well.

When management was asked as to what they saw as the main problems, a common response was IUU fishing, though no particular evidence was offered that this is occurring. Given the small size of the Gambian EEZ it is hard to see that this is a major problem. Two new patrol boats have just been received from Taiwan in the last two months but they are not yet operating. Convictions had been obtained in the past for improper storage of fishing gear for vessels transiting the Gambian fishing EEZ.

2.1.3 The Processing Sector

It was commonly reported that the 'industrial' processing in The Gambia was moribund. Seven establishments were reported registered as permitted to export to European Union countries, though the expert was aware of only two that were doing so, one the subject of a Rapid Alert while the expert was in the Gambia⁴. It was also reported that some processors had stopped operations while owing artisanal fisherman payment for deliveries of product. Two processors were visited, both of whom stressed the difficulty/impossibility in accessing working capital and funds for upgrading facilities, which they wished to do. Both referred to the national disadvantages of the current bilateral fisheries agreement with Senegal.

Both operators visited also stressed their wish for assistance in receiving more training for their staff to ensure fish quality and safety and that they felt unable to provide the training they believed was necessary. One operator suggested the need for video materials.

Processors were asked if they thought there were too many fish plants in The Gambia for the size of the country. This was not something they had thought about but they didn't disagree with the possibility. However, no strong views existed.

2.1.4 The Fishing Associations

Five sites that hosted fishing associations were visited. The most active were those at Gunjur and Tanji; the activities of those at Baikau were now restricted to renting locker space and ice-box storage on the jetty. At Banjul, with the cessation of ice production there are no sources of revenues – it was not clear what the status of their 18 employees were or if they continued to be paid. Both Gunjur and Tanji owed their facilities to Japanese International Cooperation Agency (JICA) donations but now must finance their own operations. The expert was impressed with the quality of management at Tanji, at Gunjur – the factory manager is a trained vessel technologist. A private producer was finishing an ice plant at Sanyang. Certainly at Gunjur (the largest landing site), Baikau and Banjul, accounting practices have not extended to contingency planning for spares, maintenance and amortization. Management at all associations were adamant that more ice could be sold if they had the capacity to produce it, though no analysis of the costs of producing ice was available.

The expert's impressions of the associations were that they were important, if not essential, entities in the prosecution of fisheries in The Gambia and deserve support. Should they disappear there would be no other appropriate entity that can supply the services they are now undertaking. Such demise would be accompanied by considerable social distress and would be unacceptable.

2.2 Relation of Other Technical Assistance

The work of this mission directly complements, and in certain fields, supplements, the earlier work done in the Gambia by Lamans (2006a, b, c and 2007). The focus of that two-expert mission included potential sources of contamination to fish products in the Gambia and as such broadly reviewed the industrial situation in the country in relation to sources of possible product contamination. The focus in this report has been far more on the processes of the fisheries and fisheries management, how they affect the profitability of the fishery and the ability of the industry

⁴ Polyaromatic hydrocarbon in smoked shrimp.

to address the problems of quality and fish safety. In this context, this report is more strategic in approach.

3 METHODOLOGY

The approach used in undertaking this assignment consisted of first, briefing meetings with staff of the Fisheries Department, Department of State for Fisheries, Water Resources and National Assembly Matters; then visits to five fishing sites and representatives of the respective fishing associations at these sites. These visits were supplemented by two visits to local fish processors and a meeting with a third fish processor at the Fisheries Department. Meetings continued with Fisheries Department staff and at the end the mission presented its findings to the Director of the department.

4 PERFORMANCE IN RELATION TO TERMS OF REFERENCE

4.1 Addressing the Terms of Reference

During this first intervention of Module 4 SFP Programme, the expert discussed the concepts of the SFP, their strategy and training capacities and tools that are available. The expert found that the Director of the Fisheries Department had an accurate understanding of the objectives of the programme and how it may and may not assist fisheries in The Gambia. He had participated in discussions concerning this programme in Brussels through the CAP EU fisheries programme.

The following Terms of Reference (TOR) were addressed and the expert gave his comments in regard to what was possible to be addressed while in The Gambia.

4.2 TOR Duties Undertaken

4.2.1 Evaluation of fishing boat hygiene conditions and measures to preclude contamination

Artisanal fishing boats in The Gambia are constructed following a traditional planked-hull design that is scaled up for larger boats. The narrow cross section of these boats means that they are not well suited for provision for fish ice boxes. Despite this, thwart-ship ice boxes are installed in these pirogues though it complicates fore-aft movement by crews who then have to scramble over these boxes when moving backward and forward on the vessel. Provision of ice boxes on vessels targeting higher-value is unavoidable as they make trips of 4 – 7 days and icing of the catch then becomes absolutely essential.

There is no provision (nor would any be practical) for lavatories on these vessels and such related activities must be undertaken over the side of the pirogue. No water is carried other than for drinking purposes and seawater would be used for personal hygiene requirements.

On larger vessels, a two-chamber ice box can be used that allows storage of ice while one part of the ice box is filled with fish and ice. Once this is filled, further fish must be mixed with ice in the second chamber. On smaller pirogues, a freezer chest may be carried long-ships which will provide some insulated storage for ice and fish though this was not a common arrangement. Once emptied, only seawater from the beach, and thus potentially contaminated, would be available for washing out the fish box.

Pirogues that target small pelagics (bonga and Sardinella) make short trips and their landings are inevitably processed by smoking or drying. No preservation of the catch is attempted. Small pirogues using hand-lines were commonly landing their catch of high value species with no ice – this often was deferred until the fish buyer arrived with his own ice (sometimes bringing it from Senegal).

4.2.2 Awareness of fishermen and other operators and workers on the need for adequate hygiene conditions, on board and at shore

All to whom that were interviewed were aware of the benefits of icing the fish catch and the more general needs of fish safety and quality. However, this did not automatically translate in to inevitable icing of the product. Rather, when buyers supplied ice, it was used. If ice was used at sea, it would be used again on the landed fish to the extent practical, i.e. it would have to be transferred along with the catch. Depending on the buyer (and the existence of a buyer) new ice, or additional ice would be used on shore.

The fish processors that were interviewed were acutely aware of the need for the highest standards of hygiene. However, all expressed the view that further training should sensitize their staff to the need for continual vigilance in relation to personal hygiene practices and care in relation to hygiene when handling fish and their products.

Fishing association management were aware of the deficiencies in handling practices of fish products at their landing sites (need for more ice, more fish boxes, more chill room capacity, etc.) but believed that accommodation of these requirements was beyond their control and their capacity. Fish processors also expressed similar views and all three interviewed stressed that lack of capital and lack of finance precluded their upgrading of conditions in their fish plants.

4.2.3 Assessment of fish quality and risk of contamination up to the factory deck

The Fisheries Department has what appears to be a fully equipped laboratory for testing fish and fish products at its headquarters in Banjul. There are two full-time staff, a M.Sc. scientist and an accredited technician. Another staff member is completing his PhD in fish microbiology in the United Kingdom (U.K.). Many of the staff were trained in the determination of fish safety and fish quality. At the time of visit of the expert no testing was being done.

During the field visits it was able to assess the quality of the fish through standard visual methods (appearance of the skin, eyes, gills and gill covers) but no assessment of the fish safety was possible... With few exceptions, the appearance of fish was acceptable. This was also true for the smoked fish product though the product presentation was 'rough' and would benefit from grading. However, in the case of dried fish, as it was processed by exposure to the sun, it was subject to wetting from the monsoon rains and was inevitably covered with flies. This was also commonly the case of product on sale in markets where in some cases it was displayed in piles placed on newspaper on the ground.

Reference to 'the factory deck' appears to be an error in the case of Gambian fisheries.

4.2.4 Determine the scope for improving hygiene and preservation by the provision of materials and tools (engines, fishing gear, insulated boxes...)

There is an adequate level of mechanization in the Gambian fisheries and vessels: other than those fishing immediately adjacent to their landing sites they are equipped with outboard motors. No doubt there are marginal operators who would welcome assistance in the purchase of motors but this possible assistance temptation should be avoided.

The fishing gear that is used has evolved to suit the situation in which the fishery operates and is of standard design, e.g. gill nets, bottom set nets, surround nets, etc. As for the case of motors, there was no evidence of unfulfilled demand for additional fishing gear. Nor did there seem to be any scope for improving gear designs. (however, some types of gear should be prohibited, e.g. the use of trammel cast nets to catch lobster).

Major scope exists to expand the use of insulated, washable fish boxes on pirogues. Such devices are essential in the case of extended fishing trips, i.e. 4 days to one week but even where they are used; their materials of construction are less than ideal. Commonly they have been constructed of

wood with aluminium sheeting on the inside. Internal ridges and corners would make satisfactory cleaning difficult and as only seawater is used for this purpose, conditions even approaching sterile would be impossible to achieve.

A major scope also exists to expand the use of plastic fish boxes at landing sites. These may be insulated in which case they are used for temporary storage of fish between the time of landing, sale and subsequent dispatch. Commonly, those in current use were old and cracked so that melt water could seep through to the insulated linings. Fishing association managers all asked for assistance in obtaining more such boxes (and were apparently without the finances to do so by themselves).

There was also an evident need for more plastic fish transfer boxes as levels of product requiring handling appeared to be increasing and plastic trays were needed for storage of fish both in the chill rooms and outside when only ice was being used to reduce fish temperature.

One fishing association manager that shipped product to the interior was emphatic that a need existed for more and new insulated fish boxes at the landing sites and at fish sale sites in the interior. If there was unsold product after a delivery from the association, there was no means of chilled storage so that the product could be sold at a later time. Little if any capital was available for the industry to provide these requirements.

4.2.5 Evaluate the level of availability of ice and proper landing places

Availability of Ice

Of the landing sites that were visited, ice of appropriate quality and in appropriate quantity was available at:

- Gunjur
- Tanji and
- Brufut.

At Banjul (city) fishing association, the ice plant requires repairs and is not operating. There is a commercial provider of ice who requires payment one day in advance. No information was obtained on the type or quality of ice that was available.

At Baicau, the ice plant in the fishing association appears to be obsolete and beyond cost-effective repair. Association managers claimed there was a great unfulfilled demand for ice that was being inadequately met by small-scale local traders.

At Mandinari, ice was bought from local shops 2 – 3 km distant from the landing site and was provided by the shrimp buyer. These suppliers made ice by freezing water in 1 – 1.5 kg plastics bags in domestic and small-scale commercial refrigerators.

At Sanyang, a private block-ice⁵ manufacturing plant was near completion. Otherwise, good quality flake ice was brought by the buyer from Brufut (though no evidence of this was seen).

At Wharfi i Njago there was no capacity to manufacture ice – it would have to be delivered from nearby Banjul. Neither did any product unloading facilities exist.

The fishing associations at Tanji and Gunjur charge D5/kg (€0.14/kg); when ice was available at Banjul and Bakau, the price was D2/kg (€0.054/kg). There is a privately-owned ice plant at Brufut (also D5/kg).

The managers at Tanji and especially at Gunjur both claimed that they could sell more ice if it was available. The lack of ice at Banjul and Baikau is especially grave. There is limited chill room

⁵ Block ice has better keeping properties for taking to sea but must be crushed before use. It is difficult to crush it evenly.

capacity at Bakau but otherwise the major fish landing sites are without ice. Management at both locations expressed great concern about this situation and the hardship it was imposing.

In the case of Banjul, the equipment is fairly new and replacement of spare parts of the German-built equipment and some basic maintenance should be sufficient to enable ice production to be resumed and consideration should be given to provision of this assistance even as a humanitarian gesture. At Baikau, the ice machinery is older (16 years) and from its appearance would appear to have had minimal maintenance. Though the mission expert is not competent in refrigeration engineering, the expectation of the mission is that the equipment should be replaced and the three generators, also not working, scrapped.

Section 7 of the *Fisheries Regulations (1995)* notes that fishery products during storage and transport must be kept at temperatures between 0° and 4°C but the text does not imply that it is intended to cover fishing boats – *though this is not excluded and a court test case might be needed to confirm if this is the case*. The point is that the Fisheries Department may have the option of requiring that pirogues landing a specified list of species are required to land them in an iced condition. This would require equipping them with ice boxes and the taking of ice to sea. If they believe that they do not have this option, it is one that they should consider.

Proper Landing Places

What defines ‘Proper’ landing facilities must be interpreted in a Gambian context. With the exception of Baicau where there was a jetty, albeit never used because of design failings, all landings from pirogues take place on the beach. The definition of ‘landing site’ must then refer to the facilities adjacent to the beach landing sites. Depending on the fish species, volume of landings and market demand, much, if not most, fish landings are sold and dispatched without passing through any receiving facility. Depending on the intended manner of processing, this may or may not be preferred. For example, many buyers who will smoke their product buy the small pelagic fish directly from the pirogues, or soon after, while the fish are still on the upper reaches of the beaches. From the point of purchase it is transferred by wheel barrow to where it will be smoked (or dried). More valuable, usually demersal species, if not bought immediately by suit-case buyers and related fish traders, will be stored in fish boxes while awaiting the arrival of fish buyers. It may be stored overnight in chill rooms if unsold or awaiting the arrival of a fish truck.

Thus, of the landing sites visited, ‘proper’ landing sites may be deemed to exist at:

- Gunjur
- Tanji
- Brufut
- Sanyang and
- Baicau.

4.2.6 Assess needs for training and extension to promote hygiene and better fish preservation

The needs for promoting better hygiene and fish preservation training should be considered in the present context of the fishing industry in The Gambia.

The use of ice in lowering fish temperature appeared to be well appreciated. The reasons for failure to use ice or to use insufficient quantities of ice appeared to be more the result of lack of supply of ice than failure to understand the reasons for lowering fish temperature. Thus, training that emphasized use of ice, while useful for the reasons of repetition, would not change operational practices as the limiting constraint appears to be, in some locations, the insufficiency (or complete lack) of ice supply.

The importance of storing fish in chill rooms was likewise absolutely well understood. It was stressed to the mission on almost every occasion that when fish might not be stored under preferred conditions it was the result of insufficient chill room capacity, or chill rooms were not operating to desirable temperature standards. Thus, 'training' in regard to these issues would not resolve an issue that was the consequence of lack of, or unavailability of, capital to undertake the required renovations and/or reconstruction of installations/facilities where they did exist.

4.3 Additional tasks not covered in the Terms of Reference

Artisanal Vessel Registry

West Africa countries remain one of a few areas in having open access fisheries, i.e. whoever wants to fish, can. The Fisheries Act (2007) has introduced the concept of vessel licensing for the artisanal fishery which is the essential first step to managing fishing effort and providing a means of enforcing conservation regulations. This, it is believed, would be an extremely important management step for the artisanal fishery. The Director explained that there had been no effort to implement the vessel registry as it was felt that a public education process was required first. While it is not exactly consistent with the TORs of the mission, this step, in the view of the expert, is of such importance that should the Fishery Department prove committed to implementing the concept assistance should be offered to them to do so. The expenses involved would be for staff field travel, data base programming and data entry. Fishery Department staff should be able to undertake this initiative. Minimal, if any, expatriate assistance may be needed.

5 DISCUSSION

5.1 Status of Fish Processors

The nearly moribund state of fish processing in The Gambia (all but one of the 'certified' processors were not operating for financial reasons at the time of the visit) will greatly reduce the benefits of activities directed at training of factory personnel in fish quality and fish safety issues. This situation is exacerbated by the weak financial conditions that underlie their operations. In all cases where interviews were conducted it was stressed to the expert that the operators were not in a financial situation whereby they could fund the upgrades that were either necessary or desirable to confidently satisfy the safety requirements of the European market. It was also reported that fear of product rejection by EU inspectors was now an important consideration in their considerations regarding sale of product on the European market.

Thus, in the expert's opinion, a more strategic approach is necessary to deal with the significant problems that are confronting Gambian fish processors. Such an approach must focus on the reasons for their poor financial condition and the policy environment that will be needed to enable them to operate in a profitable manner. Only in this way is a sustainable industry structure possible that can generate the wealth needed to maintain plant and equipment in a required condition.

A strategic approach should include ways of re-starting exports of fish through collaborative ventures that reduce the risk for the various participants and at the same time encourage market-driven operating procedures.

5.2 Status and Role of the Fishing Associations

Several themes were uniformly present in the discussions with all associations.

- *Economic and Social Importance to Local Communities of the Fishing Associations*

It was clear that in the major landings communities of Gunjur and Tanji, the fishing associations play a major role in the economic life of the communities – they are the main players. As such, it is unavoidable that they must play a central role in any assistance that might be provided. In Baicau, the importance of the fishing association is being eroded by their incapacity to provide ice, a major reason for their existence.

- *Failure to budget/plan for repairs and maintenance*

None of the associations evidently planned for financial contingencies for maintenance and/or repairs. This cost, when incurred, was presumably charged against regular cash flows. If there was capacity to pay the costs, the repairs were made: if not, they weren't.

- *Failure to budget/plan for depreciation/amortization*

None of the associations noted making any financial contingency for amortization costs: indeed there was no indication that this was even part of the budgetary conscience. Consequentially, when equipment required replacement there was no means of doing so other than by appeals to the Fisheries Department.

- *Commitment and enthusiasm of those interviewed*

All association staff met by the expert expressed strong commitment to the objectives of their associations and the worth of sustaining their activities. All demonstrated a good understanding of their local members and the current situation.

- *Lack of understanding of business planning and its need*

None of the association managers showed any explicit understanding of the need for regular budgeting or what was involved in business planning. With one exception there was no apparent concept of planning for contingencies, assessment of business risk or risk management in even its simplest form.

- *Poor past operational planning*

In several instances the equipment of design of plant was not optimal for the situation in which it was placed. This is scarcely the fault of the managers who often were the victim of poor planning and execution on the part of donors. However, it was they who had to assume the burdens arising from this. This manifested, e.g. in poor design of ice plants, poor installation of equipment and equipment requiring expensive and hard-to-obtain spares.⁶

5.3 The Fisheries Department Fish Quality and Safety Laboratory

The functioning of this laboratory has a central role to the mission and the opportunity was taken to inspect the facility and enquire about its activities. The laboratory itself was clean and appeared well equipped both with scientific instruments and testing equipment and laboratory agents. There was a wide range of chemicals including incubation reagents and related diagnostic materials. Some of the (all unused) microbiological materials were approaching, or just beyond, their expiry date. An office, which also appears to be well equipped, is attached to the laboratory.

Despite this promising appearance, there was no sign of any current or recent activity and it is the view of the expert that the facility is not being used in the most productive manner. Al Hafeeze (2008) describes early 2008 training activities funded by the Arab Bank for Development in Gambia and gives a detailed list of training, equipment and materials that have been provided. If this report accurately describes past activities, comprehensive and appropriate training has been

⁶ Lack of foreign exchange is a chronic problem in The Gambia.

provided to a range of Fisheries Department staff (no list is given of those who received training). The report notes that the programme addressed the issues of:

- i. Determination of fish quality (including organoleptic tests)
- ii. Factors affecting deterioration
- iii. Laboratory testing (techniques, reporting etc.)
- iv. Water testing
- v. Microbiological tests (*Salmonella spp.*, *Vibrio parahaemolyticus*)
- vi. Biochemical tests (Total volatile nitrogen, peroxide value and Trimethylamine. Bisulphites in shrimp) and
- vii. Non-enzymatic tests.

The Director of Fisheries raised the possibility of receiving further technical assistance to get the Fish Quality and Safety Laboratory functioning. It is not clear how such assistance would be effective.

5.4 Training Needs

The issue of training was raised with all relevant people interviewed. Invariably, this received a positive response. Two areas were identified for potential training:

- i. Training to fish processor employees in fish handling and fish quality requirements and practices. All three fish processor managers to whom that were interviewed were enthusiastic about this – though it was a pity that currently only some smoked product was being produced for export. It is expected that many government employees could be available for such ‘training’, though there appears to be little chance that they would be in a position to apply course material that was presented.
- ii. The second area identified where training would be of benefit was that of fishing association managers in terms of business management planning. Such ‘training’ has been provided in the past, but only at a general level, and then as part of a much larger programme. The business management planning component occupied half a day of a 5-day course. The critical issues that must be covered would be:
 - a. Planning contingencies for repairs and maintenance
 - b. Planning contingencies for depreciation/amortization
 - c. Monitoring costs and revenues and
 - d. Auditing and to use it as an assistance activity.

A course of 5 days should be sufficient and could be presented by an expatriate or national if one with an appropriate background can be identified. The course should use the operations of the respective fisheries associations as case study material. Pressure to include excessive staff from the Fisheries Department should be resisted.

Considerations were given to providing a course on Hazard Analysis and Critical Control Point (HACCP) but given the only one plant was operating and then at a minimal level, it did not appear that sufficient benefits would arise from such an effort to justify its cost.

5.5 Revolving credit for small scale equipment and materials

Revolving credit schemes have previously existed through cooperative associations and credit union. It was reported that loan default was high and the process was suspended. Instead funding was made available to groups of fishermen, which could include the fishery association as the

responsible debt holder. It had proved difficult to give loans to poor fishermen, administratively and in terms of being repaid. The primary office for providing credit appeared to be the *Social Fund for Development*, which has a fisheries component but charged 19% - 21% on loans⁷ and has finance from the Arab Bank for Development in The Gambia. However, their financing costs were considered prohibitive and the Director of the Fisheries Department expressed considerable scepticism that this fund could be helpful: however he strongly averred a preference for the *National Association of Cooperative Credit Unions*, which he said were structured to provide this type of assistance: further, their cost for finance was 10%.

The Fisheries Department experience was that it was preferable to lend to fishermen's groups (60 – 70% repayment record) and that the priority should be given to marketing rather than to the harvesting sector.

5.6 Relevance of Mission

How relevant was the mission to The Gambia to the problems of fish quality and safety encountered? The factor overriding all considerations of fish quality and safety was the severe under-capitalization of all levels of the fishery – the fishermen, fishing associations and fish processing companies followed by the absence of, or minimal level, of profitability in the sector. Any sustained increase in fish quality and safety will require a sector able to fund the activities that are involved. All processors lamented their financial inability to upgrade their factories. This has resulted in a vicious cycle – Gambian fish products now have a dubious reputation in Europe: as a consequence there is additional safety testing that results in further demurrage costs. Managers, naturally, then became more risk adverse in terms of shipping product to Europe – indeed one fishery association manager noted that his association cannot afford the risk of having a container of product rejected, and thus has stopped exporting to the European Union.

The expert cannot provide any easy 'quick-fix' solutions for these problems. Structural problems as identified here must be resolved and this may even require waiting for an upturn in the business management cycle.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Issue: Fishing boat hygiene and measures to preclude contamination [of fish product]

- *Conclusions*

- i. Little else appears possible in the way of washing other than washing fish and fish storage equipment with clean seawater. Provision of clean piped water to where the vessels unload is impractical and should not be considered.
- ii. For the small pelagic fishery, little can be done or appears to be required in the way of fish contamination while the product is on the boats. Contamination of the product in the shore environs appears inevitable and the scale and cost of possible solutions would be significant. It is unlikely that there is sufficient profitability in the fishery to enable the industry to fund required changes themselves.
- iii. For pirogues targeting demersal species and shrimp there should be:
 - Regulatory requirement to carry ice and ice boxes. The profitability of the fishery should be sufficient to permit proper icing and purchase of suitable ice boxes (assistance could be considered through provision of an appropriate micro-credit scheme).
 - Enforcement of measures to ensure that these fish are landed iced.

⁷ Should be confirmed with the EU Office, Banjul

- iv. Landing of product on jetties may result in sea-side contamination at landing sites. Further, use of jetties would restrict the speed at which pirogues could be unloaded – with beach loadings essentially the entire fleet can unload simultaneously, given the presence of sufficient labour to do this.

- *Recommendations*

- i. Advise the Fishery Department on the need for appropriate regulations concerning use of ice and ice boxes; if requested, assist drafting regulations and assist with compliance and enforcement of the regulations
- ii. Facilitate introduction and use of ice boxes: (1) assist fishing associations in the provision of ice boxes for fishing boats through design and implementation of micro-finance schemes; (2) assist in the provision of insulated temporary storage fish boxes both for inland fish distribution sites and fish landing centres; (3) review need for other easy-to-clean plastic fish boxes for storage of product;
- iii. Review the feasibility of using jetties for transfer of fish from pirogues to shore: one fish landing site is provided with a jetty, albeit unused. With only minor effort, it may be determined if such a method is with, or without any operational merit.

6.2 Issue: Awareness of fishermen and other operators and workers on the need for adequate hygiene conditions, on board and at shore

- *Conclusions*

- i. Good level of awareness at all ex-vessel levels. From discussions at many levels, it is concluded that with specific exceptions, workers and managers have a good understanding for the needs for good fish handling practices.
- ii. In the case of sun-dried fish product, processing practices are clearly deficient but addressing these will require a major national effort in upgrading processing practices.

- *Recommendation*

- In general it is recommended that no action is needed under this rubric with one exception. It is recommended that the Inspection Service of the Department of Fisheries start undertaking of inspection activities of fish processing practices in the field with particular attention to how sun-dried fish is prepared. Their report should be to their Director.

6.3 Assess the quality of fish and risk of contamination up to the factory deck

- *Conclusions*

- i. The quality of fish as generally received in pirogues is excellent for vessels undertaking short less-than-one-day trips. Quality of landed fish where vessels have undertaken longer trips, usually targeting benthic species depends on the sufficiency of ice taken for the length of the trip.
- ii. Fish quality, once landed, depends on the availability of ice and chill room capacity. When ice use is deficient and chill room capacity is limiting, fish quality suffers.

- *Recommendations*

- i. The Fisheries Department should take advantage of the benefits of introducing and enforcing a handling requirement that boats fishing demersal species take ice to sea with them (note – most do)

- ii. Ensure that this will not cause too much disruption through lack of ice by progressive implementation of any regulation and a programme of stakeholder education.

6.4 Determine the scope for improving hygiene and preservation by the provision of materials and tools (engines, fishing gear, insulated boxes...)

- *Conclusions*

- i. Pirogue engines and fishing gear are not an issue and this topic does not require attention.
- ii. Major scope exists to expand the use of insulated, washable fish boxes on pirogues.
- iii. There is a need for more and new insulated fish boxes at the landing sites and at fish sale sites in the interior
- iv. Little if any capital is available for the industry to do this either of these.

- *Recommendations*

- i. Investigate the feasibility of micro-credit schemes to fund the provision of ice boxes for pirogues
- ii. The feasibility of implementing such credit schemes should be investigated in conjunction with regulatory changes
- iii. Evaluate feasibility of discouraging/banning discharge of 'blood water' while catch is being landed at beach landing sites.

6.5 Evaluate the level of availability of ice and proper landing places

- *Conclusions*

- i. The availability of ice is variable depending on site. Where ice-making equipment has broken down there is no ice supply other than from off-site producers or small-scale retail shop outlets. There is an urgent need to address this problem.
- ii. This problem cannot be separated from low profitability in the fishing industry associations and the related weak management capacity present in most of the associations.
- iii. Fish product may be, in some places, simply landed on the beach. Proper handling then depends on the fish buyer – who may or may not be able to provide ice.
- iv. A definite need exists to rectify general deficiencies in landing installations at some sites (e.g. Sanyang).
- v. More generally, scope exists for overall improvements at all landing sites: much of these are related to the need for improved temperature control of fish.
- vi. No landing site exists that can provide conditions that even approach those that would be needed to provide modern and sanitary first-point-of-sale fish landings conditions.

- *Recommendations*

- i. Investigate provision of credit for supply of fish boxes at landing sites where this is needed
- ii. Evaluate the feasibility of a highly upgraded fish landing site with a central point of sale for at least demersal fish.
- iii. Investigate means for restoring ice production at Baicau and Banjul fishing associations.

6.6 Assess the needs for training and extension to promote hygiene and better fish preservation

- *Conclusion*

The common view was that any such training would be of use. But, with only one fish plant operational, the benefits will now be limited. Consideration should be given to cost-effectiveness in the current fish processors' operating situations.

- *Recommendation*

Review costs and benefits of organizing a training course on improving fish quality and safety in Banjul for plant workers.

6.7 Draft an action plan to solve main shortcuts found, including specific TORs.

These are addressed in the series of terms of reference for future interventions listed in Annex IV.

7 BIBLIOGRAPHY



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8 LIST OF ANNEXES

- Annex 1: Mission Terms of Reference
- Annex 2: Programme and People Met
- Annex 3: Locations and Landing Sites with Priority for Further Action
- Annex 4: Terms of Reference for Potential Follow-up Studies
- Annex 5: Programme of Action

Annexes

ANNEX 1: MISSION TERMS OF REFERENCE

 SFP ACP/OCT Programme 8ACPTPS137 	
Assignment Name	– Follow up of SFP AWA Regional project, providing assistance to the artisanal fisheries and determining further assistance needs
Code Number	ART014GMB
Coordinator	Claus-Norbert Fink
Technical Verifier	<i>Oscar do Porto – Food safety Expert - PMU</i>
Background to assignment	<p>Gambia is in Annex II, of COMMISSION DECISION of 6 November 2006 establishing the lists of third countries and territories from which imports of bivalve molluscs, echinoderms, tunicates, marine gastropods and fishery products are permitted. The industrial processing establishments receive fish and shrimp from industrial trawlers and from the artisanal fleet. Between 1997 and 2001 exports of fish and fishery products to international markets from Gambia declined from 1844 tonnes in 1995 to 692 tonnes in 2001. The main export commodities were dried fish, frozen fish and frozen shrimp or prawns.</p> <p>The Food and Veterinary Office the of SANCO of the European Union carried out an inspection in January 2006 which found a series of deficiencies but considered the type of products as low risk items and asked for correction of main deficiencies on which the country responded with an action plan</p> <p>The regional SFP project 20/06/04 AWA, provided technical assistance to Gambia, Ghana, Liberia and Sierra Leone, from 2005 to 2007. The project recommended a series of actions to be developed, concerning the CA, the testing laboratories, the industry and the artisanal sector.</p> <p>The SFP Programme capacity is being reinforced by the introduction of four modules of intervention. The programme is now in the position to propose a consistent follow up to the work done by the regional project and to provide assistance, training and other technically support necessary to satisfy the requirements in all areas of concern.</p> <p>Following the recommendations of the regional project, Module 4 now can provide assistance to the artisanal fishing, verifying the results of the previous assistance provided by the SFP AWA project. The overall intervention will serve to give directions for improving handling as required, putting special attention in the availability of ice, made of clean, appropriate water and other hygiene conditions.</p> <p>This first intervention by the new SFP Module 4 was structured to evaluate de degree of compliance of the production means and the hygiene of their operation, to determine in collaboration with the national authorities the specific additional needs for assistance and drafting the related TORs particularly in connection with the landing places linked with the industry , namely Bakau, Tanji and Banjul, but not exclusively, depending on recent evolution</p> <p>The mission shall identify the existing non compliances and training needs and propose an action plan to solve it. The government, through the CA shall make the link between the small-scale fisheries actors and the SFP Programme, and facilitate the</p>

	logistics and arrangements, but the assistance is focused in the industry specific needs.
Issues to be addressed	<p>By this first intervention in the country by the Module 4 of the SFP Programme the expert shall assess the production chains actual conditions, with particular view of the following aspects:</p> <ul style="list-style-type: none"> - The hygiene conditions of the fishing boats, the fish preservation on board and at shore, as well as the downloading and transport operations. - The awareness of all people involved on the importance of hygiene and the legal hygiene requirements. - The final condition of fish in terms of quality. - Adequate conditions e. g. availability of potable water and ice at landing sites: - The needs of materials and tools to improve handling and preservation (engines, fishing gear, insulated boxes etc.) <p>The needs for training</p>
Activities of the Consultant	<p>The Expert shall perform the following tasks:</p> <ol style="list-style-type: none"> a) To evaluate the fishing boats hygiene conditions and measures to preclude contamination b) To assess the awareness of fishermen and other operators and workers on the need for adequate hygiene conditions, on board and at shore. c) Assess the quality of fish and risk of contamination up to the factory deck. d) Determine the scope for improving hygiene and preservation by the provision of materials and tools (engines, fishing gear, insulated boxes...) e) Evaluate the level of availability of ice and proper landing places. f) Assess the needs for training and extension to promote hygiene and better fish preservation g) Draft an action plan to solve main shortcuts found, including specific TORs
Expected outputs	<p>The results of the intervention should be reflected in a final report demonstrating the activities and the results of the evaluations done. The report shall contain clear conclusions and recommendations, as well as TORs for more specific interventions to mitigate the problems encountered.</p> <p>The report to be produced using MS Word (and other MS Office software if necessary) and be available in hard copy and electronic form, both in Word (and other MS Office Programmes as appropriate) and all the elements together in single file pdf format. All training materials should form part of the report. The electronic size of the file should be as small as possible reducing any single figure or picture to a maximum of 100kb.</p>
Format of each report	<p>MS Word Styles for SFP Programme Reports and Technical Papers</p> <p>Structure</p> <p>Title pages in model format as per other Programme Reports</p> <p>Table of contents, to three levels, formal format</p> <p>List of annexes</p> <p>Tables of tables, figures and pictures all formal format</p>

	<p>Abbreviations and acronyms</p> <p>Executive Summary (1 to 2 pages), in English and French , Portuguese or Spanish where appropriate</p> <p>Introduction</p> <p>Main body of report divided into different sections as appropriate (up to 20 pages)</p> <p>Conclusions and recommendations (each recommendation must be preceded by a conclusion, that refers to a discussion in the main body of the report)</p> <p>Annex 1 Terms of reference (if appropriate)</p> <p>Annex 2 Schedule and people met (with contacts)</p> <p>Any other annex(es) as appropriate</p> <p>Format as per Project Management Unit (PMU) indications.</p>																						
Report to be reviewed by	Carlos Palin, Programme Manager																						
Duration	<table border="1"> <thead> <tr> <th>Action</th> <th>Working days</th> </tr> </thead> <tbody> <tr> <td>Briefing at PMU in Brussels</td> <td>1</td> </tr> <tr> <td>Travel to the Gambia</td> <td>1</td> </tr> <tr> <td>Inception, briefing (CA & Delegation)</td> <td>1</td> </tr> <tr> <td>Sanitary conditions évaluation</td> <td>5</td> </tr> <tr> <td>Identification of materials and training needs</td> <td>3</td> </tr> <tr> <td>Debriefing to Authorities and concerned groups to be identified</td> <td>1</td> </tr> <tr> <td>Travel to Europe</td> <td>1</td> </tr> <tr> <td>Debriefing of PMU in Brussels</td> <td>1</td> </tr> <tr> <td>Writing of report</td> <td>3</td> </tr> <tr> <td>Total</td> <td>17</td> </tr> </tbody> </table> <p>Total working days will equal 17 calendar days.</p>	Action	Working days	Briefing at PMU in Brussels	1	Travel to the Gambia	1	Inception, briefing (CA & Delegation)	1	Sanitary conditions évaluation	5	Identification of materials and training needs	3	Debriefing to Authorities and concerned groups to be identified	1	Travel to Europe	1	Debriefing of PMU in Brussels	1	Writing of report	3	Total	17
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Start date	Estimated end of July 2009																						
Completion dates for Reports and fee payment schedule	<p>Draft report 3 working days after the return to Europe</p> <p>Comments Within 2 weeks after reception</p> <p>Final report 5 working days after reception of comments by SFP/PMU including comments of authorities</p> <p>Final report bases for relevant payments</p>																						
Experience and qualification	<p>Expert of category II (at least 10 years of experience)</p> <p>Fish preservation handling and Small scale fish processing expert- Anglophone</p> <p>- Qualifications and skills</p> <p>University diploma agro industries, veterinary science, fish-food technology fisheries biologist or equivalent</p> <p>English speaking. The knowledge of French and Portuguese will be advantageous</p>																						

	<p>- General professional experience</p> <p>At least ten years' of relevant project experience in fisheries development and sanitary conditions in African, Caribbean, Pacific (ACP) countries techniques development</p> <p>- Specific professional experience</p> <p>At least five years work in artisanal fish processing from catch to industry. Good knowledge of the EU standards of fish for human consumption is essential. Experience in adults training on the job would be of advantage.</p>
Locations and travel	Based in xx, 1 travel to Gambia and up to 14 days' per diem (12 + 2 Bx)

ANNEX 2: PROGRAMME AND PEOPLE MET

Person and Organization	Comment
Thursday 30 July	
Director, Fisheries Department	Received at airport and taken to hotel
Friday 31 July	
	Discussions with Department staff at Fisheries Department; attended end of workshop to design training relating to fisheries, Serekunda.
Saturday 1 August	
Director, Fisheries Officer	Discussions
Tanji Community Fishing Proposal	Field visit to Burfut, Tanji and Gunjur fishing centres. Observations on operations, interviews with managers, fishermen on beach and buyers.
Monday 3 August	
	Review of workshop on training, Director's office. Met stats officer, Fisheries Department to quiz about quality of data. Interviewed Pater Ndow, Serekunda Fish Market project. Discussed general problems of fisheries in Gambia and relations with Senegal. Met Department's Product Inspector.
Tuesday 4 August	
	Discussions with Director on the status of the visit of the mission and progress to date. Provided with report No. 6 of Lamans – general report, technical report and main report; discussed training needs of CA.
Asberr N. Mendy; Head of Fisheries Research and officer responsible for statistics	Discussed catch and effort data collection programme in The Gambia. This uses a sample scheme that should produce unbiased but probably rather imprecise results. Data however, can probably be used with confidence.
Wednesday 5 August	
	Visited Product Testing Laboratory to personally assess status of facility. Discussions with chief scientist and technician about the work programme.
	Visit to Baikau fish landing centre; discussions regarding problems and status of centre with management, plant operator and accountant. Particular emphasis of problems arising from inability of the centre to produce ice and offer satisfactory chilled storage.
	Visit to FAO Office, Banjul
	Discussions with Director on the status of visit of the mission and progress to date. Provided with training session reports.
	Discussions with Mr Amado Seine; Deputy Minister. Focus on (futility of) sole certification programme; proposed recommendations of visit of the mission; funding possibilities for fisheries management in The Gambia
Thursday 6 August	
	Waited at Department until 1010 for staff member to arrive to accompany the mission to a landing site: proceeded to Mandinari.

	Interviewed shrimp buyer and two fishermen. Returned via Wharfi i Njago, major shrimp landing site west of Banjul. Then continued to Banjul Ice Plant at the Banjul fish landing and processing 'centre' adjacent to Albert Market. Left Department at 1530 for hotel after discussions with Director.
Friday 7 August	
	Met Kandaka Manager in Directors office – discussed his company's operations and situation; met Manager of fibre glass operations and discussed construction of ice boxes, fishing boats. Half day.
Saturday 8 August	
Director, Fisheries Department, local fisheries officer	Field trip to Sanyang, an important beach landing site and then Tanji at the time of bonga/Sardinella landings
Sunday 9 August	
	Depart for Brussels in evening
Monday 10 August	
	Informal debriefing, Brussels; depart for Crete/home

People Met during August 2009 EU SFP Gambian Mission

Name	Position	Organization	Address	Telephone	e-mail
BOJANA , Ousman		Baicau Fishing Centre	Baicau	220 993 3261	gamtida@hotmail.com
JALLOIW , Bubacar	Technical Manager				
SAHHEH , Filly	Manager				
Mrs SENGHORE , Awa	Book keeping clerk				
JAGNA , Biram	Chairman	Banjul Community Fish Association	Banjul Fish Landing Site	994 7334	
SANNEH , Momodou Lamin	Manager			771 1831	
SAINE , Amadou	Deputy Permanent Secretary	Dept. of State for Fisheries, Water Resources and National Assembly Matters	7 Marine Parade Banjul The Gambia	220 422 8216 220 992 2244 220 449 7962(H)	Ab.saine@yahoo.com
Mrs Njeu , Sirra	Programme Officer	FAO, Gambia		9927625 449 8034	
JAWNEH , Abdoulie	Managing Director	Fibre-Glass Factory	Bikama Town Western Region The Gambia	220 994 8369 722 1677	Fibreglassgambia@yahoo.co.uk
BAH , Matar	Economist	Fisheries Department	6 Marine Parade Banjul	220 422 9327 220 990 5859	Matar_bah@yahoo.com
DAMPHA , Nfamara Jerro	Director			220 422 3373 220 420 1515	jerro@ganet.gm gamfihs@gamtel.gm
DARBOE , Famara S.	Deputy Director			220 201 283	gamfish@gamtel.gm
JOBE , Ousman Mass	Principle Fisheries Officer			220 420 1283 220 932 9560	omassjobe@yahoo.com
KANYI , Babanding	Laboratory assistant				
MARONG , Ansumana	Fisheries assistant, Sanyang			220 700 4781	
MENDY , Asberr N.	Principle Fisheries Officer (Research): Head of Statistics			220 420 2355 220 990 0792	anmendy@yahoo.com

MBYE , Ebou Mass	Fisheries Officer/Gear Technologist			220 420 1515 220 994 4789	emmbye@yahoo.co.uk
NJIE , Momodou	Food Technologist			220 422 3345 220 799 1789	chonobamodado@yahoo.co.uk
NDOW , Peter	Project Coordinator	Gambia Artisanal Fisheries Development Project (GAFDP)	6 Marine Parade Banjul The Gambia	220 422 9708 220 990 7728	peterndow@hotmail.com
NEGUM , Matty		Gunjur Community Fisheries Project	Gunjur Kombo South Region	771 1023	
TOURAY , Alieu Nyakassi	General Manager		Box 5392 Brikama	220 448 6266 220 980 8505	alieunyakassi@yahoo.com
BSANYANG , Edrissa	Manager	International Pelican Seafoods LLC	PMB 37 Cotton St Banjul	991 5590	Pelican_ed@hotmail.com
SECKA , Ahmed Tijan	Shrimp buyer	Mandinari	Mandiari		
JADARMAN , Famara	Fish smoker	Sanyang Fisheries Association	Sanyang		
JALLOW , Alieu M.	Dealer in General Goods and Merchandise	Tanji Community Fisheries Project	Tanji, Kombo South District The Gambia	220 9 928 199 / 220 742 4957	
SARR , Baboucarr	General Manager			441 2012 779 4018 220 995 354	
SINYIAN , David		Kendaka Food and Int.	42 Grant Rd Banjul	991 7902	
MAHONEY , Rosamond	Managing Director	Rosamond Trade Co. Ltd 1 Oyster Creek Ave Sarro	Box 231 Banjul	220 422 8222 220 798 4935	Rosamondtrade2003@yahoo.com

ANNEX 3: Locations, Landing Sites and Groupings that the Mission considers should be given Priority for Consideration of Further Action

SITE AND ORGANIZATION	COMMENT
Banjul Community Fish Association, Banjul	Assistance needed to re-establish production of ice by repair of ice-making machinery. Probable cost <€8000.
Baicau Fishing Centre, Baicau	Assistance needed to re-establish production of ice by replacement of ice-making plant – this will be a major capital investment. Assistance in upgrading state of chill room; assistance in provision of ice boxes.
Gunjur Community Fisheries Project, Gunjur	Assistance in repair of one diesel generator; assistance in provision of ice boxes; assistance in upgrading of interior fish marketing sites.
Tanji Community Fisheries Project, Tanji	Assistance in provision of ice boxes; Evaluation of feasibility of implementing a regional ‘fish auction centre’ for higher value species.
Banjul Community Fish Association, Baicau Fishing Centre, Gunjur Community Fisheries Project and Tanji Community Fisheries Project.	Training of management in business planning and fish processing centre financial management.
Various, Banjul	Funding of short course of fish safety and quality; One or two days?
Department of Fisheries, Banjul	Assistance with artisanal boat registration programme
National	Development and implementation of a single-species fishery management process
National	Development of a fish exporting consortium

ANNEX 4: TERMS OF REFERENCE FOR POTENTIAL FOLLOW-UP STUDIES



1 Introduction

Terms of reference are provided for the following activities:

Training of national fishing centre managers and senior administrative staff on business management practices in running a fish receiving and ice supply Centre
 Purchase/Procurement and Provision of Fish Boxes and related micro-credit requirements
 Analysis of the Feasibility of Establishing a Receiving Centre and Fish Auction at a Location on the Atlantic Coast of The Gambia
 Enumeration and Licensing of Fishing Boats in the Artisanal Sector, The Gambia
 Creation of a Functioning Gambian Fish Exporters' Consortium
 Development of a Single-species Management Advisory Group and Management Plan as a Pilot Model for Fisheries Management in The Gambia.

2 Terms of Reference

TERMS OF REFERENCE: i. Training in Business Management



 SFP ACP/OCT Programme 8ACPTPS137 	
Assignment Name	<i>Training of national fishing centre management and senior administrative staff on business management practices in running a fish receiving and ice supply centres, The Gambia</i>
Code	ART 014 GMB Module 4: Support to the artisanal fisheries
Coordinator	Module 4
Technical Verifier	<i>Oscar do Porto – Food safety Expert – PMU</i>
Background to assignment	<p>This proposal is the consequence of a visit to review current practices to ensure fish quality and safety by the ‘artisanal’ fisheries sector in the Gambia. Its genesis lies in the consultant’s visit to fish landing and processing sites where fish are received from ‘artisanal’ vessels, then iced or processed by sun drying, smoking or salting prior to despatch to regional marketing centres. During the visit, the extensive and important nature of the ‘artisanal’ fishery in The Gambia was confirmed: it supplies large amounts of premium and middle-grade fish species usually in good, if not premium, quality at the point of product discharge from the fishing boats. The catch, after appropriate treatment, then enters an extensive marketing chain, either in fresh (i.e. preserved with ice), or smoked/dried form. Significant numbers of people are involved in this trade, either in harvesting, marketing and/or processing and the various fish products are a primary source of national nutrition. The harvesting sector has regional employment significance with the participation of fishermen from an extended area in Senegal and as far distant as Ghana.</p> <p>Further, if deficiencies in current fish handling practices, especially after landing of the product, can be resolved, much of the landing could potentially fetch much higher prices on European markets. However, until fish landing sites can function on a reliable financial basis through good management practices, and so ensure the sustainability of market supply, access and penetration of these markets remains only a possibility.</p> <p>It was readily apparent to the consultant that their longer-term sustainability/success of current local-area fish trading enterprises, both of fishermen’s associations and those of</p>

	<p>donor funded operations will critically depend on their managers and senior staff significantly upgrading their administrative and operations skills and gaining a good understanding of:</p> <ul style="list-style-type: none"> Business planning methods and their implementation Capital financing and cash flow management Management of amortization and financing costs and crucially, Successfully resolving the challenge of maintenance scheduling and its ongoing implementation. <p>It was apparent during the consultant’s visit that while the operations of recently constructed facilities are functioning satisfactorily these too will soon be threatened by the failure to anticipate the need for, and implement, appropriate maintenance schedules and adopt standard budgetary practices to account for fixed-asset capital amortization and capital-item replacement contingencies.</p> <p>These TOR are intended to describe the follow up activities required to address these needs.</p>
<p>Issues to be addressed</p>	<ul style="list-style-type: none"> Absence of knowledge of, and skills in, business planning methods including: <ul style="list-style-type: none"> Analysis and monitoring of plant performance, costs, revenues and net cash flows modelling of future costs and revenues projections business risk analysis and management capital finance planning good management practices fulfilling national audit requirements management of cash flow Monitoring of standard fish processing centre fixed and operating costs of: <ul style="list-style-type: none"> Ice production Generation of electricity Operation of freezing equipment Building maintenance and replacement New building costs Vehicle fleet management Staff management Management of small-scale fishing vessels Capital costs Operating costs Amortization Maintenance and repair Whether it is realistic that computer literacy can be attained by the target training group Basic computer literacy skills in Microsoft Office Skills in using spread sheets; when to use them and when to use data bases Practice in the application of case studies on based on their individual situations Establishing and/or benefiting from existing mentoring services – costs and benefits Determine the extent and timing of such a course Determine the availability and suitability of existing local courses. Determine the identity of potential presenters.
<p>Activities of the Consultant</p>	<p>The Expert shall perform the following tasks:</p> <ul style="list-style-type: none"> Meet with relevant Fisheries Department staff to confirm agreement to proceed with holding the training course and/or seminars (this may be done by correspondence) Meet jointly with the relevant staff of the Fisheries Department, fish handling centres and other relevant local organizations to gain broad agreement on the nature and timing of the courses Decide on the need for a Memorandum of Understanding: If yes, draft and finalize the

	<p>MOU.</p> <p>Agree with the co-organizers:</p> <p>The length and content of the course and/or seminar series</p> <p>Discuss potential presenters for each topic and the need for out-of-country presenters</p> <p>Need for printed materials</p> <p>Post course follow-up</p> <p>Design and implementation of a mentor programme</p> <p>Establish a budget that will consider:</p> <p>The nature of the course (it should probably be held in Banjul)</p> <p>Desirable number of participants/associations involved in the exercise</p> <p>Decide whether a 'per diem' must be/should be paid to participants and</p> <p>Other attendance incentives</p> <p>Expenses (if any) to be paid to local organizers</p> <p>All other local costs – renting of a location, refreshments, per diems, etc.</p> <p>Out-of-country expenses.</p> <p>A draft time table and course syllabus should be will be prepared and discussed with relevant stakeholders for provisional agreement.</p> <p>The consultant will determine the benefits of involving other relevant fisheries and aid agencies and recommend appropriately.</p>		
Expected outputs	<p>The results of the intervention should be:</p> <p>Enhanced understanding of the national fishing centre operators and managers to:</p> <p>Undertake standard business planning practices in a fisheries operations context</p> <p>Improved understanding of all components - cost and revenue elements involved in the running of a fishing processing establishment</p> <p>National accounting standards and auditing requirements</p> <p>Implementation of appropriate accounting practices for fish handling centres</p> <p>Application of Introductory and Medium-level Computer Practices to the operation of fish processing centres</p> <p>Improved management skills</p> <p>Sustainable and profitable operations of artisanal fishermen's associations and donor-funded fish handling centres in the Gambia</p>		
Format of each report	<p>MS Word Styles for SFP Programme Reports and Technical Papers</p> <p>Structure:</p> <p>Title pages in model format as per other Programme Reports</p> <p>Table of contents, to three levels, formal format</p> <p>List of annexes</p> <p>Tables of tables, figures and pictures all formal format</p> <p>Abbreviations and acronyms</p> <p>Executive Summary (maximum 1 page), in English</p> <p>Introduction</p> <p>Main body of report divided into different sections as appropriate (up to 20 pages)</p> <p>Findings, conclusions and recommendations (each recommendation must be preceded by a conclusion, that refers to a discussion in the main body of the report)</p> <p>Annex 1 Terms of reference (if appropriate)</p> <p>Annex 2 Schedule and people met (with contacts)</p> <p>Any other annex(es) as appropriate</p> <p>Format as per PMU indications.</p>		
Report to be reviewed by	Carlos Palin, Programme Manager		
Duration	Action	Working days	
	Briefing at PMU in Brussels		

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Completion dates for Reports and fee payment schedule	<p>Draft report 5 working days after the return to Europe</p> <p>Comments Within 2 weeks after reception</p> <p>Final report 5 working days after reception of comments by SFP/PMU including comments of authorities</p> <p>Final report bases for relevant payments</p>																
Experience and qualification																	
Locations and travel	Based in, .. travel to Brussels, 1 travel to the, internal travel and up to ...days per diem																


TERMS OF REFERENCE: ii. Provision of Fish Boxes

 SFP ACP/OCT Programme 8ACPTPS137 	
Assignment Name	<i>Purchase/Procurement of Fish Ice Boxes</i>
Code	ART 014 GMB Module 4: Support to the artisanal fisheries
Coordinator	Module 4
Technical Verifier	<i>Oscar do Porto – Food safety Expert – PMU</i>
Background to assignment	<p>This proposal is the consequence of a mission to review current practices to ensure fish quality and safety by the ‘artisanal’ fisheries sector in the Gambia. During the visit, the extensive and important nature of the ‘artisanal’ fishery in The Gambia was confirmed - it supplies large amounts of premium and middle-grade fish species that are usually received in good, if not premium, quality at the point of product discharge from the fishing pirogues. The catch, after appropriate treatment, then enters an extensive marketing chain, either in fresh (i.e. preserved with ice), or smoked/dried form. Significant numbers of people are involved in this trade, either in harvesting, marketing and/or processing and the various fish products are a primary source of national nutrition. The harvesting sector has regional employment significance with the participation of fishermen from an extended area in Senegal and as far distant as Ghana.</p> <p>To best maintain the quality of the fish it should be iced immediately on capture and be kept as close to 0°C until further processed or consumed. This is facilitated if the fish are not disturbed by repacking for display, grading etc. This is usually difficult to achieve. Despite this, ‘fish boxes’ are commonly used, supplemented by the use of baskets, and at times protected from the sun simply by layers of paper. Provision of proper ice boxes would contribute to maintaining a low, melting-ice, temperature of the fish.</p> <p>Fish boxes may be: Custom built, either of wood or fibre glass, which is preferred, that are placed athwart ship in the pirogues. Ice is placed in the containers and the fish are placed in these as they are removed from the net. These boxes are too big to be used for removal from the fish at the time of discharging the catch and the fish at that point are transferred to another container for carrying to the beach. These boxes have a capacity of approximately 1 – 1.25 m³. Imported GRP fish boxes are considered to be too expensive and similar constructions by local manufacturers can be used. Fish capacity is estimated at around 250kg net of ice. Plastic-tray-like boxes are used for storage of product in the chill room. These may be stackable and their limited size means that their use for product distribution is limited. Storage containers that remain at distribution points. (These were not seen). These are of great importance in acting as receptacles at points of resale. In this way, there is reduced pressure to sell deliveries of fish quickly once it has been received from the landing site. Such re-distribution points are fairly common and of considerable importance in the wholesale/retail network in the interior of the country. Preference has been expressed for glass-reinforced plastic (GRP) as the material of construction in preference to wood both because of its greater durability and because of ease of cleaning. It was apparent that those involved are familiar in working with this material.</p> <p>These TOR are intended to describe the follow up activities required to address these</p>

	needs.		
Issues to be addressed	<p>Type(s) of fish boxes preferred: By function – at sea; for cold store purposes; for transportation and for product storage at the place of ultimate wholesale/resale. Construction costs Who should receive these boxes and Under what conditions capital finance planning and assistance may be required Total number of boxes and type to be supplied Views and policies of the CA.</p>		
Activities of the Consultant	<p>The Expert shall perform the following tasks: Meet with relevant Fisheries Department staff to confirm agreement to proceed with the proposal to provide such fish handling equipment (this may be done by correspondence) Meet jointly with the relevant staff of the Fisheries Department, selected fish handling centres and other relevant local organizations to gain agreement on who shall receive this gear Initiate the procurement process following EU guidelines and procedures. Confirm distribution of the material to the agreed recipients Follow up (one year later) to evaluate benefit of programme, e.g. suitability of the boxes, their durability, etc. This may be undertaken by The Gambian Fisheries Department.</p>		
Expected outputs	<p>The results of the intervention should be: Improved fish safety and quality at all points of the harvesting/distribution chain where icing is required Equipping of a to-be-specified number of boats with insulated fish boxes Development of the technical capacity to build and supply such boxes in The Gambia.</p>		
Format of each report	<p>MS Word Styles for SFP Programme Reports and Technical Papers Structure: Title pages in model format as per other Programme Reports Table of contents, to three levels, formal format List of annexes Tables of tables, figures and pictures all formal format Abbreviations and acronyms Executive Summary (maximum 1 page) in English Introduction Main body of report divided into different sections as appropriate (up to 20 pages) Findings, conclusions and recommendations (each recommendation must be preceded by a conclusion, that refers to a discussion in the main body of the report) Annex 1 Terms of reference (if appropriate) Annex 2 Schedule and people met (with contacts) Any other annex(es) as appropriate Format as per PMU indications.</p>		
Report to be reviewed by	Carlos Palin, Programme Manager		
Duration	Action	Working days	
	Briefing at PMU in Brussels		
	Travel to Duty station		
	Inception, briefing (CA & Delegation)		
	Discussions with national Fisheries Department and managers of local area fish landing associations		
	Debriefing with Fisheries Department, CA and EU		

	<table border="1"> <tr> <td>Representation, Banjul</td> <td></td> </tr> <tr> <td>Travel to Europe</td> <td></td> </tr> <tr> <td>Debriefing of PMU in Brussels</td> <td></td> </tr> <tr> <td>Writing of report</td> <td></td> </tr> <tr> <td>Total</td> <td></td> </tr> </table> <p>Total working days will equal xx calendar days.</p>	Representation, Banjul		Travel to Europe		Debriefing of PMU in Brussels		Writing of report		Total	
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Completion dates for Reports and fee payment schedule	<p>Draft report 5 working days after the return to Europe</p> <p>Comments Within 2 weeks after reception</p> <p>Final report 5 working days after reception of comments by SFP/PMU including comments of authorities</p> <p>Final report bases for relevant payments</p>										
Experience and qualification											
Locations and travel	Based in, .. travel to Brussels, 1 travel to the, internal travel and up to ...days per diem										



TERMS OF REFERENCE: iii. Fish Auction Landing Site

 SFP ACP/OCT Programme 8ACPTPS137 	
Assignment Name	<i>Analysis of the Feasibility of Establishing a Receiving Centre and Fish Auction at a Location on the Atlantic Coast of The Gambia</i>
Code	ART 014 GMB Module 4: Support to the artisanal fisheries
Coordinator	Module 4
Technical Verifier	<i>Oscar do Porto – Food safety Expert – PMU</i>
Background to assignment	<p>This proposal is the consequence of a visit to review current practices to ensure fish quality and safety by the ‘artisanal’ fisheries sector in the Gambia. Its genesis lies in the consultant’s visit to numerous fish landing and processing sites where fish are received from ‘artisanal’ vessels. The fish are then iced, sun-dried, smoked or salted. During the visit, the extensive and important nature of the ‘artisanal’ fishery in The Gambia was confirmed in that it also supplies large amounts of premium and middle-grade fish species usually in good, if not premium, quality at the point of product discharge from the fishing boats. The catch, after appropriate treatment, then enters an extensive national, regional and/or international marketing chain, either in fresh (i.e. preserved with ice), or smoked/dried form. Significant numbers of people are involved in this trade, either in harvesting, marketing and/or processing and the various fish products are a primary source of national nutrition. The harvesting sector has regional employment significance with the participation of fishermen from an extended area in Senegal and as far distant as Ghana.</p> <p>If deficiencies in current fish handling practices, especially after landing of the product, can be resolved, much of the landing could potentially fetch high prices on European markets. However, until fish landing sites can function on a reliable financial basis through good management practices, and so ensure the sustainability of market supply, access and penetration of these markets remains only a possibility. While demersal fish may be iced at the point and time of landing, this was not without common exception.</p> <p>There remains no open auction where bid prices would be transparent; nor is there an incentive to fishermen to ensure that catch would go to an auction if beach deals dominate how transactions are handled. A major first ex-vessel point of sale may act as a focus for landings made elsewhere (even in Senegal) if prices received reflect better competition in the bidding process and higher quality of the fish that are sold through the ability to provide optimum handling practices (shade, chill rooms, ice, proper facilities for fish-transport truck manoeuvring s, etc.).</p> <p>These TOR are intended to describe the follow up activities required to address these needs.</p>
Issues to be addressed	<p>Absence of a ‘modern’ EU-class fish landing and auction site in The Gambia</p> <p>Operational Requirements for the implementation of such a centre</p> <p>Identification of the factors necessary to ensure its success</p> <p>Attitude of those who are likely to be affected (positively and negatively) and dealing with issues that arise as a consequence</p> <p>Estimation of the benefits expected from such a landing site</p>
Activities of the Consultant	<p>The Expert shall perform the following tasks:</p> <p>Meet with relevant Fisheries Department staff to present a concept proposal and critical proposal review</p> <p>Identify the best site for the centre (or at least options and relative benefits)</p> <p>Present the concept proposal to the local fishing associations and relevant community</p>

	<p>groups React accordingly Undertake the feasibility assessment including risk assessments Establish a 'qualitative' budget of the expenses that would be involved in the construction of such a fish landing centre and Prepare an activities time-line.</p>																								
Expected outputs	<p>The results of the intervention should be a feasibility study of the viability of an integrated fish landing centre Its best location How it would function A <i>pro forma</i> budget and A staffing table with all relevant details. This concept would be prepared to national stakeholders for evaluation and comment. If it is determined that the concept is viable, a strategy for financing should be developed and, as possible, approaches made to potential sources of funding.</p>																								
Format of each report	<p>MS Word Styles for SFP Programme Reports and Technical Papers Structure: Title pages in model format as per other Programme Reports Table of contents, to three levels, formal format List of annexes Tables of tables, figures and pictures all formal format Abbreviations and acronyms Executive Summary (maximum 1 page), in English Introduction Main body of report divided into different sections as appropriate (up to 20 pages) Findings, conclusions and recommendations (each recommendation must be preceded by a conclusion, that refers to a discussion in the main body of the report) Annex 1 Terms of reference (if appropriate) Annex 2 Schedule and people met (with contacts) Any other annex(es) as appropriate Format as per PMU indications.</p>																								
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Experience and qualification	
Locations and travel	Based in, .. Travel to Brussels, 1 travel to the, internal travel and up to ...days per diem


TERMS OF REFERENCE: iv. Enumeration and Licensing of the Gambian Artisanal Fishing Fleet

 SFP ACP/OCT Programme 8ACPTPS137 	
Assignment Name	<i>Enumeration and Licensing of All Artisanal Fishing Boats in The Gambia</i>
Code	ART 014 GMB Module 4: Support to the artisanal fisheries
Coordinator	Module 4
Technical Verifier	<i>Oscar do Porto – Food safety Expert – PMU</i>
Background to assignment	<p>This proposal is the consequence of a visit to review current practices to ensure fish quality and safety by the ‘artisanal’ fisheries sector in the Gambia. Enumerating and licensing fishing boats serves three conventional and critically important fisheries management functions:</p> <p>It provides information on the:</p> <ul style="list-style-type: none"> nature of the harvesting capacity of the industry that is essential for effective planning and It provides the basis for limiting entry into the fishery and thus overexploitation and depletion of the fishery resources and It enables particular vessels to be identified for enforcement purposes. <p>These functions are vital to the profitability and thus sustainability of all sectors of the fishing industry in The Gambia, not least that of the artisanal sector. The need to undertake such an exercise is noted in the Report of Lamans s.a. (undated). Section 7.4 of their General Report No. 6 notes the need to ‘list’ freezer, semi-industrial fishing vessels and canoes. This need is repeated on page 9 of their progress reports summary and is referred to directly in the Section titled “TO DO’S” of the Technical Report No. 6 (“The CA then needs to ... including the lists of vessels”).</p> <p>Although this is not explicitly referred to in Lamans’ report No. 6, the entire sustainability of The Gambia’s fishing sector depends on changing the existing policy of “open access”. Indeed, The Gambia is the only country of the Subregional Fisheries Commission, which encompasses all coastal countries from Mauritania to Sierra Leone, and must be one of the few in world, to maintain an open access fishery for their inshore coastal ‘artisanal’ fishery.</p> <p>Licensing of fishing boats is an essential step in resource management and controlling fishing mortality as it allows catch and effort information to be related to particular vessels of known characteristics. It also provides a basis for the collection of licence fees, which is properly used can give fishermen a sense of responsibility for the fishery in which they participate. It is an essential step (as recognized in the Lamans’ report) for monitoring fish handling conditions on respective vessels as without some form of vessel registry it can be extremely difficult/ impossible to relate inspection of fish handling conditions to a particular vessel at a particular time. Enforcement of regulations is likewise, greatly complicated, if not rendered impossible.</p> <p>No rational explanation could be obtained as to why the Fisheries Department is maintaining the policy of open access as no people interviewed considered the policy to be appropriate for The Gambia in the present conditions of the fishery.</p>

Issues to be addressed	<p>Determine the reasons and degree of commitment of the Fisheries Department to the policy of open access in the artisanal fisheries sector</p> <p>Develop a dialogue on the importance of licensing and controlling fishing effort in the artisanal sector</p> <p>Determine the capacity of the Fisheries Department to:</p> <ul style="list-style-type: none"> enumerate all fishing boats in the country develop and maintain a vessel registry enforce the requirement of vessel licensing develop an appropriate policy relating to vessel licences. <p>The national capacity to undertake such a programme exists given the political commitment to its objectives. However, some external assistance may be required in the design of the data base and in funding the field efforts that would be needed to enumerate the vessels, at least for the initial vessel census.</p>
Activities of the Consultant	<p>The Expert shall perform the following tasks:</p> <ul style="list-style-type: none"> Meet with relevant Fisheries Department staff to confirm agreement and commitment to move to such a licensing policy. In the absence of confidence in the Fisheries Department to adopt such a policy, assist in the policy development process to introduce such a policy. Assist the Fisheries Department to identify the ongoing requirements for maintaining a complete fishing vessel registry and enforcing its implementation Assist in, or undertake, the design, development of a vessel registry data base Assist in, or undertake, the design, development of a procedure of receipt of vessel licence fees Assist in, and/or design an information dissemination process to ensure acceptance of the policy among vessel owners. Report on the results of the assistance as appropriate. Establish a budget to ensure the licensing system is sustained Advise on regulatory requirements to ensure that the policy is enforced by the Department and complied with by those in the industrial sector.
Expected outputs	<p>The results of the intervention should be:</p> <ul style="list-style-type: none"> A functional and comprehensive fishing vessel registry of all boats operating in the waters of The Gambia A fishing-effort licensing policy, or at least its commencement, that relates fishing effort to resource productivity Regulations that govern the vessel licensing process and penalties for unlicensed fishing vessel operators Ability to relate vessel inspections in regard to fish handling practices and capacity to particular vessels at a later time for either educational/extension purposes or enforcement compliance purposes. Revenues to the government from licence fees that may be used for management purposes, as a form of rent for exploitation of the country's fishery resources or both.
Format of each report	<p>MS Word Styles for SFP Programme Reports and Technical Papers</p> <p>Structure:</p> <ul style="list-style-type: none"> Title pages in model format as per other Programme Reports Table of contents, to three levels, formal format List of annexes Tables of tables, figures and pictures all formal format

	Abbreviations and acronyms Executive Summary (maximum 1 page) in English Introduction Main body of report divided into different sections as appropriate (up to 20 pages) Findings, conclusions and recommendations (each recommendation must be preceded by a conclusion, that refers to a discussion in the main body of the report) Annex 1 Terms of reference (if appropriate) Annex 2 Schedule and people met (with contacts) Any other annex(es) as appropriate Format as per PMU indications.																			
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TERMS OF REFERENCE: v. Creation of a Functioning Gambian Fish Exporters' Consortium

 SFP ACP/OCT Programme 8ACPTPS137 	
Assignment Name	<i>Creation of a Functioning Gambian Fish Exporters' Consortium</i>
Code	ART 014 GMB Module 4: Support to the artisanal fisheries
Coordinator	Module 4
Technical Verifier	<i>Oscar do Porto – Food safety Expert – PMU</i>
Background to assignment	<p>This proposal is the consequence of a visit to review current practices to ensure fish quality and safety by the 'artisanal' fisheries sector in the Gambia. Its genesis lies in the expert's consultations with management of both the Gambian fish processing and exporters and regional Fishing Associations.</p> <p>Neither the commercial processing sector or the Fishing Associations are currently exporting fish, primarily because of the possibility of product rejection on export markets, which creates an unacceptable financial risk to their existence but also because of the difficulty of obtaining working capital. Export of frozen fish is by reefer container (7 – 9 tonnes of product per container) which represents a significant amount of working capital to the individual operators (€30 000) as the fishermen are paid on delivery of the catch. The expected demurrage cost (around 12 days) on the containers in Europe adds a further €100/day which is a significant part of their profit margin. Further, because of the relatively small size of the fishery in The Gambia, accumulating a consignment of 7 – 9 tonnes of high-value fish is a considerable operational difficulty. For these reasons, in practice, the best paying market for high value species landed in The Gambia has become beyond reach with consequential loss of income for artisanal fishermen and those involved in the subsequent marketing chain.</p> <p>The challenge to the SPF mission is to devise a management process that would:</p> <ul style="list-style-type: none"> Reduce the financial risk to individual operators from re-engaging in this export market Benefit from a collective and collaborative action on the part of the processors and Fishing Associations Ensure that the product is handled from the point of capture to the point of export in a way that maximizes its quality and condition of safety. <p>The benefits would be:</p> <ul style="list-style-type: none"> Higher income to artisanal fishermen from greater demand and better prices Increased value added to landings from introduction of 'best practice' fish handling procedures Increased income to fish processors and Fishing Associations Increased economic benefit to The Gambia. <p>These TOR are intended to describe the follow up activities required to address these needs.</p>
Issues to be addressed	<ul style="list-style-type: none"> Confirmation of the willingness of fish processors and Fishing Associations to collaborate in functioning of an exports consortium Confirmation of the profitability of collaborative exporting of selected fish products to European markets Analysis of costs, revenues and net cash flows modelling of future costs and revenues projections business risk analysis and management

	<p>capital finance planning</p> <p>Development of an operational model for the concept:</p> <p>Management and coordination in The Gambia</p> <p>Legal issues (if any)</p> <p>Operation of a freezing capability in Banjul</p> <p>Cold storage in The Gambia</p> <p>Marketing in Europe</p> <p>Undertake a <i>pro forma</i> profit and loss analysis</p> <p>Arrange and undertake coordination meetings of potential stakeholders</p>
Activities of the Consultant	<p>The Expert shall perform the following tasks:</p> <p>Meet with relevant Fisheries Department senior management (and Minister?) to confirm agreement to proceed in developing the concept</p> <p>Develop a programme with the Fisheries Department to undertake consultations with potential partners; identify a liaison officer within the Department to manage arrangements at the national level.</p> <p>Collectively decide on the need for a Memorandum of Understanding: If yes, draft and finalize the MOU.</p> <p>Develop the programme concept with stakeholders who wish to participate in the programme and document:</p> <p>a course of action</p> <p>respective responsibilities</p> <p>a coordination and management mechanism</p> <p>a programme schedule</p> <p>Review any budgetary considerations</p>
Expected outputs	<p>The results of the intervention should be the creation of a functioning fish exporting consortium with:</p> <p>Re-entry of Gambian higher-value fish products into the European market</p> <p>Maximization of added value to the product through strict adoption and implementation of best fish handling practices</p> <p>Increased earnings at all levels of the fish harvesting, processing and marketing levels in the Gambia</p> <p>Increased security of payment by greater ability to deal with reputable European fish traders by offering product of higher quality and great shipment volumes</p>
Format of each report	<p>MS Word Styles for SFP Programme Reports and Technical Papers</p> <p>Structure:</p> <p>Title pages in model format as per other Programme Reports</p> <p>Table of contents, to three levels, formal format</p> <p>List of annexes</p> <p>Tables of tables, figures and pictures all formal format</p> <p>Abbreviations and acronyms</p> <p>Executive Summary (maximum 1 page), in English</p> <p>Introduction</p> <p>Main body of report divided into different sections as appropriate (up to 20 pages)</p> <p>Findings, conclusions and recommendations (each recommendation must be preceded by a conclusion, that refers to a discussion in the main body of the report)</p> <p>Annex 1 Terms of reference (if appropriate)</p> <p>Annex 2 Schedule and people met (with contacts)</p> <p>Any other annex(es) as appropriate</p> <p>Format as per PMU indications.</p>
Report to be	Carlos Palin, Programme Manager

reviewed by		
Duration	Action	Working days
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	Travel to Duty station	
	Inception, briefing (CA & Delegation)	
	Discussions with national Fisheries Department and National Training Authority ; visit to potential course sites	
	Discussions on, and determination of, the course training syllabus; Identification of training aides, materials and needs. Determination of locally available courses and presenters. Discussions with representatives of fishermen’s associations. Debriefing to CA and Representation	
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Start date		
Completion dates for Reports and fee payment schedule	Draft report 5 working days after the return to Europe Comments Within 2 weeks after reception Final report 5 working days after reception of comments by SFP/PMU including comments of authorities Final report bases for relevant payments	
Experience and qualification		
Locations and travel	Based in, .. travel to Brussels, 1 travel to the, internal travel and up to ...days per diem	

TERMS OF REFERENCE: vi Development of a Single-species Management Advisory Group and Management Plan as a Pilot Model for Sector-specific Fisheries Management in The Gambia.

 SFP ACP/OCT Programme 8ACPTPS137 	
Assignment Name	<i>Development of a Single-species Management Advisory Group and Management Plan as a Pilot Model for Sector-specific Fisheries Management in The Gambia</i>
Code	ART 014 GMB Module 4: Support to the artisanal fisheries
Coordinator	Module 4
Technical Verifier	<i>Oscar do Porto – Food safety Expert – PMU</i>
Background to assignment	<p>This proposal is the consequence of a visit to review current practices to ensure fish quality and safety by the ‘artisanal’ fisheries sector in the Gambia. Its genesis lies in the expert’s consultations with management in the Fisheries Department and the various groups comprising the fishing industry in The Gambia – fishermen, Fishing Associations and fish processors.</p> <p>At present there is no formal management by species groups or fisheries sectors (e.g. shrimp, sole, croakers, small pelagics, etc.) in The Gambia. This puts at risk the sustainability of the various fisheries by failure to have management mechanisms that can respond to temporal changes in the status of the fishery resources resulting in declines in stock biomass and/or spawning stock biomass from, e.g. recruitment failure, growth overfishing and recruitment overfishing.</p> <p>Conventionally, these threats are addressed by the creation of single-stock management advisory committees (FMACs) supported by an institutional arrangement for species-dedicated stock assessment processes. FMACs are composed of all relevant stakeholders and provide the best-known model for addressing fishery management issues.</p> <p>These TOR are intended to describe the follow up activities required to address these needs.</p>
Issues to be addressed	<ul style="list-style-type: none"> • Willingness of the Fisheries Department to adopt this model of resource and sector management • Agreement on a model or species/sector to be adopted as the pilot project • Identification of stakeholders/participants • Terms of Reference for the Fishery Management Advisory Group • Administrative and budgetary considerations • Reporting arrangements (see 4th bullet also).
Activities of the Consultant	<p>The Expert shall perform the following tasks:</p> <p>Meet with relevant Fisheries Department senior management (and Minister?) to confirm agreement to proceed in developing the concept</p> <p>Develop a programme with the Fisheries Department to undertake consultations with potential stakeholders; identify a lead officer within the Department to manage arrangements.</p> <p>Develop the programme concept with potential participants in government and the</p>

	fishery sector														
Expected outputs	<p>The results from the pilot programme would be:</p> <ol style="list-style-type: none"> i. Creation of a pilot Fishery Management Advisory Committee for a single pilot species or fishery sector. ii. Introduction of species-specific and/or sector specific artisanal fishery management iii. Explicit involvement of the artisanal sector in the management arrangements for their fishery iv. Increased economic benefit to The Gambia from more effective management v. Improved fishery management from shared ownership of management problems and the creation of incentives for better compliance with conservation regulations. 														
Format of each report	<p>MS Word Styles for SFP Programme Reports and Technical Papers</p> <p>Structure:</p> <p>Title pages in model format as per other Programme Reports</p> <p>Table of contents, to three levels, formal format</p> <p>List of annexes</p> <p>Tables of tables, figures and pictures all formal format</p> <p>Abbreviations and acronyms</p> <p>Executive Summary (maximum 1 page), in English</p> <p>Introduction</p> <p>Main body of report divided into different sections as appropriate (up to 20 pages)</p> <p>Findings, conclusions and recommendations (each recommendation must be preceded by a conclusion, that refers to a discussion in the main body of the report)</p> <p>Annex 1 Terms of reference (if appropriate)</p> <p>Annex 2 Schedule and people met (with contacts)</p> <p>Any other annex(es) as appropriate</p> <p>Format as per PMU indications.</p>														
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ANNEX 5: Programme of Action: Follow up of the SFP AWA Project to Introduce the Present Programme Approach and to Identify Further Needs

1. ACTIONS TO BE ADDRESSED

1. Training of national fishing centre managers and senior administrative staff on business management practices in running a fish receiving and ice supply Centre
2. Purchase/Procurement and Provision of Fish Boxes and related micro-credit requirements
3. Analysis of the Feasibility of Establishing a Receiving Centre and Fish Auction at a Location on the Atlantic Coast of The Gambia
4. Enumeration and Licensing of Fishing Boats in the Artisanal Sector, The Gambia
5. Creation of a Functioning Gambian Fish Exporters' Consortium
6. Development of a Single-species Management Advisory Group and Management Plan as a Pilot Model for Fisheries Management in The Gambia.

2. GENERAL APPROACH

SPF/Module 4 to determine which proposals they will handle and which proposals they will offer to other modules for consideration.

The expert's report once cleared needs to be forwarded to the Fisheries Department possibly through that of the Minister for formal consideration and response. In the covering letter it should be noted that the Terms of Reference offered in this report can form the basis for further action given the need for a timely response. There appears to be no reason why programme implementation cannot begin once there is agreement on the terms of reference. Programme capacity to modify the Terms of Reference should be provided for.

3. ACTION ITEMS

1) Training of National Fishing Centre Managers and Senior Administrative Staff on Business Management Practices in Running a Fish Receiving and Ice Supply Centre

Proposal for Action

- Confirm with Fisheries Department to proceed in principle
- Develop/confirm the syllabus and length of the course – one week (4½ days) is envisaged as being necessary. The syllabus will include the following topics:
 - The business plan – its objectives and structure
 - Estimating revenues
 - Estimating costs
 - Fixed costs
 - Operating Costs
 - Estimating future revenues
 - Planning for contingencies
 - Budgeting for maintenance and amortization
 - Risk assessment and management
- Establish the budget and when the course may be undertaken. Budget items might include:
 - Rental of premises for delivery of the course

- Honorarium for presenters (it is envisaged that the course will require at least two presenters)
- Course materials
- Preparation costs for the course (preparation of lectures, presentation materials, powerpoint presentations)
- Agree on the people who are to participate in the course – envisaged to be senior management of the Fishery Associations
- Undertake the course as planned.

It is envisaged that the Fisheries Department could assume a major responsibility for organization of this courses.

2) Purchase/Procurement and Provision of Fish Boxes and Related Micro-Credit Requirements

Proposal for Action

- The major partner organization is unlikely to be the Fisheries Department but probably one or more of the Fisheries Associations or local-area Credit Unions, though the Fisheries Department would play an important advisory role. Decisions that must be taken are:
- Confirm agreement with the Fisheries Department to proceed
- Agree on the manner of operation of the programme, e.g. should funding be made as loans or by part or complete grant? (use of a grant approach may be more efficient in terms of use of funding resources as there will be no costs in maintain a repayment programme)
- Agree on the sum of money that will be provided
- Design a programme monitoring process to enable the success of the programme to be evaluated
- Decision on how the programme will function, i.e. the interactions between the SFP and the Fisheries Department and possibly other government departments in The Gambia.

These issues could be discussed during a single ‘arrangements’ meeting

3) Analysis of the Feasibility of Establishing a Receiving Centre and Fish Auction at a Location on the Atlantic Coast of The Gambia

Proposal for Action

- Confirm agreement to proceed with the Fisheries Department, Gambia
- Mission visit of fisheries manager *and fish landings civil engineer* to obtain agreement on a site for the development
- Preparation of a feasibility analysis of the concept (and expanded concept note).
- Site travel – for two consultants – fish landing site engineer and fisheries manager
- Undertake initial contacts with potential funding agencies, e.g. The African Development Bank.
- Draft full concept note, risk assessment and initial feasibility analysis
- Present findings to local stakeholders
- Develop a subsequent course of action (which may include no action at all).

4) Enumeration and Licensing of Fishing Boats in the Artisanal Sector, The Gambia

Proposal for Action

- Note, strong support has already been expressed by the Fisheries Department's Director for this initiative. Almost all of the activities could be undertaken by Fisheries Department staff.
- Establish field programme to enumerate and register (artisanal) fishing boats (staff and field programme schedule)
- Establish budget for the field programme
- Develop database for storage of data and to enable data access by accredited users
- Identify requirements for non-Fisheries Department staff and their funding requirements
- Identify programme equipment requirements (tape measures, marking equipment, computers, software)
- Establish contract to develop database, data entry forms, reporting macros and query/database interrogation modules)
- Execute data entry phase
- Test and modify as required data base
- Produce and disseminate standard reports

5) Creation of a Functioning Gambian Fish Exporters' Consortium

Proposal for Action

- Confirm agreement to proceed with the Fisheries Department, Gambia
- Agree on the respective roles of the Fisheries Department and Gambian fish processors in the programme
- Meet with the fish processors and other stakeholders to explain and develop the concept
- Develop of programme for fish export. This will require
- Developing fish handling standards for the artisanal sector
- Agreeing on an operator who can freeze (and pack) product
- Agreeing on the nature of the product pack in response to market demands
- Agreement on measures to ensure product safety and quality (e.g. an inspection procedure undertaken by the Fisheries Department).
- Agree on respective programme responsibilities
- Develop a *pro forma* budget for the entire operation; review and confirm with participants
- Agree on a management structure for the operation
- Identify and develop the marketing channels and
- Initiate programme.

6) Development of a Single-species Management Advisory Group and Management Plan as a Pilot Model for Artisanal Fisheries Management in The Gambia.

Proposal for Action

- Confirm agreement to proceed with the Fisheries Department, Gambia. This may require further explanation and development of the concept through meetings with Fisheries Department management and staff
- Evaluate and agree on a target fishery for the programme, e.g. sole, shrimp, etc.

- Meet with the Fishing Associations, fish processors and other stakeholders to explain the concept, their potential role and to develop the concept
- Develop the programme. This will require
- Developing terms of reference for the process
- Appointing an executive secretary
- Developing a data collection programme
- Agreeing on licensing conditions for those involved in the fishery to ensure that provision of data can be legally insisted upon
- Developing a resource assessment programme and a procedure for providing advice on levels of harvest, closed seasons, minimum sizes, etc.
- Reviewing compliance and enforcement requirements; developing an inspection programme to ensure compliance with conservation requirements
- Agreeing on an appropriate meeting schedule
- Agree on respective programme responsibilities
- Develop a *Pro forma* budget for the procedure and confirm with participants
- Agree on a management structure for the operation
- Initiate programme.