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Programme Implemented
by Secretariat of ACP
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Programme Funded
by the European Union

Final Report

Training in inspection and other official control activities for the
Competent Authority of Sierra Leone

Ref: CA064SLE

August 2010



Strengthening Fishery Products Health Conditions in ACP/OCT Countries



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**Training in inspection and other official control activities for the Competent
Authority of Sierra Leone**

**17th June – 14th July 2010
CA064SLE**

August 2010

This mission was carried out by Richard Chivers

Name of the Contractor: Cardno Emerging Markets (UK) Ltd

Name of the reporting Company: Macalister Elliott and Partners Ltd with Megapesca

**The contents of this publications the sole responsibility of the contractor and can in no way be taken to
reflect the views of the European Commission**

The picture on the cover shows Sierra Leonean Competent Authority inspectors taste testing fish samples

Module I
Strengthening National Health Control Capacity for Fishery Products

Strengthening Fishery Products Health Conditions in ACP/OCT Countries 8ACPTPS137



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ABBREVIATIONS

ACP	African, Caribbean and Pacific States (Lomé Convention IV)
CA	Competent Authority
DG	Directorate General
EC	European Commission
EU	European Union
FP	Fisheries Products
FVO	Food and Veterinary Office
GHP	Good Hygiene Practice
GMP	Good Manufacturing Practice
HACCP	Hazard Analysis and Critical Control Points
HC	Health Certificate
ISO	International Organisation for Standardisation
MD	Managing Director
PCBs	Polychlorinated biphenyls
PMU	Project Management Unit
QA	Quality Assurance
QM	Quality Manager
RASFF	Rapid Alert System for Food and Feed
SANCO	DG Health and Consumer Protection
SFP	Strengthening Fishery Products
TA	Technical Assistance
ToR	Terms of Reference

LAYMAN'S SUMMARY

The mission was the last one undertaken in Sierra Leone by Module 1 of the SFP programme. It comprised training Competent Authority (CA) inspectors in vessels inspection, fish quality assessment and practical HACCP. It also required the development of a National Control Plan, a National Monitoring Plan and a gap analysis to assess how far the CA had developed and what future actions were needed.

The consultant found that further training was needed in particular in respect of the CA's relationship with the private sector.

EXECUTIVE SUMMARY

The Competent Authority had taken some further steps towards becoming an effective organisation but there were still obstacles to surmount especially resourcing the departmental resources and the state of the fishing industry.

Major issues were identified with the fishing industry, where no quality control existed and little better was found on land.

The relationship between the CA and private industry was fragmented, although by the end of the mission, a more cordial environment existed, once both parties' needs had been brought into the open and discussed.

The question of when Sierra Leone will be in a position to export fish remains open. The consultant recommended that further support be provided for the CA to bring it up to an equivalent standard to that of the EU, mainly by coaching, as the CA undergo continual practice of the techniques they have been trained in.

There still remains in the civil service an environment in which stagnation of activities is a real risk. This is due in part to the need for investment in the CA by central government.

The practical activities revealed a picture where improvement could be made by the private sector and more practice in official controls would be needed by the CA.

An inspection was undertaken at a landing site, where the process of unloading a catch was observed, the condition of the fishing vessel was assessed and fish quality judged. Overall matters were not satisfactory:

- a) The unloading process stopped when it was interrupted by heavy rain and fish at an already high temperature were left at ambient temperatures until it stopped raining.
- b) The vessels (pair trawlers) were in a poor state of hygiene and structural condition. Unloading facilities were exclusively timber, old and wet.
- c) Fish quality varied from acceptable (but not excellent) to unacceptable.
- d) Fish temperatures were overall unacceptable.

The problem these findings illuminated was the difficulty in identifying a channel through which hygienic fish of consistently high quality could be sought. This remains a large barrier to Sierra Leone being admitted to the list of EU exporting nations.

The gap analysis indicated the need for the Fishery Products Regulations (FPR) to be updated and separated from the good manufacturing practice guidelines (GMP) or codes of practice (referred to in the regulations as Best Practices). The analysis also indicated that the CA was in need of support from central government in order to function effectively.

A framework for the National Control Plan and the National Monitoring Plan was drawn up and by the end of the mission they were being typed.

Six recommendations were made:

1. Any future missions to have an assurance from the Sierra Leonean government that the Competent Authority is being supported by central funding.
2. The CA to be provided with training in more advanced raw and cooked fish quality assessment.
3. The CA to receive training in quality management systems.
4. The CA to be given a four day course in practical HACCP.
5. The CA staff to have practice in the assessment of private sector records.
6. A survey of heavy metal contaminants in fish to be carried out.

RÉSUMÉ POUR NON-SPÉCIALISTES

Cette mission a été la dernière exécutée en Sierra Leone par le Module 1 du programme SFP. Elle comprenait les inspecteurs de l'Autorité compétente (AC) chargés de l'inspection des pinasses, de l'estimation de la qualité du poisson et de la pratique de la méthode HACCP. Elle a aussi exigé le développement d'un plan de contrôle national, d'un plan de surveillance nationale et d'une analyse de l'écart permettant d'évaluer jusqu'où l'AC avait réalisé le développement et les actions futures nécessaires.

Le consultant a trouvé qu'il était nécessaire d'approfondir l'enseignement, en particulier concernant les relations de l'AC avec le secteur privé.

RÉSUMÉ OPÉRATIONNEL

L'Autorité compétente a entrepris les mesures supplémentaires visant à obtenir une organisation efficace, mais il y avait encore des obstacles à surmonter, spécialement le financement des ressources départementales et l'état de l'industrie de la pêche.

Les problèmes majeurs ont été identifiés en rapport avec l'industrie de la pêche, où aucun contrôle de la qualité n'existait. Il a été néanmoins constaté que les conditions des opérations à terre étaient meilleures.

La relation entre l'AC et l'industrie privée a été fragmentée, bien qu'à la fin de la mission, un environnement plus cordial existait, les besoins des deux ayant été étalés au grand jour puis discutés.

La question de savoir, quand la Sierra Leone sera en mesure d'exporter le poisson, reste ouverte. Le consultant a recommandé de fournir un soutien plus poussé à l'AC pour qu'elle puisse atteindre un niveau équivalent à ce des systèmes en place dans l'UE, principalement grâce au coaching, étant donné que l'AC pratique continuellement les techniques auxquelles elle a été formée.

Dans le service civil, il persiste le risque d'une certaine stagnation de la situation. Ceci est dû en partie au besoin d'investissement du Gouvernement central dans l'AC.

Les activités pratiques ont révélé que l'image pouvait être améliorée par le secteur privé et qu'une meilleure pratique des contrôles non officiels était nécessaire de la part de l'AC.

L'inspection a été menée sur le site de débarquement, où l'on a observé le processus de débarquement de la capture, l'état de la pinasse et la qualité du poisson ayant été évalués. En général ceux-ci n'étaient pas satisfaisants :

- e) Le processus de déchargement s'est arrêté, lorsqu'il a été interrompu par de fortes pluies, et le poisson déjà soumis à une température élevée est resté aux températures ambiantes jusqu'à ce que la pluie cesse.
- f) Les pinasses (deux chalutiers) étaient en piteux état d'hygiène et les conditions structurelles étaient insuffisantes. Les installations de déchargement étaient exclusivement en bois, désuètes et humides.
- g) La qualité du poisson variait d'acceptable (mais n'étant pas excellente) à inacceptable.
- h) Les températures du poisson étaient globalement inacceptables.

Le problème mis en évidence par les résultats était la difficulté d'identifier un réseau, via lequel il était possible de rechercher du poisson hygiénique de qualité très consistante. Ceci est resté une large barrière à l'admission de la Sierra Leone sur la liste des nations exportatrices de l'UE.

L'analyse de l'écart a indiqué la nécessité de développer des réglementations relatives aux produits de la pêche (RPP) devant être mises à jour et séparées des bonnes pratiques de fabrication (BPF) ou des codes de pratique (relatifs aux réglementations en tant que meilleures pratiques) et également que l'AC avait besoin du soutien du Gouvernement central pour fonctionner efficacement.

Le cadre du plan de contrôle national et du plan de surveillance national déterminés à la fin de la mission a été tracé.

Six recommandations ont été faites :

1. À l'avenir, toutes les missions devront avoir la garantie du Gouvernement sierra-léonais que l'Autorité compétente sera centralement soutenue financièrement.
2. L'AC recevra une formation à l'évaluation plus avancée de la qualité du poisson cru et cuit.
3. L'AC recevra une formation aux systèmes de gestion de la qualité.
4. L'AC suivra un cours de quatre jours à la pratique de la méthode HACCP.
5. Le personnel de l'AC sera capable de pratiquer l'évaluation des enregistrements du secteur privé.
6. Une étude de la contamination en métaux lourds dans le poisson sera menée.

1 INTRODUCTION

Sierra Leone has benefitted from five SFP Module 1 missions, one by Module 2 (Support for laboratories), with one more to come and two missions by Module 4 (Support for artisanal fisheries) since 2009. This mission was the last to be performed in Sierra Leone before the end of the programme in November 2010, its aim being to complete some elements of the Competent Authority's training with a series of short practical sessions covering hazard analysis, inspection of fishing vessels, practical assessment of fish quality.

The consultant was also requested to undertake a gap analysis to determine the CAs status, capabilities and limitations and what, if any, further actions were needed to bring its operations to a standard equivalent to those of the EU.

Finally the consultant was asked to prepare, in association with the staff of the competent authority the first drafts of the National Control Plan and the National Monitoring Plan.

A consultant from the contracting consortium, Cardno Emerging Markets (UK) Ltd (reporting company: Macalister Elliott and Partners Ltd) carried out the work from 21st June 2010 to 9th July 2010.

2 CONTEXT OF THE ASSIGNMENT

2.1 Work environment

The responsibility for the CA is the Food Unit of the Ministry of Health and Sanitation (MOHS). It has a head of section and approximately 9 inspectors working in the Freetown area with an undefined but much larger number believed to be in the region of 130 persons working for the department throughout the country. The inspectors supervise the safety of all foods, not just fish.

Over the year from June 2009 to July 2010 a group of the most experienced inspectors (approximately 10) who work in Freetown and the nearest large fish landing sites have been given specific training in fish and fish related topics plus generic training in auditing and inspection techniques.

Following a request by the then Fisheries Minister to DG SANCO, the latter undertook an inspection of Sierra Leone's CA in October 2009. The result was a report (DG SANCO 8351-MR FINAL), which identified a number of matters that needed to be addressed.

The consultant worked with a group of 8-9 inspectors and the Head of the Food Unit on further training in inspection, fish quality assessment and the structuring of both a National Control Plan and a National Monitoring Plan.

In November 2009 a meeting with the Vice President indicated that fish exports were a prime interest of the government and that the CA were to be given full back up. Unfortunately the mission in February/March 2010 (CA074SLE) and the present mission did not identify any progress in supporting the department beyond the purchase, through the consultant himself of two probe thermometers, which were brought from the UK.

The staff have received training through Module 1 in the use of the checklists from the SFP Manual/Handbook for the Execution of Sanitary Inspection of Fish as Raw Material and Fish-Products as Food for Human Consumption and have since used the checklists for vessels, landing sites and establishments.

Sierra Leone would like to request a second inspection by DG SANCO in early 2011 by which time it hopes to have in place all the necessary systems needed to pass this time.

2.2 In relation to other TA and development initiatives

This mission is the fifth and last of the Module 1 interventions in Sierra Leone. In addition to the five Module 1 missions (CA001SLE, CA041SLE, CA014SLE, CA074SLE and the present mission CA064SLE) the CA has now been the subject of one needs assessment for its own equipment and laboratory equipment plus one mission by Module 2 (Support for laboratories) and two artisanal trainer training missions by Module 4 (ART001SLE and ART034SLE).

Yet to be determined is the route through which fish will be exported. At the time of this mission the only factory with the quality of build and management capable of reaching the standard required for export to the EU, was incomplete. Other routes may become available but at present there is no satisfactory chain from catching to export.

The Ministry of Fisheries and Marine Resources (MFMR) is pursuing the use of new landing sites. The African Development Bank has financed the development of four landing sites at Goderich, Tombo, Shenge and Bonthe. These sites are provided with concrete jetties that could be used as suitable landing facilities for fish destined for export to the EU if provision is made for the fish to be removed in ice boxes to vehicles backed up to the jetty. The sites were due for completion in November 2009 but this was postponed until 30th June 2010. At the time of this mission those sites were still awaiting completion.

A final alternative is the possibility of artisanal fishermen transshipping catches on ice to a collection vessel that would take the consignments to a landing site on the north side of the Sierra River estuary and then by road to Lungi International Airport for chilled export. Reports say that this is viable but at least two years away due to the need for a road to be built from the proposed landing site to the airport.

Other Technical Assistance (TA) initiatives that affect the fishing industry are the World Bank's West Africa Regional Fisheries Program, which is due to start work within the next few months. Its aim is to develop the fisheries management of the region but inputs will be available for CA training and equipping laboratories and training their staff. At the time of writing a coordinator for the program had not been found and its commencement had been postponed; if or when it starts the work begun by the SFP program will be continued.

The French organisation COLEACP has expressed an interest in promoting fisheries products, although its main area of expertise is horticulture. There is a real possibility that the organisation will also take on work from the SFP programme, although at the time of writing its plans have not been clearly expressed.

Recently as reported by the Ministry of Fisheries and Marine Resources (MFMR) a joint venture between UNIDO and Russia has been agreed with the aim to open a fisheries school. No further details were available at the time of writing.

At the same time a joint venture between the Sierra Leonean government and the Chinese government is being developed for artisanal support at an estimated rate of \$500,000/year. No further details were available at the time of writing.

3 METHODOLOGY

A group of up to nine fish inspectors were trained in office and field environments during a period of 11 days in June and July 2010. The number of delegates varied slightly when one or another had to be elsewhere due to their being needed at other training events or to partake in official inspections.

The HACCP training took place in workshop situations based mainly at the CA offices but also in a factory in Freetown.

Practical training in fishing vessel inspection took place at a private fish landing jetty in Freetown.

The practical training in fish quality took place on a jetty in Freetown and in an adjacent factory, where both raw and cooked fish were assessed.

Practical evaluation of a hazard analysis document was undertaken at the CA offices and then for three sessions in the factory where the HACCP plan was produced.

No new training materials were used, the consultant preferred to retain the use of systems developed in the previous missions (CA001SLE (fish quality, HACCP, procedures), CA014SLE (auditing – reference only), CA074 (sampling/monitoring)) as these were recognized and understood by the CA staff.

Although the training was well received by all participants it was not possible to complete evaluation questionnaires for this mission due to practical difficulties in printing and gaining access to both staff and the CA offices at the end of the mission.

3.1 Vessel Inspection Practical Training

Practical training in fishing vessel inspection took place at a jetty in Freetown where pair trawlers (Port City 103 and Port City 104) were viewed and comments from the inspectors were collected. The inspectors used the checklists taken from the SFP Manual/Handbook for the Execution of Sanitary Inspection of Fish as Raw Material and Fish-Products as Food for Human Consumption October 2005 that they had been provided with during SFP mission CA001SLE

Problems in finding vessels to inspect persisted as they had in previous missions, although in one respect this did not have a big impact – the vessels were primarily Chinese or South Korean and were of a uniformly poor condition that would not pass the next inspection due at the end of the year.

3.2 Practical Assessment of Fish Quality

Practical assessment of fish quality was undertaken during two of the training workshops, one on a jetty as fish were being landed and one in a factory when fish were assessed in both their raw and cooked forms.

3.2.1 Raw Fish Assessment

Raw fish were removed from their boxes as they were being landed at a jetty and prior to being placed in transport to the factory.

Fish were tested for temperature and evaluated against the CA's own quality standards as shown in Table 1 and against the company's fish quality checklist.

It should be noted that the criteria by which the CA judge fish quality are a simplified form of those indicated in the EU regulation 2406/96 and demonstrate equivalence by satisfactorily identifying fish of good (Category A), acceptable (Category B) and not admitted - unacceptable quality (Category C). They have no Category E - Extra but also no market situation in which the labels would be attached.

It should also be borne in mind that the tropical fish exhibit slightly different spoilage indicators from those of temperate zones for which the EU descriptors were developed (with perhaps the exception of the Group B 'Blue fish')

Table 1: Sierra Leone Competent Authority Organoleptic Assessment of Fin Fish*

SCALES	EYES	SKIN	GILLS APPEARANCE	FLESH	GRADING	
Firmly attached	Bulging, black pupil	Bright colours, transparent slime	Glossy, bright red or pink	Firm and elastic. Thumb indentation springs back	A	Acceptable
Loosely attached some lost	Slight flattening, loss of brilliance	Loss of brilliance of colour	Loss of gloss and brightness, slight loss of colour	Less elastic, imprint slightly retained	B	
Most scales lost	Slightly sunken, slightly grey pupil	Fading colours, greyness. Somewhat milky slime	Loss of brightness, some browning	Soft thumb indentation remains	C	Unacceptable

**Taken from the CA Monitoring Procedure Issue 1: Organoleptic Checklist.*

The company's own system was not available for publication.

The inspectors were asked to evaluate the fish and note their results.

Photos were taken for consideration at the office.

3.2.2 Cooked Fish Assessment

A second set of four fish samples of differing quality were presented for raw and cooked assessment by the factory's Quality Manager (QM). The fish were first assessed against the CA's and factory's quality checklists, then filleted and cooked.

Equipment:

- i. 700W microwave oven
- ii. Four glass plates
- iii. Four whole ungutted fish
- iv. Knife
- v. Clingfilm
- vi. Freezer bags (boil-in-the bag backup in case of problems with the microwave)
- vii. Disposable vinyl gloves
- viii. Disposable forks
- ix. Disposable cups
- x. Kitchen roll
- xi. Waste bag

Pairs of fillets cut from each fish (fillets weighing approximately 60g each) were put on glass plates, covered tightly with cling film and placed in a 700w microwave oven.

They were cooked initially for 2 minutes, then given separate 20 second bursts until cooked but still moist.

The cooked samples were allowed to cool for 2 minutes to avoid scalding, then the cling film was raised and first the odour then the flavour were assessed.

The inspectors were asked to assess the quality against the basic fish quality parameters shown in Table 2.

Table 2: Basic Fish Odour and Flavour Parameters

Odour	Flavour
Shellfish/seaweed	Sweet
Neutral: boiled starchy plants e.g. cassava	Neutral
Off odours	Sour
Strong off odours	Bitter

3.3 Practical Analysis of HACCP

An examination of a real HACCP study was arranged at the offices of the CA, using the HACCP system drawn up by the Quality Assurance (QA) department of a major fish processor and examples of HACCP provided in mission CA001SLE.

The inspectors were asked to study the real document and identify supporting evidence they would like to see to verify the claims made and to validate the system.

The questions were then used during two Question and Answer workshops on site at the factory that provided the HACCP study. The workshop (Section 3.4 below) functioned as a trial audit of the factory's systems.

3.4 Practical Audit of Factory HACCP

Following the preparation of the HACCP audit a meeting was arranged with the factory's QM and his staff to both give practise to the CA staff in understanding how an audit is carried out and to give a real perspective on auditing for the private sector.

The audit was carried out over two three hour workshops. Using the heavy metals, E. coli and coliforms analysis results and the HACCP study and a projector the CA were able to practice the questions they had discussed in preparation (pre-reading, discussion of inconsistencies, areas where more detail was required and notes of documents that would be needed to verify the system). The quality staff from the factory took part in the same workshop.

3.5 Gap Analysis

The consultant carried out a gap analysis based on the legislative requirements deemed necessary for the CA to demonstrate that they effectively performed an equivalent service to those found in the EU and were able to offer guarantees of food safety and quality.

In addition to the legal requirements the analysis took into account the structural and operational capacity of the CA.

The analysis identified those areas where actions were needed and proposed resources needed to accomplish the changes and a time-frame in which to do so – refer to Annex 7.8.

3.6 National Control Plan and National Monitoring Plan

A first draft of the documents was prepared with the inspectors in a workshop situation using two examples from other SFP missions as models (Project S066FJI - Technical Assistance to the CA Fiji Final Technical Report; Updating of CA Inspection Manual and Training of Fishery Inspectors in Guyana Mission Ref: CA030GUY – refer to Annex 7.4).

The National Control Plan proved simple to devise as it incorporated the existing procedures written in earlier missions. By the time the workshops were completed the inspectors had decided how they wished to present their Control Plan and had sent the first draft for typing.

The National Monitoring Plan also reached its first draft stage and was being typed by the end of the mission. The inspectors had decided what they wished to be included, the time scales and frequencies of monitoring.

4 PERFORMANCE IN RELATION TO TERMS OF REFERENCE

4.1 General response to Terms of Reference

The mission was targeted at drawing together the activities already carried out by Module 1 of the SFP programme.

In particular it was one of the objectives that theory carried out in previous missions be put into practice in real-life situations to give the CA experience and confidence in carrying out their tasks; hence the practical inspections and assessments of vessels, fish quality, and HACCP systems.

It was also important that the CA were able to demonstrate understanding and application of the systems they had gained during the previous missions such as documented procedures and testing and sampling regimes.

It was expected that the activities would establish the CA as a credible inspection service and position it for another DG SANCO inspection in 2011.

The objectives were achieved in respect of drawing together the systems already put in place and preparing the control and monitoring plans (effectively the Quality Manual). However it cannot be said that the CA was left in a position in which it would satisfy a demanding audit. Whilst the staff were keen to carry out their duties, there remained impediments that the mission was not able to surmount:

- a) The CA owns no equipment for carrying out their tasks (vehicles, computers and peripherals, testing and sampling kits). These were due to be delivered as part of the SFP programme but were delayed due to administrative issues and availability of stock.
- b) The CA are unable to carry out basic functions such as printing due to the need for further support from central government, which had been promised in November 2009 but which was not evident at the time of the mission. The printer had no toner, paper was scarce, there were no files to base a filing system on and photocopying could only be achieved if the staff paid for the copies.
- c) The CA's internet connection is very poor and paid for by staff subscription. For example the consultant was unable to use it at times and when it was working emails with attachments greater than 100kb (in one case a single page with a table) would not send. This was the only means by which the consultant could have printing carried out without the use of an outside agent as the CA computer was too infected with viruses to risk connection by flash memory drive.
- d) Whilst the consultant requested that several vessels were to be inspected as part of the training only one visit was possible and that during a time when the trawlers were very busy unloading (approximately 20 people working on deck). Finding other fishing vessels proved impossible within the timetable due to a breakdown in communication between the industry and the CA as explained in Section 4.2.

4.2 Practical inspection of fishing vessels

An inspection of two pair trawlers (Twin Port 103 and Twin Port 104) was carried out but had to be curtailed. The vessels had docked for unloading and were extremely busy with approximately 40 people working on and around them. They were therefore viewed from the jetty until such time as heavy rain set in and made the use of checklists impossible.

The inspectors were however familiar with the vessels and agreed that they would not pass a further hygiene inspection (they had passed in January 2010) due to:

- a) The condition of the timber decks.
- b) The known unhygienic condition of facilities on board.
- c) The unclean condition of the fish boxes.
- d) The lack of ice on the fish.
- e) The lack of labelling for traceability.
- f) The lack of recording where and when catches were made.
- g) The old timbers used as chutes for unloading fish.

4.3 Practical Assessment of Fish

Fish was sampled as it was unloaded from the vessels named in Section 4.2.

The inspectors removed three boxes and the condition of the fish was examined. All boxes landed had little ice on to cool the fish. In addition the ice was not crushed and instead had been broken into large lumps and scattered across the top of the plastic trays used to hold the fish. The effect of this was to cool only the few fish which were touched by the ice. Temperatures were taken at the top middle and bottom of the boxes and at the horizontal centre and at the sides of the boxes by the inspectors. The readings reflected the lack of temperature control on the vessels and were recorded in the range 1.3°C to 18.4°C, with the large majority of temperatures being found in the upper region (15-18°C).

Fish quality was assessed against the CA's Organoleptic Checklist and fish were found to range from Grade A (Good) to Grade B (Acceptable) and Grade C (Unsatisfactory).

All fish were accepted into the factory and directed to different markets.

The factory's own fish quality assessment scheme indicated that any fish above 10 °C would be rejected.

During the third visit to the factory four fish were assessed in their raw condition and for cooked flavour against basic taste test parameters as shown in 3.2.

Of the four fish one failed, one was borderline and two passed the raw tests.

When cooked however three out of the four were found to be acceptable, although one only just so.

During the previous mission two of the four samples failed the taste test.

4.4 HACCP Assessment

The HACCP practical assessment using a working example from a major factory in Freetown proved a valuable exercise.

Inspectors demonstrated that they had attained a good basic understanding of HACCP but needed confidence to challenge a system put together by a commercial enterprise.

The inspectors worked through the categories of hazard, biological, chemical and physical and applied each to the hazard analysis offered by the factory QM. Their further inspections took them into the critical limits and determination of controls for heavy metals.

4.5 HACCP Practical Audit

The audit of a factory's HACCP moved from the CA offices and was continued at the factory where the Quality Assurance department staff were able to participate too.

The consultant began by drawing attention to the need for a risk analysis first to establish where the significant hazards lay, then went into the detail of the actual hazard analysis.

The workshops (two half days) proved extremely valuable, in bringing together the two sides of the food safety chain, the food business operator and the inspection body and revealed very significant issues that contributed to a lack of understanding between the parties

The HACCP was discussed in the context of the questions framed at the CA offices. The consultant showed that there were areas where the HACCP could be improved:

- a) The introduction was very long and missed valuable information such as the quantities of fish produced and senior management commitment to staff resources in the quality policy statement.
- b) The title indicated that the only fish being considered were 'scombroid' fish, as scombrototoxin was deemed to be the most significant hazard, whereas the no one at that time had identified which species were aimed at the EU market. All other fish types and categories e.g. shellfish as well as fin-fish were ignored.
- c) By more precise descriptions of the hazard (e.g. 'Biological hazard: Vibrio', rather than 'Temperature rise').
- d) There were no critical temperatures.
- e) Heavy metals had no controls.

4.5.1 Relationship between the private sector and the CA

The consultant requested copies of the factory's product reception temperatures and quality assessments. A review made it clear that there were significant discrepancies between what the CA understood was happening and what actually was occurring:

- a) There were approximately four days per week when landings occurred. The CA had a standing arrangement that they would be told when there would be landings and on that basis only attended one or at the most two.
- b) The company took product temperatures that were at variance with those taken by the CA. All products above 10°C was according to the company policy to be rejected but most products according to the CA records was above this figure and yet received into the plant.
- c) Fish quality was evaluated by the company and whilst very little was recorded at the reject (to a lower valued local market) level, the CA recorded greater quantities of unacceptable quality fish.
- d) The CA recorded their findings on the Organoleptic Checklist and made critical comments but these were not effectively followed up.

4.6 First Drafts of the National Control Plan and National Monitoring Plan

The inspectors, working in groups of 2-3 were provided with hard copies of the Fijian NCP and were shown the Guyanan Quality Manual updated in 2009 under mission CA030GUY (Annex 7.4). The inspectors were trained in the main objectives of these documents – to layout the systems in place for operating official controls. The staff were required to use the Fijian system as a template and insert their own procedures and records into the same categories.

The result was a document that satisfied in broad terms the requirements of an NCP and which the CA recognized as a first draft that must be read through by the senior inspectors and made fully applicable to their needs.

The NMP was dealt with in a similar fashion, although in this case the model used was considered too burdened with detail of sampling and analysis that the CA would not undertake themselves (in the previous mission CA074SLE a sampling system had been developed that made reference to the EU regulations and the laboratory procedures to be followed by the laboratory staff rather than the CA staff). This document was therefore much smaller than the NCP and was founded on the already existing Monitoring Procedure.

A plan for all monitoring and inspections was produced by the consultant and may be found in Annex 7.6

Both the documents were in the process of being typed at the end of the mission.

4.7 Gap Analysis

The gap analysis identified that the Fishery Products Regulations (FPR) needed to be updated and that the CA required much practice in carrying out its official controls.

The FPR had already been passed to FAO in October 2009 for redrafting but there had been no change to date.

Annex 7.8 contains the gap analysis

Road Map

Action	Start	End
Staff to familiarize themselves with labelling requirements for exported fish	August 2010	November 2010
Review of NCP and NMP	August 2010	October 2010
Practice official controls	August 2010	June 2011
Redrafting FPR	August 2010	July 2011
Job descriptions	August 2010	November 2011
Heavy metals analyses	October 2010	October 2012

4.8 Additional tasks not covered in the Terms of Reference

4.8.1 Review of the heavy metals tests carried out at Ghana Standards Board

In April 2010 the CA undertook a second batch of heavy metals, histamine and microbiological tests on fish samples. The previous samples had been taken in October 2009. In each case the tests were paid for by the potential exporter.

The consultant reviewed the findings, bearing in mind that at the first tests had been referenced by the GSB against EU regulations that were two amendments out of date. The GSB had been informed of this by the CA after the consultant's visit and changed their reference point to Regulation EC 1881/2006. Unfortunately on detailed checking of the most recent results, the consultant found that the wrong limits had been applied. The GSB did not provide advice as to whether the samples were outside the limits so the reference they did give misdirected the CA in judging the legality of the heavy metals content.

The results indicated that over the six month period of the nine fish species sampled (bonito, kinnie, red snapper, black snapper, rojje, 'snapper' (grouper), crocus, sole, cuttle and record) seven (all but kinnie and black snapper) were above the limit for import to the EU.

The consultant put the data into an Excel table (see Annex 7.5) and used it to demonstrate the potentially harmful effect of the contamination in terms of returned or destroyed fish, loss of reputation and the probability of a rapid alert being raised against Sierra Leone. The information was fed back to the company and the CA.

The expert asked the company what fish species were targeted for export by the EU. This information was not immediately available to the QA staff but was supplied at a later meeting with the Managing Director (MD), who identified grouper, snapper, squid, shrimps, lobster and crabs; therefore only three of the species that to date had been tested.

The consultant requested that the Institutional Support for Fisheries Management in Sierra Leone led by the consortium GOPA and their Project Manager Heiko Seilert, set aside samples of fish from known locations for heavy metals analysis. The aim would be to develop a database that gave a picture of the spread and concentration of heavy metals in target species in Sierra Leonean waters, by categories such as:

- i. Migratory fish stocks that may bring contaminants from distant areas.
- ii. Non-migratory fish stocks, open ocean.
- iii. Non-migratory fish stocks, inshore.
- iv. Non-migratory fish stocks from estuarine areas or seawaters affected by estuarine water.

The idea was agreed in principle and details were to be worked out by later missions.

4.8.2 Review of other test results carried out by GSB

The other tests carried out by GSB were for microbiological counts and histamine.

The latter, histamine was assessed in two species, kinnie and bonito. Three out of four results were very low (<2.49mg/kg) one was relatively high (32.81mg/kg). Neither species were targeted for the EU market.

The aerobic plate count for all species was assessed. In every case the count was significantly higher (factor of 10) in 2010 than in 2009.

High levels (10^3) of both coliforms and E. coli were identified in black snapper.

4.8.3 Meeting at the Sierra Leone National Water Quality Laboratory (NWQL)

The consultant reviewed the results on water quality from the NWQL and found them ambivalent and inaccurately reported. The report contained information e.g. the importance of water to human existence that was not needed but missed the significance of chlorine in the water supply and misreported as satisfactory the lack of available chlorine in the samples. Results were published without the units and without advice on whether they were satisfactory.

The laboratory, which is due to benefit from SFP funded equipment, did not operate to internationally recognized standards.

At a meeting with the head of the laboratory Mr Fornah the results were discussed in depth and an agreement reached that all that was required was for them only to report their findings, with the units included, the reference for the limits used and advice on which samples passed and which failed.

The samples were taken from the water sources (a fish factory and a commercial water/ice production factory) by a member of the CA but no ice was taken. The consultant advised the CA to take ice samples in future.

4.8.4 Training Matrix

The consultant prepared a training matrix for the Head of the Food Unit and demonstrated to him how it was to be used to record the training that each member of staff had received.

The consultant made the point to the CA and the private sector that matrices such as these are in common use in industry backed up by documented training procedures and training evaluation records.

The matrix can be found in Annex 7.7

4.8.5 Follow up of signing the Memoranda of Understanding with the MFMR and Pharmacy Board

Two Memoranda of Understanding (MoU) were prepared during mission CA074SLE, one to help regulate the reporting relationship with the MFMR Fishery Observers and one to secure the services of the Pharmacy Laboratory (PL) once the SFP fish analysis equipment arrived.

Neither had been signed and the consultant asked why. The MoU with the MFMR was not considered necessary, although it became evident that the Observers were not reporting back to the CA or using the Organoleptic Checklists that had been prepared for them.

The MoU with the PL was not signed, according to one report because the head of that department, the Chief Medical Officer (CMO) was also the head of the food division and would authorise the PL to carry out the tests. As there seemed to be no impediment to his signing anyway, the consultant asked for a meeting to ascertain if he were prepared to sign it and to ask what budget had been allowed for operating the Food Unit. Unfortunately neither the CMO nor his deputy was available during the course of the mission.

4.8.6 Establishing a Filing System

When the consultant arrived he found that the CA had no filing system or even a filing cabinet. He spent the first training afternoon assisting the CA to compose a suitable system, after which hanging document folders were purchased and a member of the staff was dedicated the job of creating the system.

4.9 Terms of Reference for Future Missions

Terms of reference were prepared for missions following on from the SFP programme (Annex 7.9). They referred especially to the need for inspectors and, at the request of the MFMR, fishery inspectors too, to be trained in a knowledge quality management systems and higher elements of HACCP when used in a practical application in the private sector, although the latter was deemed suitable only for those who have already received a grounding in HACCP.

5 DISCUSSION

5.1 Factors affecting successful listing as an exporting nation

The mission, being the last under the SFP Module 1 has acted not only as a training mission but as a period in which to summarize the results of the SFP efforts to date. In that respect it is worthwhile noting that there has throughout been a strong desire on behalf of all parties that Sierra Leone achieves listing status for export to the EU and that furthermore there is an expectation in the Sierra Leonean government that this may occur in 2011, the 50th anniversary of independence.

The aim is laudable but it has put considerable pressure on both the SFP programme and on a department that is under resourced and new to most of the subjects it is expected to demonstrate competence in. To move from having no skills in EU equivalent official controls asks a lot, particularly when the department has not had the benefit of equipment and strong government backing with which to carry out the tasks expected of it.

The consultant was asked at a meeting with the EU Head of Delegation, the Minister for FMR and the Director of Fisheries what he thought the chances were that Sierra Leone would pass an assessment in 2011. He gave the opinion that the outlook was not favourable due to the number of adverse variables. In particular the following:

5.1.1 Private Sector

- a) The condition of the fishing fleet. It is populated by very poor Chinese and South Korean vessels that are managed and skippered in such a way that fish quality and sanitary standards cannot be guaranteed, at least in the short terms of 6-12 months.
- b) The consultant only inspected one vessel (March 2010) that approached satisfactory condition and that one was being renovated during his visit. It could provide one sanitary source of acceptable fish.
- c) The factory that would supply the chain was due for completion in February 2010 but that had been put back to November 2010 and whilst it was understood that every effort was being made to finish it, there is still no guarantee that it will be ready for use at that date.
- d) The factory should be able to demonstrate its systems and records over an operating period of perhaps three months before inspection by DG SANCO.
- e) The four new vessels ordered by the factory owner are purse seiners and will not target fish for the EU market, meaning that fish would have to be sourced from less reliable vessels. Point b) above refers.
- f) These variables revolve around one issue, the private interests of one business. This is not a criticism, simply an observation that in the short term, when no other private sector operator is in a condition to export to Europe and the artisanal sector has no route either, Sierra Leone's hopes rest with the commercial interest of one company.

5.1.2 Competent Authority

- a) The Food Unit is under resourced even though it was promised full support in November last year
- b) The SFP programme has not delivered its equipment on time due to administrative problems, meaning that the CA and the NWQL and the Pharmaceutical Laboratory have not had the opportunity to practice their use when an EU trainer was present.
- c) There appeared to be a reluctance on behalf of the MOHS to meet with the consultant who requested a meeting on a number of occasions as he wished to ascertain the budgetary support (reported as nil by staff) that was being given to the unit and also why the MoU prepared in the previous mission had not been signed
- d) The CA required further central government support, this will be crucial to the future of the inspection service. During the mission the consultant had found the department had no toner, no paper, no funds for photocopying, no files and therefore no filing system. The consultant invited a representative of the Strategy and Policy Unit, Office of the President to his debrief but no one was available although he was informed that the matter of budgeting for the Food Unit was a concern and that the issue was being raised with the Financial Secretary and would be discussed at the time this report is being written.

5.2 **Inspection of Fishing Vessels**

The difficulties in effective communication between the private industry and the CA significantly reduced the opportunities for inspection training with the consultant.

It is difficult to understand how the CA could operate in partnership with the private sector and yet not know that landings were being made at a rate of three or four times the number being reported.

The situation appeared unbalanced and was exacerbated by the CA not making deeper enquiries into the records kept by the private sector.

5.3 Inspection of fish quality

The CA judged the fish quality well and made records of their findings, though usually on loose sheets of paper, due to the lack of printing facilities that the unit could afford. Photocopying was likewise not possible unless the staff pooled their resources and paid for the photocopying themselves.

5.4 Gap Analysis

The analysis indicated that updating the FPR would be valuable as identified in mission CA001SLE and that the CA needed much more practice in carrying out their official controls. Concomitant with that is the need for the CA to be recognized and respected by the private sector. At one point for example, the Head of the Food Unit was refused entry to a factory, although he had identified himself.

5.5 HACCP and HACCP auditing

The CA had begun to understand the concepts of HACCP but lacked practical experience of implementation (they only had one factory hazard analysis to work from). It was difficult for them to gain practice and this contributed to an evident lack of confidence to challenge the findings of the private sector.

Many more examples and much more practice is needed.

5.6 NCP and NMP

The NCP and NMP were both at the first draft stage and were recognised as working documents that the inspectors would need to revise shortly after they became available.

Both the NCP and NMP were only at the typing stage when the mission ended.

5.7 Heavy Metals

Clearly heavy metal contamination of fish was an area of research that needed deeper consideration. Had any of the species in the recent tests been exported over 70% would have been rejected at the Border Inspection Post.

An investigation into the occurrence of heavy metals is certainly warranted, followed by reliable catch records, otherwise both the exporter and the country may suffer heavy penalties in the longer term.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Summary of the factors affecting Sierra Leone's listing status (5.1 above)

Sierra Leone's chances of becoming an exporting nation to the EU in short term of perhaps one year depend entirely on the business strategy of one company. Without that outlet an essential link in the chain is non-existent. Beyond the building of a factory is the problem of the fishing vessels. Their condition and the interest of the skippers (e.g. care of the catch) will determine what guarantees may be made. There is little that the SFP or other donors will be able to do such as training that will directly affect the desires of a private commercial operation.

Central government support is needed for the CA to be effective without it is difficult to see how the department can operate.

6.1.1 Recommendation

It is recommended that any future missions ensure that the CA has sufficient support and resources to operate, prior to their preparing further CA development work.

6.2 **Fishing Vessels (4.2 and 5.2)**

The industrial vessels and their care of the catch remain a major obstacle. If the present fleet is not replaced then the chance of any significant volumes of fish being exported to the EU are greatly reduced.

Only one vessel of any quality was inspected.

6.3 **Fish Quality Assessment (4.3 and 5.3)**

The CA staff proved good at assessment of raw fish quality and needed further practice plus practice of taste testing fish.

6.3.1 Recommendation

That the CA be provided with training in more advanced raw and cooked fish quality assessment and in care of the catch.

6.4 **HACCP Assessment and Audit (4.4 and 4.5)**

The CA have a clear understanding of the basics of HACCP but lacked confidence in challenging the private sector which they appeared to regard as having more expertise than they did. This may be the case but the private sector also needed to improve its technique and the CA needs to be at least equivalent in their knowledge.

6.4.1 Recommendation

That the CA be provided with a four day course in practical HACCP

6.5 **NCP and NMP (5.6)**

Both were in their draft stage by the end of the mission and would need to be thoroughly reviewed and moulded to the CA's specific needs. The CA recognized this and was willing to carry out the work

6.6 **Gap analysis (5.4)**

The gap analysis supported the findings of the remainder of the report, that the CA needs much more practical experience of enforcing their official controls

6.6.1 Recommendations

That the CA be provided with further practical training in enforcement of their official controls, specifically making detailed demands of the private sector including knowledge of all landings and records of fish quality, temperatures and HACCP controls.

6.7 **Heavy Metals (4.8 and 5.7)**

Heavy metals could prove to be a considerable problem if the existing records prove to be typical. In other fisheries e.g. tuna and swordfish it is possible to exclude fish with high heavy metals content based on their size, but fish in this fishery are relatively small when fully grown and may live for many years accumulating contaminants. A good knowledge of where or which fish are likely to cause a problem would help relieve the issue, which may otherwise be a constant threat, especially to the international sale of fish on ice (frozen fish having the advantage that they can be held on to while batch analyses are carried out).

Species selected should initially be those destined for the EU market.

6.7.1 Recommendation

That the offer from the ISFM is accepted and arrangements are put in hand for the development of a sampling regime that will provide a good picture of the occurrence of heavy metals in the fish stocks.

7 ANNEXES

Annex 7.1: Terms of Reference

Annex 7.2: Programme and people met

Annex 7.3: Information about training activities

Annex 7.4: Bibliography

Annex 7.5: Ghana Standards Board Fish Sample Test Results



Annex 7.6: National Monitoring Plan Year

Annex 7.7: Training Matrix

Annex 7.8: Gap Analysis

Annex 7.9: Proposed Terms of Reference for future missions

ANNEX 7.1: TERMS OF REFERENCE

	SFP ACP/OCT Programme 8ACPTPS137 
Assignment name and number	CA064SLE: Training in inspection and other official control activities for the Competent Authority of Sierra Leone
Coordinator	Coordinator, Module 1
Technical Supervisor	Expert on sanitary conditions of Fishery products – SFP PMU
Background to assignment	<p>Sierra Leone is not currently authorised to export fishery products to the European Union. The SFP has been helping the country achieve harmonisation with EU sanitary regulations and requirements for importing fish and fishery products, firstly through the SFP Anglophone West Africa (AWA) regional project, which ended in 2007, and more recently through missions carried out by SFP Module 1 (CA001SLE and CA041SLE [Training Event], both carried out in June – July 2009, CA014SLE in November 2009, and CA074SLE in February 2010), Module 2 (LTI001SLE, May 2009) and Module 4 (ART001SLE, September 2009). Further technical assistance and capacity building is still needed at all levels if Sierra Leone is to attain the required level of guarantees needed for exporters of fish and fishery products to access the European market. As a result, additional interventions are currently being considered by Module 4, which will soon launch mission ART034SLE, and other SFP Modules.</p> <p>The Competent Authority in Sierra Leone is the Food Unit of the Environmental Health Department within the Ministry of Health and Sanitation (MHS). SFP Module 1 mission CA001SLE began the process of upgrading the CA’s official control activities through recommending legislative changes, preparing procedures for control activities and carrying out training in inspection. The mission proposed that a Memorandum of Understanding be drawn up between the Ministry of Health and Sanitation and the Ministry of Fisheries, which would legally empower the latter to undertake inspections of fishing vessels and landing sites on behalf of the MHS. This agreement has not yet been put in place. The mission also identified areas for future interventions, including a strong need for training of inspectors in a range of areas. These led to the implementation of missions CA014SLE, which provided basic training of fishery inspectors, and mission CA074SLE, which led to the development of a national monitoring and sampling scheme, the establishment of firmer connections with the Ministry of Fisheries and Marine Resources (MFMR), an agreement with a local laboratory, and the practical training of staff in selected inspection practices. Both r missions recommended further specific training for CA inspectors.</p> <p>An inspection visit by the EC Food and Veterinary Office (FVO) took place in October 2009, the final report of which was published in January 2010. The inspection did not result in Sierra Leone becoming authorised to export fishery products to the EU, but did provide important guidance to the CA in regard to the major areas of weakness that need to be rectified. It is anticipated that, if these issues can be resolved, a further inspection by the FVO could be scheduled in 2010 or (more likely) 2011, which could lead to Sierra Leone becoming</p>

	<p>authorised to export fishery products to the EU.</p> <p>The general objective of the present mission is therefore to continue the process of CA institutional strengthening and capacity-building commenced under missions CA001SLE, CA014SLE and CA074SLE, paying specific attention to the completion of the training programme and evaluation of the status of the CA as an effective inspection body. The mission will focus on development of operational arrangements for approval and inspection of fish processing establishments and fishing vessels, as well as on providing additional training to CA inspectors. This work will complement additional missions to Sierra Leone likely to be implemented by other SFP Modules.</p>
Issues to be addressed	<p>The Sierra Leone CA expects to be inspected for a second time by the FVO, either towards the end of 2010 or at the beginning of 2011. In order to be prepared for the inspection the CA inspectors need to complete a programme of training, started in earlier missions that will provide them with full coverage of the inspection procedures that will enable them to perform to the standards needed for compliance with EU fishery product hygiene requirements.</p> <p>The present mission will assist the CA's inspectors to further develop and put into practice, under supervision, the skills that they have already been exposed to at an introductory level. By the end of this mission the CA staff will have the attained skill levels necessary for them to effectively carry out their inspection functions.</p> <p>Sierra Leone does not have at present a National Control Plan (NCP) or a National Monitoring Plan (NMP) although the elements of each exist in the form of procedures and records and instructions on monitoring frequency. These plans are an essential element of the CA's performance to demonstrate equivalence with the EU regulations, and their development by the Sierra Leone CA needs to be supported. The present mission will start this process and will prepare a road map to completion.</p> <p>SFP Module 1 support to Sierra Leone will conclude with this mission, although it is recognised that the CA will probably need further assistance in the future. In addition to providing training, therefore, the mission will also evaluate the status of the CA and make recommendations for future interventions by other technical assistance or donor organisations, specifically the EU-funded EDES programme and the World Bank's West Africa Regional Fisheries Programme.</p>
Activities of the Consultant	<p>In partnership with the technicians of the CA and other relevant stakeholders, the consultant will undertake the following tasks:</p> <ul style="list-style-type: none"> • Provide classroom and hands-on/ on-the-job training to the CA inspection and technical staff in the following areas: • Practical inspection of fishing vessels; • Practical assessment of fish quality; • HACCP systems assessment • Audit of HACCP process and systems in fish processing establishments; • Through performance of a gap analysis, assess and report on the current status, capacities and limitations of the CA in terms of its organisational structure, management, operations, and overall capability to implement official controls over fishery product hygiene in a manner that would

	<p>allow equivalence with EU requirements;</p> <ul style="list-style-type: none"> • Develop first draft of National Control Plan (NCP) and National Monitoring Plan (NMP), as well as a road map for the CA to follow in order to complete these documents; • Make recommendations in regard to any areas where the CA may require of technical and financial support in the future, and which could be considered by other development organisations or donors agencies. <p>The expert should draft Terms of Reference (ToR) for any complementary actions recommended for implementation either by the SFP or the EDES programme.</p> <p>The above list of activities is non-exhaustive. The consultant is expected to consult with government agencies and other relevant stakeholders and to use his professional judgement in identifying and carrying out other tasks in response to the conditions and requirements observed in the field.</p> <p>The expert will hold a formal debriefing with the relevant authorities in Sierra Leone at the conclusion of the mission. An end-of-mission aide-memoire, summarising the expert's main findings and recommendations, should be produced as a background document for the debriefing, and subsequently included as an annexe in the expert's mission report.</p>
Expected outputs	<p>The main outputs expected from the present mission are:</p> <ul style="list-style-type: none"> • Training materials produced and relevant, appropriate theoretical and practical training provided to CA staff; • Evaluation of the performance of the CA as an inspection body through performance of a gap analysis, and identification of priority areas for future support to the CA; • Draft NCP and NMP route map for their completion • Draft Terms of Reference for any follow-up activities recommended for the SFP or the EDES programme. <p>The expert is required to produce a report detailing his activities, the results of any training delivered, issues that need to be addressed, and recommendations for any follow-up actions needed by the Sierra Leone Government or the SFP.</p> <p>For any training delivered during the mission, the expert's report must contain:</p> <ul style="list-style-type: none"> • a detailed record of all participants in the training, including full name, gender, occupation or position, and contact details; • a summary of the participants' evaluation of the training delivered (standardised evaluation forms will be provided); • a copy of all training materials used by the expert during the mission. <p>All training records, evaluations and materials, as well as any draft TOR for proposed SFP interventions, should be included in the report as annexes.</p> <p>The report is to be produced using MS Word for word processing, as well as other MS Office software where necessary. The report must be made available in hard copy and electronic form, both in Word/ MS Office as appropriate, and in pdf format, with all elements combined in a single file. More information on the report format is contained in the next section.</p>

Report format	<p>The Consultant will be provided with a standard document template in MSWord which must be used as the basis for the mission report. The report will be prepared in English, according to the following 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 - A ‘Layman’s Summary’ of 4-5 lines, as per EC visibility requirements - Executive Summary (maximum 2 pages), in English and French - Introduction - Main body of report divided into different sections as appropriate, normally Context, Methodology, Performance in relation to TOR, and Discussion (up to 20 pages) - 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 - Annex 2 Schedule and people met (with contacts) - Annex 3: Aide-memoire used at the in-country debriefing meeting - Any other annex(es) as appropriate. <p>Format as per PMU indications.</p>																								
Report to be reviewed by	SFP Programme Manager																								
Duration/ indicative schedule of work activities	<p>The following schedule of inputs is indicative only, and subject to amendment by the consultant in response to operational considerations</p> <table border="1" data-bbox="395 1395 1406 2045"> <thead> <tr> <th>Activity</th> <th>Working days</th> </tr> </thead> <tbody> <tr> <td>Preparation of training materials at home base</td> <td>2</td> </tr> <tr> <td>Travel to Sierra Leone</td> <td>2</td> </tr> <tr> <td>Briefing of Authorities & EC Delegation in Sierra Leone</td> <td>1</td> </tr> <tr> <td>Theoretical and practical training in inspection practices</td> <td>12</td> </tr> <tr> <td>Draft NCP and NMP road map for completion</td> <td>2</td> </tr> <tr> <td>Gap analysis/ CA assessment/ TA recommendations</td> <td>3</td> </tr> <tr> <td>Debriefing of Authorities & Delegation in Sierra Leone</td> <td>1</td> </tr> <tr> <td>Travel to Europe</td> <td>1</td> </tr> <tr> <td>Debriefing in Brussels</td> <td>1</td> </tr> <tr> <td>Report preparation</td> <td>3</td> </tr> <tr> <td>Total</td> <td>28</td> </tr> </tbody> </table> <p>Total working days will equal 28 calendar days.</p>	Activity	Working days	Preparation of training materials at home base	2	Travel to Sierra Leone	2	Briefing of Authorities & EC Delegation in Sierra Leone	1	Theoretical and practical training in inspection practices	12	Draft NCP and NMP road map for completion	2	Gap analysis/ CA assessment/ TA recommendations	3	Debriefing of Authorities & Delegation in Sierra Leone	1	Travel to Europe	1	Debriefing in Brussels	1	Report preparation	3	Total	28
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Briefing of Authorities & EC Delegation in Sierra Leone	1																								
Theoretical and practical training in inspection practices	12																								
Draft NCP and NMP road map for completion	2																								
Gap analysis/ CA assessment/ TA recommendations	3																								
Debriefing of Authorities & Delegation in Sierra Leone	1																								
Travel to Europe	1																								
Debriefing in Brussels	1																								
Report preparation	3																								
Total	28																								

Start date	June 2010 (estimated)	
Completion dates for reports	Draft report to PMU	10 working days after return to home base
	PMU comments	Within 2 weeks of reception
	Final report	10 working days after reception of PMU comments (including comments of authorities if appropriate)
Experience and qualification	<p>Expert of category II (at least 10 years of experience)</p> <p>Qualifications and skills:</p> <ul style="list-style-type: none"> - A University degree in veterinary, food technology or related sciences - Knowledge of English is essential. - The applicant must be of EU or ACP member states nationality. <p>General professional experience:</p> <ul style="list-style-type: none"> - Comprehensive knowledge of EU regulations relevant to control of fish and fishery products sanitary status. - Demonstrated long-term background in fish and fish products surveillance <p>Specific professional experience:</p> <ul style="list-style-type: none"> - Long term background in the application of EU legislation and procedures for inspection and certification in third countries; the drafting of manuals of procedures for the inspection and certification, and the design and setting up of self-control systems, based on HACCP methodology, by the food industry as well as their audit by official inspection bodies. 	
Locations and travel	<p>Based in Wellington, Somerset, United Kingdom:</p> <ul style="list-style-type: none"> - 1 journey Wellington, UK – Freetown, Sierra Leone; - 1 journey Wellington, UK – Brussels, Belgium; - up to 21 nights' per diem in Sierra Leone; - up to 1 night's per diem in London (transit); - up to 1 night's per diem in Brussels. 	

ANNEX 7.2: PROGRAMME AND PEOPLE MET

Date	Location	Name and Title	Contact details & remarks
21/06/2010	Freetown	Gebrilla Bundu, Head of CA Mr Manso Kargbo Mr Sellu Daboh Miss Martha Mani Mr Charles	Organize programme for mission foodsunit@yahoo.com 076 243920 076 780376 078 607086 076 786562/088 418104
22/06/2010	Freetown	Mr Pierre Reymondet- Commoy Head of Delegation Matthias Reusing Head of Rural Development Mrs Myers, Deputy Director NAO	Pierre.Reymondet-Commoy@ec.europa.eu EC Delegation, Freetown (Since left post) 076 624594
		Heiko Seilert Mr Andrew Tucker NAO Mr Ritchie Jones Mr Bundu Mr Alie Kamara	Tel: +232-76-547250 Email: heiko.seilert@gopa.de - Project Officer (Rural Development Section, Delegation of the European Union Tel: +232-76-727955 Email: ritchie- peter.jones@ec.europa.eu - 077 539223/076 685084
		Mr Sellu Daboh	Training with Mr Daboh. Consideration of checklist for water quality report audit. Begin development of filing system
23/06/2010	Freetown	Mr Bundu Mr Kargbo Miss Mani Mr Daboh Mr Charles Mr Abu Mrs Sanah Mr Kamara	Training in development of a CA filing system.
24/06/2010	Freetown	CA staff as above plus: Mr Sahr E Abu	Inspection of landing in process from vessels Port City 103 & 104

Date	Location	Name and Title	Contact details & remarks
		Mr Ahmad Makki Fleet Manager	078 385 662 00961 303 1107
		Mr Bundu Mr Sellu Daboh Mr Ali Kamara	Meeting at the National Water Quality Laboratory to discuss the presentation of their reports: Water Quality Lab. Tower Hill Freetown
		Mr S S Fornah Head of NWQL	076 504 278 077 364 760
		Kai Junisa (Technician)	076 967 074 088 582 341
		Edward Toby Lab Technician	077 577 020 033 953 079 edwardtoby36@yahoo.com
		Wosu A Korom Chief Engineer Water Supply Division	088 948 388 wakoroma@yahoo.com
25/06/2010	Freetown	CA staff plus: Mr Simon Dabuya	As above
26/06/2010	Freetown		Preparing NCP and second week training
27/06/2010	Freetown		Preparing NCP and second week training
28/06/2010	Freetown	CA staff	Team work building NCP
29/06/2010	Freetown	CA staff	
30/06/2010	Freetown	CA staff	
01/07/2010	Freetown		Meeting Delegation
02/07/2010	Freetown	CA staff	
03/07/2010	Freetown	-	Preparing gap analysis
04/07/2010	Freetown	-	Preparing gap analysis
05/07/2010	Freetown	CA Staff	
06/07/2010	Freetown	CA Staff	
07/07/2010	Freetown	CA Staff	
08/07/2010	Freetown	CA Staff	Meeting Mr Bundu discuss debrief and ToR

Date	Location	Name and Title	Contact details & remarks
09/07/2010	Freetown	P Reymondet-Commoy	Debrief: EU Delegation Head of Delegation As above
		Mr Muci	EU Food Security 076 717409
		Mrs Amy Myers	NAO/Deputy Director 076 624594
		Heiko Seilert	MFMR/ISFM 076 54 7250
		Kadyafu Jalloh	Senior Fisheries Officer 033 512525
		Gibrilla Bundu	-
		David Goebells	Trade Officer EUD 076 333945
		Hotanga Robbie	MFMR Acting Assistant Director 076 617042

ANNEX 7.3: INFORMATION ABOUT TRAINING ACTIVITIES

a) Title of training course or subject of training	Practical Training in vessel inspection, fish quality assessment, HACCP assessment, development of the NCP and NMP
b) Location (City, town, etc)	Freetown
c) Dates (start and finish)	23/06/10 – 7/07/10
d) No of days of training delivered (e.g. a 5-day course in which training occupied half of each day would be 2.5 days)	11
e) Total number of participants	9
f) Total number of participant-days (normally = d*e, unless there was partial attendance by some participants)	99
g) Total number of women participants	1
h) Total number of women participant-days (normally = g*e, unless there was partial attendance by some participants)	11

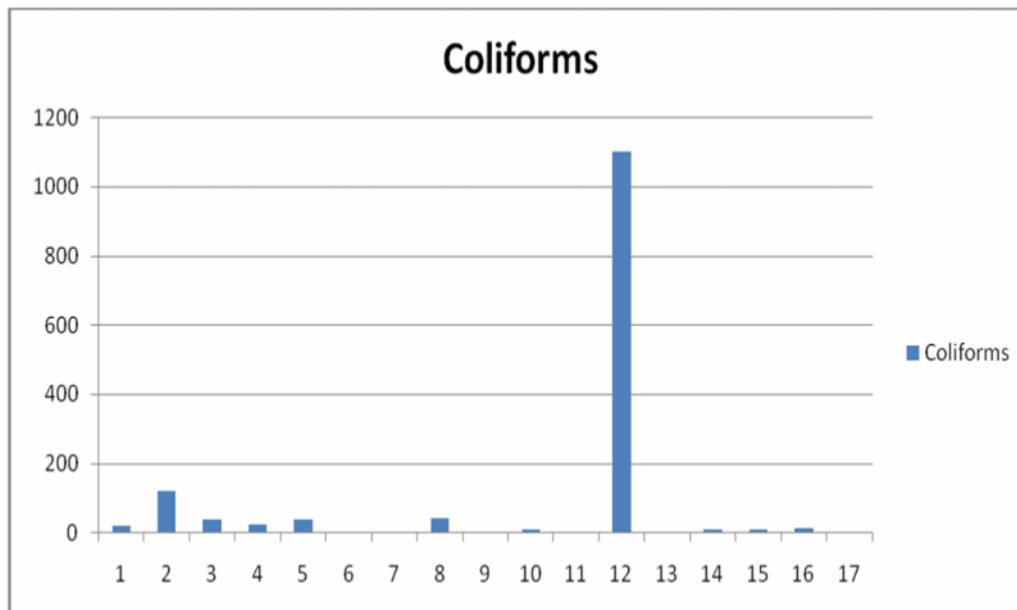
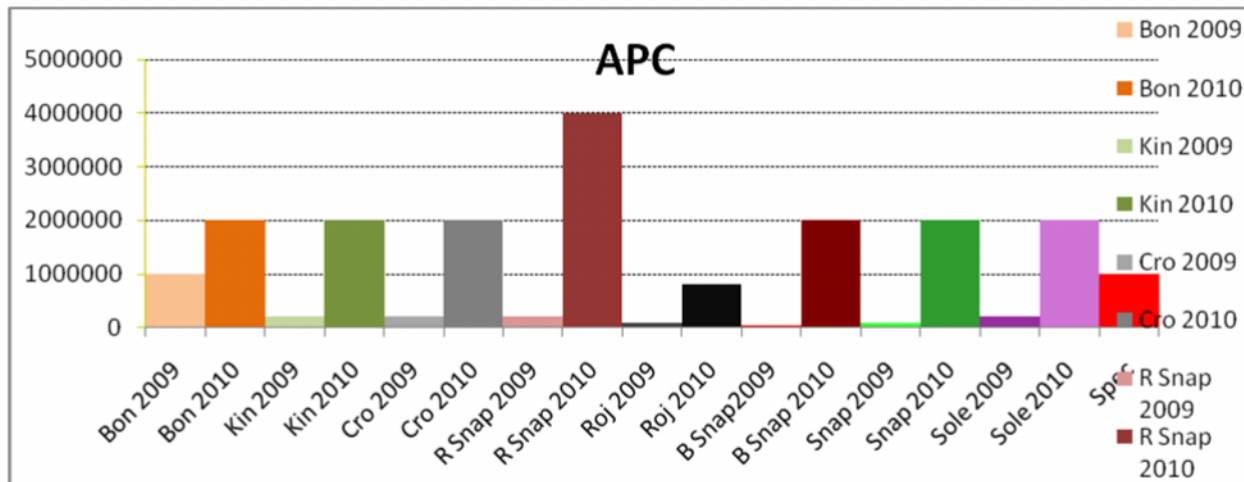
ANNEX 7.4: BIBLIOGRAPHY**SFP Technical Papers:**

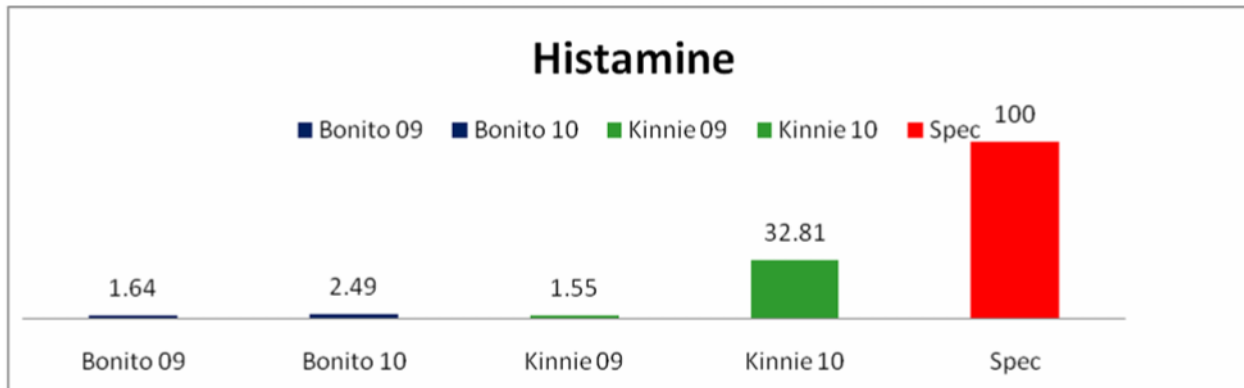
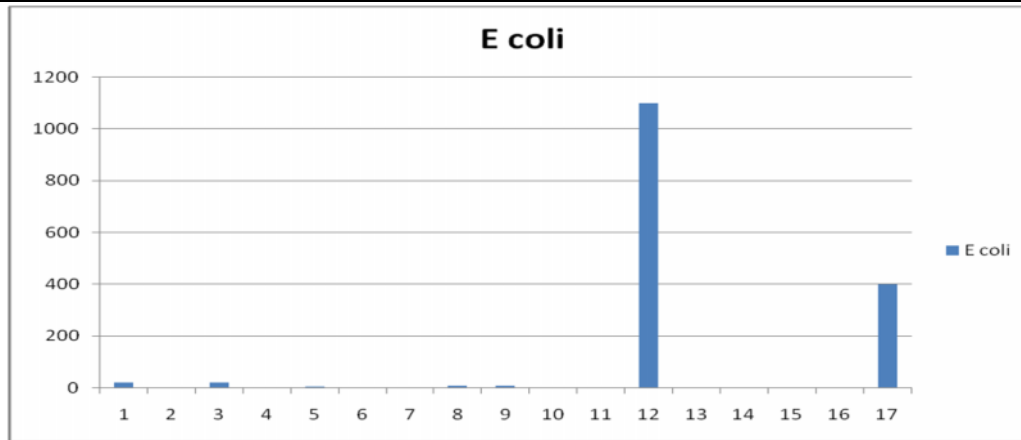
Project S066FJI - Technical Assistance to the CA Fiji Final Technical Report;

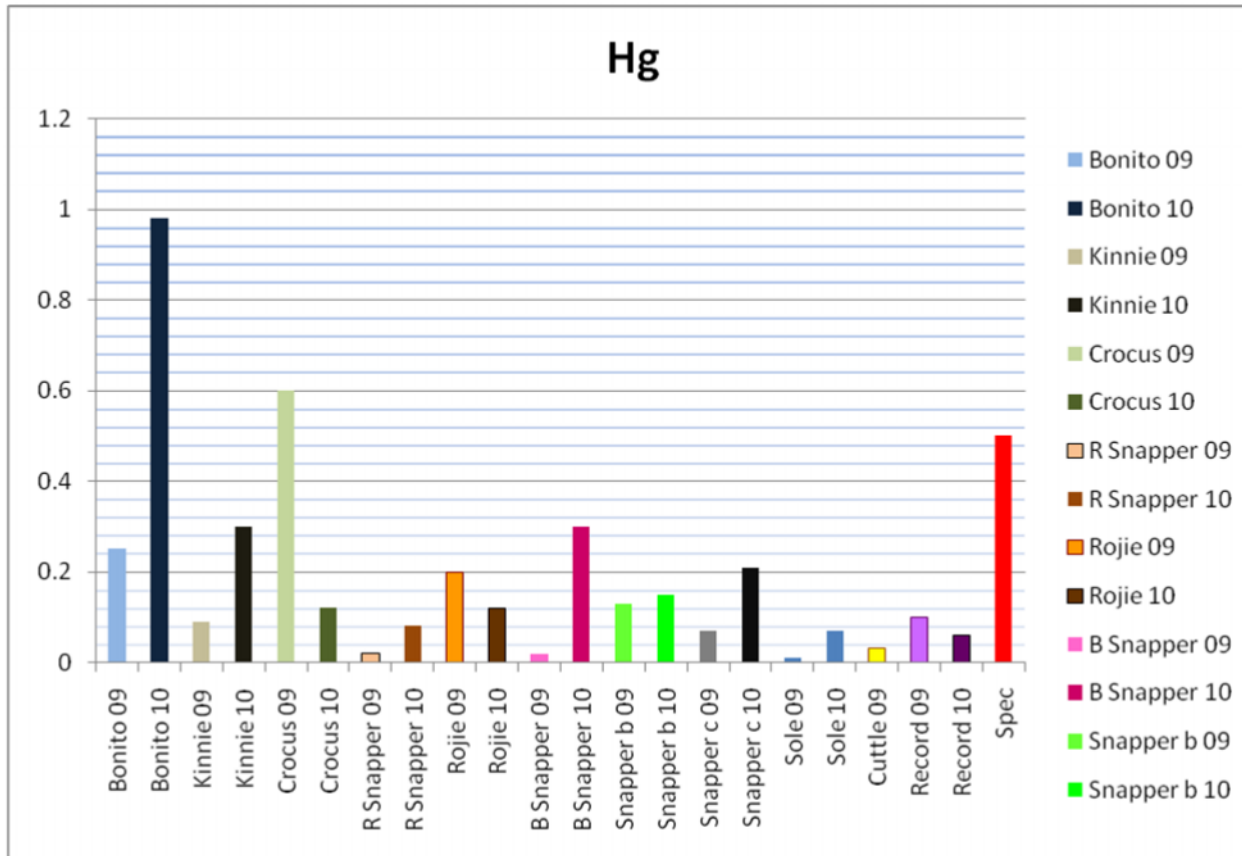
Updating of CA Inspection Manual and Training of Fishery Inspectors in Guyana Mission Ref: CA030GUY

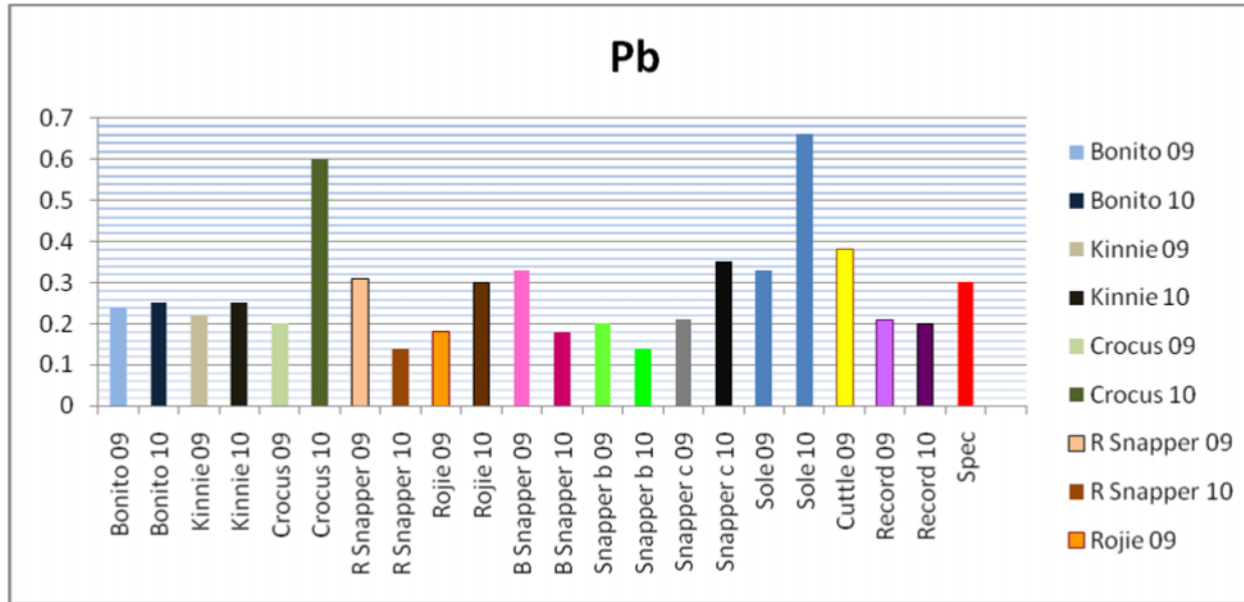
SFP Manual/Handbook for the Execution of Sanitary Inspection of Fish as Raw Material and Fish-Products as Food for Human Consumption October 2005

ANNEX 7.5: GHANA STANDARDS BOARD FISH SAMPLE TEST RESULTS









ANNEX 7.8: GAP ANALYSIS

Equivalence between Sierra Leonean official controls and fish products legislation and EU legislation

Note: the report on mission CA001SLE recommended that the Sierra Leonean Fishery Products Regulations be rewritten due to inaccuracies and the inclusion of best practices as regulations rather than guidelines.

EC Requirement	Source in EC legislation	Actions required in Sierra Leone	Time estimate	Resources
Verification of risks to food safety Labelling	Reg 882/2004 Art 1	1. Training in risk analysis undertaken during current mission. 2. Labelling requirement to be followed up	2. 3 months	EU Regulations already supplied in electronic and hard copy
Control plan	Reg 882/2004 Art 2	1. A first draft of a control plan was written during the mission. Including an organogram of the department's activities 2. First draft of national monitoring plan written during the mission	1. Review 1 st draft NCP and accuracy of the organogram - 2 months 2. Review 1 st draft NMP to be reviewed - 2 months	Legislation as above
Regular official controls	Reg 882/2004 Art 3 General conditions All stages of production; risk based;	No actions needed other than PRACTICE.	6 months	Most can be effected with existing equipment and facilities but will be aided by SFP provided computers, vehicles and sampling equipment
Designation of the CA	Reg 882/2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules Article 4 Designation of competent authorities and	Regulations (Statutory Instrument No. 6 of 2007; 19/05/2007) made by Minister of Health and Sanitation in exercise of his powers (Sections 107, 119, 147 Public Health Act 1960 (Act No 23)) The designation of the CA exists under Regulation 2 of the FRP 2007 (under the	No action required	N/A

EC Requirement	Source in EC legislation	Actions required in Sierra Leone	Time estimate	Resources
	operational criteria	powers of Section 110 of Public Health Act)		
Description of a system of approval of establishments	Reg 853/2004 laying down specific hygiene rules for food of animal origin Article 4 Registration and approval of establishments	The CA has procedures that cover the initial approach from an applicant to open a business and the review of plans through to final approval and registration of establishments. Also includes the removal of approval	No action required	N/A
		The CA inspection staff appeared reluctant to take on the power of the private sector e.g. by not requesting records from the fishing companies and not following up corrective action requests to a satisfactory conclusion. Much more practice in investigating company records and following up corrective actions needed.	9 months	SFP computers and vehicles etc will help as will upgraded laboratory facilities.
Verification of methods of analysis and detection	Reg 882 Art 10 Control activities, methods and techniques	Use of recognized techniques and laboratory facilities with appropriate accreditation	No action required	N/A
Description of conditions of establishments needed for approval; including building conditions, GMP, GHP and HACCP	Reg 853/2004 Annex III: Specific Requirements Section VIII Fishery Products	In general terms these requirements are present in the FRP, although they would benefit from improvement and more accuracy	Long term action. Rewrite the regulations for easier interpretation and accuracy. 1 year.	Passed to FAO in July 2009 but no known action to date. A consultant or further action by FAO.
Traceability (one up one down)	Reg 178/2002 laying down the general principles and requirements of food law, and laying down procedures in matters of food safety	No specific mention of 'one up one down' practice	As above	As above
Requirement for the inspection of fishing vessels	Reg 853/2004 Annex III Section VIII Chpt 1 Requirements for Fishing Vessels	As with other comments regarding the Sierra Leonean FRP clarity would be obtained by rewriting	As above	As above

EC Requirement	Source in EC legislation	Actions required in Sierra Leone	Time estimate	Resources
Description of requirements at landing sites	Reg 853/2004 Annex III Section VIII Chpt II Requirements during and after landing	Exists in legislation.	As above	As above
Requirements for organoleptic inspection and parasite checks	Reg 2074/2005 laying down implementing measures for certain products under Reg 853/2004 and for the organisation of official controls under Reg 854/2004 and Reg 882/2004 derogating from Reg852/2004 and amending Regs 853/2004 and 854/2004 (traditional foods)	Exists in legislation.	As above	As above
Health certificates	Reg 2074/2005 contd. Annex VI: Includes Model Health Certificates for Fishery products and Live Bivalve Molluscs) Section IV :Fishery Products Section V: Live Bivalve Molluscs	The most recent Model Health Certificate exists in the Certification Procedure but not in the FRP	Review of FRP as above	As above
Poisonous fish	Annex VII Amendments to Reg 853/2004 (c) in Section VIII, Chapter V(E), point 1 is replaced	Not in FRP in full form	Review of FRP as above	As above
1. Relating to classification conditions for bivalve harvesting areas 2. Relating to poisonous fish	Annex VIII Amendments to Reg 854/2004 2. in Annex II, Chapter II (A), points 4 and 5 are replaced with the criteria in EN/ISO 16140. 3. in Annex III, Chapter II(G), point 1 is replaced	Not in FRP	Review of FRP as above	As above
Monitoring residues and contaminants	Reg 854/2004: laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption	In general terms these are present in the FRP	Review of FRP as above	As above
Powers of inspectors	Reg 882/2004	In FRP	No action	N/A

Food Safety conditions applied to marine capture fishery products for human consumption

EC Requirement	Source in EC legislation	Actions required by Sierra Leonean CA	Time scale	
Potable water or clean seawater	Directive 98/83: on the quality of water intended for human consumption	Included in National Monitoring Plan (NMP) and in Sampling procedure	No action	N/A
Requirements for testing laboratories for official controls	Reg 882/2004 Article 12 Designation of laboratories at ISO 17025 standard	Included in FRP	No action	N/A
Microbiological criteria for fishery products	Reg 2073/2005 on microbiological criteria for foodstuffs	Included in FRP but inaccurate	Include in redrafting	1 year
Sulphite content of crustacea	Directive 95/2 on food additives other than colours and sweeteners	Included in FRP but meaning is not clear	Include in redrafting	1 year
Heavy metal limits; Cd, Hg, Pb	Reg 1881/2006 setting maximum levels for certain contaminants in foodstuffs	Included in FRP but inaccurate	Include in redrafting	1 year
Sampling and analytical methods for heavy metals	Directive 2001/22 laying down the sampling methods and the methods of analysis for the official control of the levels of lead, cadmium, mercury and 3-MCPD in foodstuffs and Dir 2005/4 amending Directive 2001/22/EC laying down the sampling methods and the methods of analysis for the official control of the levels of lead, cadmium, mercury and 3-MCPD in foodstuffs	Included in FRP but inaccurate	Include in redrafting	1 year
Maximum residue levels for dioxins and dioxin-like PCBs and PAHs in fishery products	Reg 1883/2006 laying down methods of sampling and analysis for the official control of levels of dioxins and dioxin-like PCBs in certain foodstuffs	Included in FRP but inaccurate	Include in redrafting	1 year
Labelling requirements	Directive 2000/13 on labelling of foodstuffs	Not in FRP	Include in redrafting	1 year
Tasks and duties of staff	Reg 882 General requirements throughout	Insufficiently well defined	Job descriptions to be prepared within 2 months	CA using definitions from NCP

ANNEX 7.9: PROPOSED TERMS OF REFERENCE FOR FUTURE MISSIONS

Presented in basic format as future terms of reference will not be carried out SFP

Issues to be addressed	<p>The Competent Authority and their partners in the development of an export trade from Sierra Leone, the Fishery Inspectors from the Ministry of Fisheries and Marine Resources have very little experience of quality management systems and would benefit from an understanding of the requirements of the higher levels of the world market for fish.</p> <p>A training course in Quality Management Systems would provide an excellent basis for their future assistance with the industrial sector in advising on the growth of the export market and meeting market needs in the EU.</p> <p>The inspectors will also need to understand how they should approach HACCP auditing and how to prepare a challenge to the private sector specialists.</p>																
Activities of the Consultant	<p>To train 10 staff from the Competent Authority and 5 staff from the Ministry of Fisheries and Marine Resources in quality management systems in particular the British Retail Consortium Global Standard – Food.</p> <p>The inspectors will also require training in the practical aspects of HACCP auditing. This part of the course should only be provided for those who have a grounding in HACCP already.</p> <p>The consultant will also carry out training in raw and cooked fish quality assessment</p>																
Expected outputs	<p>That 15 inspectors from the CA and MFMR are trained in an understanding of the requirements of quality management systems to the extent that they can deliver advice on the subject to private sector interested in exporting to the EU market.</p> <p>A sound understanding of how to audit HACCP in a practical situations, especially with respect to the private sector.</p> <p>The inspectors will recognize and be able to describe raw fish quality and relate it to the cooked quality.</p>																
Duration/ indicative schedule of work activities	<p>The following schedule of inputs is indicative only, and subject to amendment by the consultant in response to operational considerations</p> <table border="1" data-bbox="416 1574 1396 2027"> <thead> <tr> <th data-bbox="416 1574 1206 1664">Activity</th> <th data-bbox="1206 1574 1396 1664">Working days</th> </tr> </thead> <tbody> <tr> <td data-bbox="416 1664 1206 1720">Brief</td> <td data-bbox="1206 1664 1396 1720">1</td> </tr> <tr> <td data-bbox="416 1720 1206 1776">Preparation of materials</td> <td data-bbox="1206 1720 1396 1776">4</td> </tr> <tr> <td data-bbox="416 1776 1206 1832">Travel to Sierra Leone</td> <td data-bbox="1206 1776 1396 1832">1</td> </tr> <tr> <td data-bbox="416 1832 1206 1888">Meetings with CA and MFMR</td> <td data-bbox="1206 1832 1396 1888">1</td> </tr> <tr> <td data-bbox="416 1888 1206 1944">Preparation of materials</td> <td data-bbox="1206 1888 1396 1944">4</td> </tr> <tr> <td data-bbox="416 1944 1206 2000">Training Quality Management Systems</td> <td data-bbox="1206 1944 1396 2000">4</td> </tr> <tr> <td data-bbox="416 2000 1206 2027">Training in practical aspects of HACCP</td> <td data-bbox="1206 2000 1396 2027">4</td> </tr> </tbody> </table>	Activity	Working days	Brief	1	Preparation of materials	4	Travel to Sierra Leone	1	Meetings with CA and MFMR	1	Preparation of materials	4	Training Quality Management Systems	4	Training in practical aspects of HACCP	4
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Locations and travel	<p>Based in XXXXXXXX:</p> <p>Mission 1 journey from XXXX to XXX;</p> <p>Debrief 1 journey from XXXX to XXX;</p> <p>up to XX nights' per diem in XX;</p> <p>up to 1 night's per diem in XX;</p>												