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ACP/OCT COUNTRIES**

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**CARIBBEAN Region - REQUEST FOR SERVICES N° 36/03/06/CAR
Study to Improve Compliance with EU Commission Sanitary Standards in
the CARIFORUM Fisheries Sector**

Draft Final Report

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Disclaimer

This report has been prepared for Agrifor Consult, Brussels and Europe AID. Information has been obtained from interviewing a range of people with a direct involvement in the subject of the study. The team have used their best efforts to ensure the accuracy of the material. However, they do not warrant the accuracy of any data provided, nor do they accept responsibility for any error contained in or any omission from the documents prepared, nor any loss or consequential loss arising from the information or its use.

Abbreviations

AQIS	Australian Quarantine and Inspection Service
CA	Competent Authority
CARICOM	Caribbean Community Secretariat
CARIFORUM	Caribbean Forum (CARICOM plus Dominican Republic and Haiti)
CARIRI	Caribbean Industrial Institute
CEHI	Caribbean Environmental Health Institute
CIDA	Canadian International Development Assistance Agency
CITES	The Convention on International Trade in Endangered Species
CAHFSA	Proposed CARIFORUM plant / animal health and food safety agency
CRAA	Caribbean Regional Accreditation Authority
CRAS	Caribbean Regional Accreditation System
CROSQ	CARICOM Regional Organisation For Standards And Quality
DFID	UK Department for International Development
DSP	Diarrhetic Shellfish Poisoning
EEC	European Economic Community
EU	The European Union
FDA	U.S. Food and Drug Administration
FAO	Food and Agriculture Organisation of the United Nations
GDP	Gross Domestic Product
GMP	Good Manufacturing Practice
JICA	Japan International Cooperation Agency
HACCP	Hazard Analysis and Critical Control Points
MRAs	Mutual recognition agreements
OECS	Organisation of Eastern Caribbean States
ORISA	Organismo Internacional Regional de Sanidad Agrpecuaria (Central America Regional Organisation for Plant and Animal Health)
PSP	Paralytic shellfish poisoning
R&M	Repairs and Maintenance
RFQ	Regional quality infrastructure
SPC	Secretariat of the Pacific Community
SPS	Sanitary and Phytosanitary Agreement of the WTO
WHO	World Health Organisation
WTO	World Trade Organisation

Executive Summary

This study has confirmed earlier studies that there are substantial impediments to some CARIFORUM countries developing their fishing industries particularly in relation to the export of fishery products to the EU.

The study has taken a short to medium term perspective in line with the TOR for the study. However, external market forces such as the following will inevitably bring about longer-term structural change:

- The fact that CARIFORUM countries have virtually no control over the price of fish in world markets. Exporters in CARIFORUM countries for a number of species including tuna are “price takers” in world markets with the exception of conch and flying fish;
- The likelihood that the WTO rules will over time lead to increased competition from countries that have economy of scale advantages over CARIFORUM countries;

It is important that the longer-term issues related to the potential influence of world markets is factored into investment and development assistance decisions.

The CARIFORUM countries:

- Are small in population;
- Generally do not have soundly based Competent Authority (CA) arrangements;
- Produce relatively small quantities of fishery products by world standards;
- Have for the most part inadequate sanitary standards in their local markets;
- For the most part lack the capacity to screen fisheries imports from a food safety perspective;
- Most CARIFORUM countries are relatively high cost producers compared with significant fishery products exporters such as Guyana and Surinam;
- Generally lack the necessary infrastructure, such as laboratory capacity, required to meet the requirements of markets like the EU;
- Generally lack capacity to implement and audit HACCP programs;
- Are subject to seasonal demand for marine product on their domestic markets as well as seasonal fishing influences / migratory species;
- In particular some of the CARIFORUM countries have significant social impediments in terms of improving the economic efficiency of their fishing industries;

Notwithstanding the above, there are CARIFORUM countries presently exporting fishery products successfully to nearby EU, EU Territories and the USA. Exports of shrimp, conch and live lobster are likely to remain viable given stocks are not depleted, and export of certain other species may be viable, depending on the world price for the product and whether the exporter has a diversified business or joint venture arrangements.

In the case of EU Territories' trade, some CARIFORUM countries have been longstanding suppliers to these markets until the imposition in the mid 1990's of more stringent standards by the EU. Some EU Caribbean Territories have special arrangements to allow the importation of certain

species. Given the stringent requirements of the EU maintenance of the trade reflects a strong commitment by officers of the CA's in the various countries.

The domestic market (including tourism and restaurant trade) is important to CARIFORUM countries, as the fishing industry is a significant employer of labour (2-5%). The availability of a local market, even based on the existing generally inadequate sanitary standards, is likely to continue for some years. However, it would be prudent to recognise that even in this market there will be pressure for change, which will require an upgrading of sanitary standards. Improving sanitary standards for the domestic market is likely to lead to a stronger, more viable market over time.

In many CARIFORUM countries pressure for change is much more likely to come from the private sector, such as supermarkets that impose their own food safety and quality standards, and from export oriented processing plants as distinct from Governments, although it is important to recognise that Government can assist greatly in terms of providing appropriate institutional framework.

This report suggests areas where Governments can provide an appropriate framework for the private sector to develop. It also recognises that not all CARIFORUM countries will be able to sustain an export fishing industry and as such not all recommendations will be applicable to all CARIFORUM countries. The report also suggests that regional organisations such as CARIFORUM can make a substantial contribution to building the sustainability of the fishing industries of CARIFORUM countries through agencies such as the proposed CAHFSA agency. As such, this report is directed toward CARIFORUM Governments, CARIFORUM donor agencies and the private sector.

The major recommendations of this report cover institutional aspects of sanitary controls, such as the development of sustainable Competent Authorities and related foundation stones for the building of sustainable arrangements. Without such development unlimited training and laboratory support can be provided but it will have little practical effect, as it will not be sustainable. Upgrading of sanitary standards is seen as important to the longer-term sustainability of the domestic fishing industry as well as having critical implications as far as access to export markets such as the EU and USA

A key recommendation is the seeking of development assistance funding to enable establishment of a number of specialist positions within the proposed CARIFORUM plant / animal health and food safety agency (CAHFSA) It is envisaged that the appointees will facilitate the development of institutional CA arrangements where these do not exist, and also provide a focus for HACCP training and auditing, including train the trainer efforts, to ensure all CARIFORUM countries have at least some real capacity in this area.

In the difficult area of laboratory upgrading there are recommendations designed to provide a sustainable solution in the short to medium term. There is a need to at least provide specific microbiological test facilities in countries that export to the EU Territories and the USA.

Training and public awareness activities are highlighted in the recommendations as they relate to fishermen, inspection staff and the general public. .

The financing proposal has been provided in line with the TOR's, however the reality is that an organisation like CAHFSA will need long-term donor funding to remain a useful organisation to CARIFORUM countries. A good example is the technical capacity provided in the Pacific through Secretariat of the Pacific Community (SPC) where Europe AID, AusAID and NZAID all contribute funding to maintain and effective animal and plant health capacity that is available to the small island member countries of the SPC. In the case of animal health some of this funding is baseline funding in addition to specific project funding.

The growth in aquaculture ventures in some CARIFORUM countries will highlight specialised areas of need as far as aquaculture is concerned, including:

- Sourcing spore and fingerlings from countries that do not pose a risk of introducing exotic pests or diseases into aquaculture;
- Sourcing feeds from sources that do not introduce aquatic animal health or food safety issues;
- Ensuring residue issues such as potential anti biotic residues are well managed.

The reality in relation to EU listing is acceptance of the system based approach, and an acceptance that CA status for any country is hard won but very easily lost. One exporter who ensures compliance one day but not the next may well put the firm's status at risk, but a CA with a system designed to meet EU requirements that is not robust can put the whole export industry at risk. This is a key reason why a CA must be built and sustained on a sound foundation. Even during the team visits, according to a press report, Brazil was put on notice re histamine testing by the EU because of what was described as serious health concerns. Brazil is a much larger exporter of seafood than any CARIFORUM country.

What will absolutely critical to sustainable improvements being effected as a result of recommendations in this report is a commitment by the concerned governments that they understand the complexity of the requirements laid down by the EU. Additionally that they recognize the importance of their active participation in any project the EU might carry out in the Caribbean region before the commencement of such a project

1. Background

This study has built on an earlier study undertaken in 2002 by the CRFM Secretariat (then CARICOM Fisheries Unit). Other studies reviewed include:

- The 2003 studies “Advice and Support to the Competent Authority” – for Guyana and Belize;
- The 2003 Commonwealth Secretariat study by John Landos (Team Leader) and Naveen Kumar “Technical Assistance Inputs to Enhance Sanitary Standards and Capacity in the Supply Chain for Marine Products for Human Consumption in Eastern Caribbean States of St Lucia, Antigua, Anguilla, British Virgin Islands, Dominica and Grenada”. The Research Officer assisting the team, also visited Montserrat, St Kitts and Nevis;
- The 2002 EU Review of the live lobster export trade in Antigua and Barbuda;

The study commenced in Belize with an Inception Meeting and the development of an Inception Report. This report was considered as a draft and then accepted; during this phase a number of countries were added to the list to be visited, in particular CARIFORUM countries such as Guyana with major fisheries exports. Following this, visits by team members were made to Dominican Republic, Antigua, St Lucia, Barbados, Guyana, Trinidad and Tobago, Jamaica, The Bahamas and Haiti. A number of additional countries were added to the study during the inception phase including Guyana, Barbados and The Bahamas. Wherever EU Delegation personnel were available, meetings were held with them as well as development assistance agencies and international organisations relevant to the study.

The terms of reference are attached at Annex A

The study has examined existing sanitary controls relating to exports, domestic production and imports, and has specifically focussed on the upgrading of sanitary controls for the EU market.

During the course of the study, the team became aware of a presently ongoing study into CARIFORUM WTO SPS laboratory capacity being undertaken by Ms Beverley Wood of Barbados. Contact was established with Ms Wood with a view to ensuring a cohesive approach to the difficult issue of laboratory capacity.

A draft final report was prepared and circulated two weeks before to all participants in the workshop held during the second visit of the team in November 2006. This report was considered by the workshop and a workshop report then prepared as well as a final report.

1.1 Methodology and Limitations

This study involved two visits by John Landos, (Team Leader) and Stephen Smikle and Reuben Charles (Team Members). The first visit of almost five weeks was made in September / October 2006. The second visit, primarily to conduct the workshop, was made in November 2006.

In addition to obtaining information through discussions, the team also sought out available statistics and factual structural information from both agencies and web based sources that could be used in the analysis process. However, suitable statistical material was not always available and this represented a limitation to the study.

The stated timeframe in the TORs of two years for providing significant benefits to CARIFORUM countries is extremely limiting in the context of this study.

2. Introduction

2.1 World Market Trends

The world market is a very powerful generator of change and the fishing industries of CARIFORUM countries are not immune from its influence.

The available information suggests fisheries stocks are under pressure in many CARIFORUM countries. At the same time, in countries able to support aquaculture ventures, production from aquaculture is increasing.

It is recognised that world demand for fish is growing against a background of world population growth and the perceived health benefits of eating fish. As such, a balanced view would suggest that wild caught and aquaculture produced fisheries products will be in increasing demand

Market forces such as the following impact on the fishing industries of CARIFORUM countries:

- The availability of frozen portion controlled imports from countries with low production costs;
- The steady growth in food sold by supermarkets, against a background that supermarkets usually apply strong purchase cost and sanitary requirements on suppliers. The growth in supermarkets can be expected to continue;
- The increasing tendency for consumers to look for ready prepared meals; in the case of fish implying cleaned and filleted or portion controlled product; and
- Pressure flowing from the trade rules of the WTO that are designed to allow a freer flow of trade.

2.2 Country Cost Structures

CARIFORUM island country cost structures are generally high compared with low cost, higher volume producers such as Guyana and Belize. Estimates were provided that monthly wages alone were four times as high in some CARIFORUM island countries compared with Guyana. In addition, utility costs, particularly electricity, are very high in most CARIFORUM countries, and water, also a key input to the processing of fishery products, is also generally high in cost.

In line with world fuel prices very substantial increases have occurred in fuel costs in recent years.

2.3 Exports

Major exports include shrimp groundfish, conch, tuna, lobster (including live), red snapper and some reef fish. Tilapia and shrimp are emerging as significant aquaculture venture exports.

2.4 Imports

Many CARIFORUM countries import both locally available and exotic fishery products either from fellow CARIFORUM countries. Frozen portion or filleted fish from Guyana can be seen in supermarkets retailing at a price that is competitive to locally available product in these supermarkets.

Generally sanitary controls and inspection of imported products are not strong. Over time the rules of the WTO will lead to more open markets, exposing CARIFORUM countries to even greater competition from imports.

2.5 General growing awareness of safe foods

There is a growing awareness of issues related to the safety of food in the younger people in CARIFORUM countries, by virtue of the availability of information via television and the Internet. Additionally, younger people are travelling more widely and as such more exposed to trends in fresh food retailing in other countries. There remains a sector of the population that holds to the view that evidence of ice being used to store fish indicates the fish is not fresh.

2.6 Hotels, Resorts, Restaurants and Supermarkets

The restaurant and tourism related trade remain good markets for CARIFORUM fishermen. However, in terms of sanitary standards there will be increasing demand for improvements to be made to these standards.

This reflects the growing issue of legal liability, for example in the case of a guest of a hotel, restaurant or resort who becomes ill after eating fish. It is understood most hotels avoid ciguatera problems by careful selection of the species of fish they buy. Others have established arrangements with individual fishermen that can include ice and/or refrigeration being used.

Fresh fish was preferred to frozen fish, however the price differential between fresh fish and frozen fish was a real issue. In the main, hotels sought cleaned filleted portion controlled fish as distinct from whole fish.

Studies have suggested that the availability of fresh fish was a factor that attracted tourists to eat in particular restaurants. Supermarket growth continues and in line with this growth improved sanitary standards for fisheries products are often required of the suppliers of fisheries products.

3. Findings

This chapter represents a summary of the findings as it relates to this study in the CARIFORUM countries.

3.1 Sustainability of Fisheries

The countries visited vary greatly in terms of the size of their economic zone and of fish stocks they have available. There is evidence to support the view that close to shore fish stocks are declining and therefore larger vessels are going to be required with the capacity to remain at sea longer than a day. Shrimp stocks in Guyana and Surinam are being managed and production is not likely to increase. There is fishing by some fishermen of other CARIFORUM countries waters, with the fishermen leaving port from their home country and landing product in a second CARIFORUM country.

Another significant influence on fish stocks is likely to be illegal fishing by large vessels of non-CARIFORUM countries. The CARIFORUM countries have little capacity to enforce their territorial sea rights.

A number of key species such as tuna are migratory in nature and this, combined with seasonal conditions, adds to the difficulty in maintaining sustainable fisheries particularly as it relates to exports.

3.2 Market Constraints

For the small island countries lacking economies of scale and having an industry largely based on small, expensive to operate vessels remains the most significant market constraint.

The high cost of capital financing and obtaining suitable statistical information that can be used to guide strategic decision making by the private sector is not easily obtained at a reasonable cost.

A detailed understanding of recent EU Directives is a major problem for the private sector and many Government agencies.

While markets such as the EU Caribbean Territories and the USA are relatively close, the cost of airfreight to those markets is significant.

3.3 Knowledge of Market Developments

Fishermen and processors are well aware of domestic market conditions and what that market requires. Some acknowledge the adverse impact of imports upon their business, Guyana being an exception.

Less understood among smaller exporting countries is how the international market operates in terms of supply and demand, prices received and what is required to access specific countries such as the EU.

Extremely limited in countries not exporting to the EU) is a good understanding of the requirements of the EU in particular:

- The systems based approach that is used by the EU to ensure the safety of seafood for its consumers;
- A sound knowledge and understanding for new EU Directives related to sanitary matters in fisheries.

However, even countries already exporting to the EU have difficulties when significant new directives are introduced.

3.4 Competent Authority Issues

Of the CARIFORUM countries that are active exporters of fisheries products to the EU, only Belize has an integrated single agency CA. A few countries have a CA for its animal products including fish. Other countries typically have CA responsibilities split between a number of Departments of State such as Agriculture, Fisheries (although usually part of Agriculture), Health and the Bureau of Standards. In a number of CARIFORUM countries an “SPS Committee” is responsible for the coordination of CA activities.

Overall the current CA arrangements, particularly those that do not involve a single agency, must be regarded as fragile and more prone to problems arising than necessary. Links between Competent Authorities and other relevant agencies are not robust, and there are greatly increased opportunities for issues that arise, in particular new requirements not being addressed in a timely and logical manner.

At the root of the problem is the organisational structure of Ministries of Agriculture (and Fisheries) and to a lesser extent the Ministries of Health. By and large Ministries of Agriculture have not changed their organisational arrangements to the extent necessary to adequately address market access issues related to the WTO SPS agreement. Many of these agencies still have a similar structure to what might have existed (and been appropriate for) fifty years ago. However, since 1996, that is the date when the WTO SPS Agreement came into force, organisational arrangements have not changed to the extent warranted by the significance of this agreement to trade in foods.

A comparison between the percentages of total resources available to Ministries of Agriculture in developed countries that are directed toward CA activities will show quite a significant percentage. Typically this is not the case in developing countries including the CARIFORUM countries.

CA's are generally under resources from a personnel and financial perspective. Often they lack specialist expertise, for example food technology or aquatic animal health. Only a few countries have easy access to the required laboratory facilities.

Generally, there has been inadequate recognition of the critical role the CA has in relation to gaining and maintaining market access for exports of fishery (and other agricultural) products.

3.5 Financial Support and Cost Recovery

All CARIFORUM Governments have severe budget constraints and this tends to be the norm in developing countries. As such the extent of financial support the Government is able to provide to CA activities is very limited.

Cost recovery for the provision of Government enforcement, inspection and certification services is not well developed in most CARIFORUM countries an exception being the Government Analytical Laboratory in the DR. The absence of cost recovery inevitably leads to a service or CA that is more under- resourced than necessary.

3.6 Legislation

Current sanitary legislation as it relates to both domestic and export control of foods is generally inadequate in most CARIFORUM countries. Some countries have quite advanced drafts prepared that would address this issue. However, in the main legislation is not well structured, as often principal Acts and Regulations are difficult to amend given the legal resource capability and the staffing capacity of the specific agency.

During the study, the team became aware of draft model animal health legislation; however this legislation was not suited to a single agency CA arrangement, and unsuitable in the context of the technical and legal resources available to CARIFORUM countries.

3.7 Operating Procedures and HACCP

Considerable effort has been made Governments, the private sector and by a number of development assistance agencies to improve the understanding of HACCP in the region. Quite a number of public sector employees have received some HACCP training via donor agency workshops (eg EU, FAO, CIDA and JICA). To some extent this has been successful however there remains a significant shortage of "in depth" expertise for developing and the independent auditing of HACCP plans.

Some private sector operatives have produced their own HACCP plan following training of one of their own personnel. However, too many of these plans are static, that is they are "bookshelf plans" and are not "living plans" that are updated regularly or independently audited on a regular basis.

The capacity for independent HACCP auditing is extremely limited in the region.

3.8 Sanitary Conditions in Local Markets

With the possible exception of resorts, major hotels and the larger supermarkets the domestic market in most if not all CARIFORUM countries has serious deficiencies in fisheries sanitation. These can be attributed to a range of factors:

In some countries there are significant issues that to date have impeded the development of improved sanitary arrangements in the fishing industry. These include:

- A reluctance of fishermen to move away from open outboard powered Pirogues to more efficient and sanitary vessels;
- A reluctance of fishermen and their families to spend more than a day at sea;
- A belief by the general public that iced or refrigerated fish is not fresh fish;
- Inability to obtain financing for upgrading;
- Fishermen being contented with their level income;
- The lack of public landing and post harvest facilities

Fishermen are more than likely not to change their habits in advance of identifiable consumer demand for improved sanitary practices. Partly this probably reflects the cash returns received from fishing and a tendency not to plan too far ahead.

Biotoxins, particularly ciguatera, are a real problem for some CARIFORUM countries. For example, in Antigua and Barbuda in the period 1999-2002, an average of approximately 300 cases a year were reported. No figures have been obtained on the cost of hospitalisation and economic loss due to this and other toxins.

3.9 Testing Facilities (Laboratory)

Laboratory capacity is very limited in most CARIFORUM countries. Typically some capacity exists in all countries to undertake basic microbiological testing, for example of water samples. However, more complex tests of pesticides, heavy metals and toxins can be undertaken only in a few countries.

Over many years development assistance agencies have provided support both by way of equipment and training to enhance laboratory capacity in developing countries generally. However

in many cases the sustainability of these efforts has not been thought through adequately, leading to a situation where:

- Sophisticated equipment is often purchased from countries not well located to the laboratory, leading to a situation where if servicing, upgrading or maintenance of the equipment is required (which inevitably will be the case) the laboratory or the country does not have financial resources to meet the need;
- Laboratory equipment is supplied with minimal maintenance and servicing arrangements;
- Adequately trained technical staff are not available or in very short supply;

One specific option raised in the TOR for this study relates to the capacity to utilise a regional laboratory. At present one specific purpose regional laboratory exists in the region the Caribbean Environmental Health Institute (CEHI) in St Lucia. This laboratory has in the past had the capacity to undertake a range of complex tests. However, due to funding and technical constraints this is not now happening. A significant problem has been the lack of samples being submitted to the laboratory that in turn the laboratory can charge for. Apparently at least one other private sector laboratory in the region actively competes for samples, and this impacts on the ability of CEHI to provide a sustainable capacity for complex testing such as heavy metals and toxins. Specific issues that are often not adequately addressed in the context of a regional laboratory are:

- The availability of timely, cost effective air links preferably without a transit to ensure samples in cooler boxes arrive at the laboratory in good condition;
- The need for a formal protocol between the sending and receiving country when a sample of potentially exotic organism is to be the subject of testing.

A substantial amount of reef fish is harvested in CARIFORUM countries, and together with the movement of fish between countries, this means that in many countries there will be some risk, even if the country does not have specific risk areas or species. On-line travel health web sites tend to highlight ciguatera as a risk in all CARIFORUM countries ie they do not discriminate between those that have a genuine domestic problem and those that do not have a serious incidence of the toxin.

While some measures are taken, such as species selection to try to minimise the incidence of toxin in fisheries products, there remains no simple cheap test kit that could be used to identify a fish with the toxin. The 2003 Commonwealth Secretariat study of sanitation in OECS countries was shown a test kit that cost USD5 but could only be applied to a single fish that was valued at USD1.

3.10 Status of National Policies and Planning

Some CARIFORUM countries have commissioned reports or strategic plans aimed at development of the fish and fish processing industry. However, with such plans, food safety, inspection and certification issues related to the status of the CA have generally not been adequately addressed. This will lead to a situation where development that is export oriented will be delayed by inadequate institutional arrangements related to food safety.

The team was not made aware of any CARIFORUM country that had a cohesive plan to address sanitary deficiencies in the domestic, import or export markets. Some countries had successfully accessed development assistance, but the net result was a fragmented and as such largely unsustainable approach to improving fisheries sanitation issues.

3.11 Donor Strategies and Programs

Key donors active in the region include Europe AID, FAO, CIDA and JICA. The World Bank is currently embarking on a worldwide SPS strengthening program.

Contact was made with CIDA who advised that they have no planned interventions in the area of fisheries sanitation in CARIFORUM countries.

Coordination between donors in the area of fisheries sanitation is nowhere near as extensive as it should be leading to fragmented development assistance efforts.

4. Discussion of General Issues

The options for moving forward are quite constrained by the timetable suggested in this study's TOR. End 2007 is mentioned as well as a two-year timeframe which would extend to end 2008. Both in the context of substantive and sustainable improvements to fisheries sanitary capacity in the region are unrealistic.

As a consequence this study has provided recommendations and options that meet the timeframe specified in the TORs, but also provided substantive guidance for future years.

Options can be considered for meeting EU export requirements, import requirements and the local market in each of the CARIFORUM countries.

4.1 Meeting EU Export Food Safety Requirements

There are a limited number of CARIFORUM countries that have a fisheries resource that would lead to the export of product to the EU or its Caribbean Territories. Guyana, Surinam Jamaica, Belize and Antigua (live lobster) at present export to these destinations. Given the timeframe of end 2008 that this study has, there is very little likelihood of other CARIFORUM countries becoming exporters of fisheries product to the EU.

As such the exploration of options for meeting EU export requirements is for the time being best confined to the countries that are presently active exporters to the EU, and those that previously exported and are making efforts to regain that status.

4.2 Food Safety Issues Related to Imports of Fisheries Products by CARIFORUM Countries

As a general statement, all CARIFORUM countries require strengthening of capacity in relation to ensuring imports of fisheries products meet reasonable food safety standards. As such, recommendations in this area will be applicable to all CARIFORUM countries although it is recognised that some will be in a better position to move down this path than others. Most will require substantial building of the foundations of a CA (preferably a single agency) before sustainable enhancements can be made to their processes that relate to the food safety of fisheries imports.

4.3 Food Safety Issues Related to the Local Market

Most, if not all CARIFORUM countries have a real need to upgrade if not requirements then the enforcement of these requirements, for fisheries products destined for the local market. Fisheries products are but one food, in a range of foods (for example meat), where food safety can be a real concern in the context of the current capability of CARIFORUM countries. It is essential that the more general foundations for food safety are addressed as part of enhancing fisheries food safety to provide a higher level of sustainability.

At present in many local markets realistic food safety requirements are required and enforced by hotels, resorts and supermarkets. With a general trend towards growth in the supermarket sector, a reasonable expectation is that food safety requirements and enforcement will improve at least as far as this group of sellers and users are concerned.

This study will recommend measures that can be taken to improve fisheries sanitation in the local market. These measures will be directed towards improving the understanding of consumers of the need for appropriate sanitation in relation to fisheries products. Consumers are the primary drivers when it comes to forcing fishermen, handlers and processors to improve sanitary standards, so accordingly initial measures must target this group to have a sustainable impact.

4.4 CAHFSA

The proposed establishment of CAHFSA is a significant issue in the context of fisheries sanitation. The Pacific island countries through Secretariat of the Pacific Community (SPC) have a regional animal and plant health capacity and have had this capacity for many years. Development assistance agencies such as Europe Aid, AusAID and NZAID provide baseline and project funding. There is severely limited capacity for the Pacific island countries to provide funding that would sustainably support these functions.

The Central America Regional Organisation for Plant and Animal Health (ORISA) headquartered in San Salvador and with a presence in Belize is another example of a regional organisation. At present ORISA is actively sponsoring Masters study that is often largely Internet based for both SPS issues and food safety.

For CAHFSA at this point in time:

- The staffing suggested is one Veterinarian, one plant health specialist, one food safety specialist and an administrator. The food safety specialist will be useful in the context of fisheries sanitation however, other issues that require specialist fisheries aquatic animal health expertise are likely to emerge as the aquaculture industry develops;
- There is varying levels of enthusiasm for the establishment of CAHFSA and some countries are not supportive as they cannot identify the value of CAHFSA to their situation;
- The funding model proposed for CAHFSA, that is quota contributions by member countries is unlikely to provide the necessary income to sustain a viable organisation;
 - While it may be possible for specific project funding to be obtained by CAHFSA, the organisation is likely to require external development assistance baseline funding for at least five years.
- It will be critical that the objectives of CAHFSA are tightly focussed and remain that way in the years ahead. The document that discusses the establishment of CAHFSA, projects an extensive set of objectives that are more than likely to place an impossible task on the staff of CAHFSA unless specific priorities are nominated.

Given CAHFSA can be established on a sound base, it will prove a useful organisation to many if not all CARIFORUM countries. One of its most valuable roles could be advising on appropriate harmonised legislation for exports / imports and the domestic sector. There is still one off legislation currently being developed in the field of animal health that is not appropriate to the needs of CARIFORUM countries and if anything sets back the development of more robust CA organisational arrangements. Another potentially valuable role would be advising development assistance agencies on how to improve the sustainability of donor assistance in the SPS area. This does not imply CAHFSA having funding control over these efforts, as clearly there are national sovereignty issues to consider.

Having regard to the above and in particular the need for the smaller CARIFORUM countries to have a focus where help is required this study is proposing funding measures that will assist CAHFSA in its formative years.

4.5 CROSQ

The CARICOM Regional Organisation for Standards and Quality (CROSQ) was established as an intergovernmental organisation to establish and maintain a cost effective and internationally recognised regional quality infrastructure (RQI). The quality infrastructure is based on establishing within the region, an infrastructure for metrology, standards, testing and quality, which meets international standards to support mutual recognition agreements (MRAs).

In 2005 CROSQ presented a discussion paper that outlines the concept of the Caribbean Regional Accreditation System (CRAS), and defines the role of a Caribbean Regional Accreditation Authority (CRAA), which is recommended as the first step in the process of harmonising the region's testing and quality systems in order to afford and ensure international recognition.

CROSQ is not a regulatory organisation but can play a useful part in strengthening fisheries sanitary capacity arrangements through its efforts to establish a regional accreditation authority and through its efforts related to HACCP. It will be important that close links are maintained between CAFSA and CROSQ as at times their efforts will focus on similar issues.

4.6. The Roles Of Development Assistance, Governments, and Regional Organisations

Before considering the respective roles of development assistance agencies, governments and regional organisations, it is necessary to identify the steps necessary to ensure a sustainable export market.

The following summarises, by precedence, the steps that are necessary.

Stage 1 Foundations Underpinning Exports of Fishery Products

- Industry personnel who understand how the international market works and have necessary linkages to purchasers of product, or related companies in foreign markets;
- Availability of sustainable stocks of key species;
- Existence of market at profitable price, having regard to:
 - Seasonal demand for product and seasonal catches;
 - Cost of catching;
 - In country transport costs;
 - Processing and storage costs;
 - Costs of laboratory testing and certification;
 - Availability of suitable air/sea freight for (fisheries product);
 - Packaging, freight and insurance to international destination;
 - Supply of comparable product from markets with economies of scale and cheaper production costs.
- Availability of alternative market if international price offered is not profitable;
- A credible Competent Authority with the ability to provide credible Government-to-Government health certification, and underpinned by:
 - Legislation;
 - Regulations and Operational Manuals;
 - Trained Officers;
 - Regulatory culture that allows enforcement of requirements;

- Availability of supporting specialist scientific advice in the event importing government authorities raise specific technical issues.
- Industry personnel who understand catching, processing, storage and transport requirements of key importing countries;
- Availability (not necessarily in-country) of laboratory capacity to undertake the full range of test required by importing countries;
- Availability of HACCP development and auditing capability at reasonable cost.

Governments can set a framework by:

- Improving knowledge of private sector on international markets and movements in sanitary standards;
- Improving the public awareness of the wider public as to the benefits of improved sanitary arrangements;
- Having clear CA Arrangements and Organisational structures that recognise that qualified resources are scarce in small countries;
- Having appropriate legislation in place;
- Recognising that a regulatory service associated with the issuing of internationally accepted certification will need support and will need to be able to enforce prescribed standards.
- Facilitating a gradual move in sanitary standards on the domestic market consistent with sustaining domestic fisheries activity.

Development assistance agencies can assist by:

- Recognising the need to support the development of sustainable infrastructure in order to guarantee the importation of safe product to their country and to ensure the viability of their business. Coordination of activities between agencies will be critical to sustainable outcomes. This can be facilitated by a regional agency like CAHFSA even recognising that specific donors will have objectives that they themselves wish to pursue.

Regional Organisations such as CARIFORUM / CAHFSA / CROSQ can assist by:

- Acting as a focal point for institutional strengthening activities for CARIFORUM countries in relation to upgrading sanitary standards for fish processing;
- Being a focal point for specialised training such as HACCP and risk analysis;
- Advising on the formation of appropriate consultative arrangements between a CA and the private sector;
- Ensuring that other development assistance agencies active in CARIFORUM countries in the field covered by this study have access to this report and perhaps meet to plan a strategic approach to funding;
- Facilitating the development of standardised legislative frameworks, operating manuals and HACCP auditing capacity;
- Providing information in relation to the sustainability of species;

5 Conclusions

5.1 Organisation of the Competent Authority

In very small countries, as is the case with many CARIFORUM countries, appropriately qualified technical inspection and certification resources are scarce. Having only one or two people able to perform these duties leads to the need for a multi skilled workforce trained across all exported agricultural, marine and food products. Many of the skills needed to inspect and certify the safety of a specific food will be common to another food, agricultural or marine product. In practice, this points to the need to establish an integrated CA in countries where exports of these products are significant enough to justify such a move. Establishing such a Service needs to include consideration of how it can best mesh with domestic sanitary requirements that have typically been the responsibility of the Ministry of Health. It is undesirable in a small country with limited resources, to have two separate inspection regimes for establishments producing product for both the domestic and export markets.

Having a single CA that acts like a post box by sending specific requirements to specialist Ministries is one option. However, will prove not to be a practical way of dealing with the issue of obtaining and maintaining EU listing in the medium to long term.

A preferred option in terms of EU and all other foreign country requirements is to establish a stand-alone CA agency more than likely in the Ministry of Agriculture. It would be the agency responsible for inspection and the issue of export certification, and therefore in turn responsible for providing the necessary assurances to all foreign governments in relation to meeting their standards. It would operate the WTO SPS Enquiry Point and Notification functions.

The benefits of such an agency are that all import and export SPS related inspection and certification activities will be located in a specialist regulatory agency. Having a single regulatory agency involved in this area will provide a genuine focus for building on current arrangements.

In small countries there may be advantages in the short term having a Committee set up which comprises the various competent authorities, and perhaps chaired by an agency such as the Ministry of Agriculture. In some CARIFORUM countries, agricultural products as well as fishery products are exported with government-to-government certification invariably provided by the Ministry of Agriculture.

However, in the medium to long-term movement to a single CA agency will provide a stronger foundation in terms of sustainable exports to markets such as the EU.

Strengthening CA arrangements can only happen where the will to do so exists within the national Government. Moving organisationally to a single CA agency is not a simple exercise and a multitude of problems may be encountered, including issues related to "patch protection", or argument that organisational alignment to international organisations is more important than such an agency.

If a single agency is developed, then other substantive foundation issues need to be addressed such as the legislative base for the organisation and cost recovery.

It is highly unlikely that external expertise that can be provided to national governments exists in the region at present, and accordingly this study is suggesting that a regional funding facility be established managed by the soon to be formed CAHFSA so that countries who are prepared to organisationally move to a CA single agency can be assisted to make that move. The expertise required will in the main be institutional, having regard to the fact that a single agency CA should encompass all CA activities related to animal (including aquatic species) and plants and their products and foods, particularly import and export of food subject to WTO SPS measures.

Having a single agency involved in CA responsibilities, concentrates the capacity of countries to address SPS measures related to the export and imports of all foods. As such it will have flexibility

in the utilisation of enforcement staff and be able to spread their activities over export and import enforcement activities.

Access to the regional funding facility must depend on firm prior commitments from national governments to implement a single agency CA.

5.2 Funding Base of the Competent Authority

Realistic cost recovery policies can make a substantive contribution to the funds available to the CA, given Governments allow the funds recovered to be used by the agency. In particular, cost recovery can provide a funding base from which equipment can be purchased and maintained and specialised technical expertise developed. Cost recovery is, along with up to date legislation and an appropriate organisation structure, one of the foundations stones on which sound CA arrangements can be built.

There are risks with cost recovery, and one is that the Government may not allow recovered funds to be retained by the agency; another is that, having regard to the agency having a cost recovery policy, a Government may choose to reduce budgetary funding. However, even acknowledging these weaknesses, a sound cost recovery policy based on the premise that there is an identifiable beneficiary, is strongly supported. There are clearly situations in CARIFORUM countries where the private sector is not contributing for a valuable service that the Government provides. A significant part of this issue is a lack of appreciation of the value of the services the Government provides through its CA arrangements. The case for cost recovery can be argued with the private sector in the context of strengthening the essential inspection and certification infrastructure. This will offset the perception that many private enterprise firms see only the actual time spent by an inspector on their premises, either inspecting some product or issuing required government-to-government certification. They do not recognise that, behind the scenes, a considerable amount of government effort goes into, in some cases, securing new markets for agricultural and fishery products, and then maintaining those markets. This issue can be addressed through improving the understanding of the private sector of EU food safety requirements and the role that the CA has in the whole process leading to sustainable exports.

As well as risks related to cost recovery there are opportunities to derive income from wider sources with that income being applied to core CA functions. Included may be:

- Licence fees;
- A fee for the registration/approval of processing and storage establishments;
- A fee for the time Government Officers spend on monitoring, inspection and certification duties at approved processing establishments;
- Passenger processing, and cargo inspection charges for countries (particularly island countries) who have a genuine need for import biosecurity measures to be enforced at airports and seaports, to minimise possible exotic pest and disease incursions from these sources that may impact on their wider agricultural and fisheries industries.

In general having cost recovery provisions will lead to improved ability to argue for budgetary support from Government.

This study believes that the regional funding facility referred to above to support the development of a single agency CA within countries, should be utilised to assist national Governments to implement appropriate cost recovery measures. However, access to funding to enhance cost recovery activities should be dependent on a national government's commitment to a single agency CA.

5.3 Legislation

A critical need exists for CARIFORUM countries to have access to common model legislation that covers the inspection and certification of all agricultural and marine products. Model legislation will not only assist in facilitating trade between CARIFORUM countries but will also provide an easier platform for individual countries to maintain their legislation in an up to date form. Technical requirements do change in relation to inspection and certification, and legislation that can cope with these regular changes is needed. Ideally this model legislation will be simple and operationally suitable for CARIFORUM countries.

Overarching export control legislation that allows for the basic requirements for inspection and certification would significantly improve the situation. Such legislation, if adopted, will provide a framework for accessing the EU food market as well as other markets for fisheries (and other agricultural products) exports. Using an Export Control Act as the overarching legislation for the inspection and certification of all agricultural, fisheries and food products, allows for specific regulations to be developed for particular products such as fishery products, while maintaining a common overall framework. An outline of an Export Control Act is at Annex 3.

In addition to export control legislation, appropriate domestic legislation and import control legislation is needed. An outline of appropriate import control (biosecurity / quarantine) legislation is at Annex 4.

A high priority for CAHFSA should be having access to expertise that will facilitate the development of appropriate legislation for a single agency CA. Typically such legislation will include export control and import biosecurity (quarantine) legislation. In some countries this will require a substantial rewrite of traditional livestock and plant protection legislation for example.

The funding of a SPS / CA legislative specialist capacity available to CAHFSA is recommended to meet this critical need within CARIFORUM countries.

5.4 HACCP Capacity Within Competent Authorities and the Private Sector

There has been a previous report that recommended the establishment of a HACCP Regional CA with four subcommittees installed under the CARICOM Scientific and Technical Committee. This Committee would be responsible for:

- The harmonisation of food legislation;
- Training (Good Practices – pre requisite programs and HACCP);
- Regional Environmental monitoring program;
- Approval and net working of regional laboratories.

While this remains an option, the current study sees the problem as more one of a shortage of specialised resources as distinct from the need for coordination of activities. Some CARIFORUM countries have the capacity to develop operating procedures for inspection and certification authorities, others do not. Given the generally small size of the countries covered by this study and their limited trained human resources, one option is that model procedures and documents such as HACCP auditing manuals are developed by one lead country and made available to other CARIFORUM countries.

However, a better alternative may be providing a small-specialised resource base to CAHFSA, for say a two year period, with a view to the development of model procedures and manuals that can be adopted by all CARIFORUM countries.

This study believes that a targeted program of upgrading existing HACCP skills is needed, and that it should be a program that includes both key Government officials and representatives of the private sector active in the fisheries harvesting and processing sectors. However, in drawing this conclusion it is important to point out that, unless governments are prepared to enforce building

and sanitary standards, and the private sector is prepared to renovate or build new premises that meet current accepted standards, a lot of the training effort will be wasted.

Within the timeframe suggested for the implementation of the recommendations of this study CAHFSA is unlikely to be in a position to manage such a program, although in the longer term it may have the capacity.

The ultimate aim should be to establish train the trainer and HACCP auditing capacity within each CARIFORUM country.

5.5 Laboratory Capacity

This is one of the more difficult issues to address. There is no question that laboratory capacity generally in CARIFORUM countries is inadequate. At issue is how to improve laboratory capacity, and, in relation to this issue, this study has focussed on testing needs related to fisheries exports to the EU.

JICA has been active in this area in Dominica, and more recently in Antigua, where microbiological and bacteriological laboratory facilities and equipment have been provided to Fisheries. In Antigua, the technical staff needed to operate the equipment will be from the Ministry of Agriculture laboratory.

It is critical to note that a separate and ongoing study is in progress as this report is completed. Ms Beverley Wood of Barbados has been commissioned by CARICOM Rural Development Unit to undertake a study "Agricultural Health and Food Safety Laboratory and Training Needs Assessment for CARICOM Countries." This study can be expected to provide substantive detail that can be read in conjunction with this study, with a view to formulating a sustainable approach to this critical issue.

At least for the time frame required by this study, regional strengthening of laboratory capacity is not a viable option. However, the strengthening and/or rationalisation of national laboratory capacity is an option through a regional funding facility managed for example by CAHFSA. However, for this to result in sustainable improvements will require a rigorous assessment of any request for funding including:

- The availability of potentially competing private sector laboratories;
- The laboratory having sound cost recovery policies and practices in place;
- Specimen throughput is sufficient to sustain the particular test regime;
- Qualified (and backup) technical staff are available;
- Supplementary Government funding is sufficient to sustain a servicing / maintenance program and the purchase of consumables.

In addition to the above, specialised training of key personnel may be required and this would represent a useful investment in building laboratory capacity, given parameters such as those above are in place.

Laboratory accreditation is a further major issue that needs to be considered in terms of upgrading or building new laboratories in CARIFORUM countries. The accreditation process requires specialised personnel and at present these are few available in CARIFORUM countries. For example, the EU would have an expectation that any laboratory used to process samples under its requirements would be accredited by a substantive organisation in accordance with EN 45001 or ISO 17025.

Some CARIFORUM countries are looking to establish a national laboratory that integrates presently fragmented laboratories in a number of different ministries, and this option has merit, providing the specific limits of the proposed laboratory in terms of tests it can perform, is carefully circumscribed. It is critical to recognise that laboratory techniques across plant pathology, animal health, and food in general and human vary widely and require specialist expertise, if not to conduct the test itself, then at least to interpret results.

There are good arguments to support the view that microbiological parameters should be capable of being tested within a country, and this study supports that view.

However, conducting complex testing may still best be managed by sending samples to overseas laboratories unless a detailed study supports, in an economic sense, the establishment of a fully functional national or regional laboratory. Any laboratory engaged in the process of testing samples for the EU should be encouraged to seek accreditation under EN 45001 or ISO 17025 to ensure reliability of test results. These laboratories should have arrangements for inter laboratory comparison of test results.

Given the underlying funding difficulties experienced by all developing countries, directing funding into the development of ELISA or other quick / cheap tests that do not require sophisticated laboratory equipment or specialised technical staff, will be an option. However, it is recognised that often the specificity of such tests will not meet EU testing requirements and therefore “package arrangements” would be required. These include the use of these tests as a screening tool with much more infrequent use of the more specific laboratory tests. In conjunction with this approach, consideration of derogation issues for certain specific tests for CARIFORUM (or all developing countries) may be required.

5.6 An Understanding by Both the Private and Government Sectors of EU Requirements

A number of private sector processing plants indicated they had significant difficulty in coming to an appropriate understanding of EU requirements. This was particularly so where a significant new Directive had been issued. One company, a significant EU exporter in its country, had printed out the Directive from the Internet but understanding and actioning the content of the Directive was a task that required external assistance.

This assistance could take the form of targeted workshops both for existing EU requirements and for significant new directives. There are several options that could be considered:

- One would involve an EU fisheries sanitation team visiting the region regularly and conducting workshops for both Government and the private sector;
- Another option would be for the EU to seek advice from the CARIFORUM states as to the relative importance to CARIFORUM countries of the fisheries sector compared to the rural sector generally, and when an opportunity arises place a fisheries sanitation expert in one of the regions rural development positions within the delegation. That person would be specifically designated as a resource in terms of improving the understanding of both the private sector and Government of EU requirements. Having such a person in the region would facilitate consideration of capacity issues that might follow the implementation of a new EU directive;
- Early on going funding for the food safety component of CAHFSA with a position being designated as being responsible for improving the understanding of EU directives in the region. Whilst this report focuses on fisheries, such a person would more than likely have skills that would support wider food safety initiatives in the region;
- Early on going funding directed towards the establishment of an e-mail based help service for fisheries sanitation in the region, with a specific focus on assistance in understanding and meeting EU requirements. Pacific PestNet is one example of an e-mail based help

service that has been operating successfully for a number of years now, with a specific focus on plant protection

- Establishing a facility that could be used to strengthen CA / private sector consultative arrangements.

5.7 Fisheries Import Sanitation

Improving capacity in the area of fisheries imports is an issue that cannot be easily separated from the fisheries export issues.

This reflects the fact that to have sound import inspection and enforcement practices effectively means that a country requires a single agency CA, complete with the package of issues raised above in respect of exports.

For the most part, current arrangements for inspection and clearance of imported fisheries products are ad hoc in nature, and provide no substantive food safety assurance to consumers. More than likely, the only areas where imports are meeting reasonable food safety requirements are where resorts, major hotels and supermarkets are the importers, and have commercial requirements relating to food safety that must be met.

Foundation issues that require focus include:

- Having contemporary food safety legislation that is equally applicable to imports and domestically produced fisheries products. In many countries that currently have aging public health legislation, this will mean the development and implementation of new food safety legislation;
- Having an agency with sound cost recovery practices, including the recovery of costs from the private (domestic) sector. This is essential in order to sustain an enforcement workforce and, in time, to having the private sector recognise and operate to its own responsibilities in the context of supplying consumers with safe food.;

5.8 Domestic Market Fisheries Sanitation

Having regard to the constraints faced by local markets there are key issues:

- The availability of adequate legislation;
- The capacity to enforce legislation;
- The need for specific and serious health issues such as ciguatera poisoning to be addressed if at all possible by the development of a cheap and effective test kit;
- The need to continue to educate consumers about the benefits of sound sanitary practices for fisheries products. This would recognise that fishermen and processors will only improve their practices when there is a demonstrated need from consumers.

The most appropriate option given the nature of this study is the development of a regional program designed to educate consumers in relation to the need for fisheries sanitation. Such a program could be a foundation project for CAHFSA. The program would need to be capable of being easily modified by specific CARIFORUM countries to more accurately reflect local conditions or needs.

6. Recommendations, Prioritisation, Costings and Risks

Recommendations

1. That in order to establish CAHFSA within a short period of time baseline funding is provided to facilitate this happening. Ideally this funding should extend for at least five years.
2. That a regional funding facility be provided managed by CAHFSA that will allow, over the next two years, for the engagement of suitable institutional specialists to advise countries who express serious interest in how to set up sustainable single agency Competent Authority.
3. That funding is provided to CAHFSA to enable the strengthening of institutional arrangements such as cost recovery in smaller CARIFORUM countries that may at this stage not wish to implement a single agency Competent authority.
4. That funding is provided for CAHFSA to be specifically directed towards the establishment of in depth HACCP expertise and train the trainer capacity in CARIFORUM countries.
5. That a regional funding facility managed by CAHFSA is established for a period of two years that can be accessed by countries wishing to review and rationalise existing in country laboratory facilities.
6. That a regional funding facility managed by CAHFSA is established for a period of two years that is able to be accessed by countries wishing to upgrade existing laboratory capacity so as to better meet EU testing requirements. This facility subject to strict conditions of access relating to the sustainability of the proposed expenditure.
7. That funds be made available to enable the commissioning of a study to identify where “quick screen tests” are capable of being developed for use in developing countries in conjunction with derogations to allow time for the development of sustainable laboratory facilities.
8. That funding is provided to CAHFSA for two years to facilitate access to an SPS legal specialist who can guide countries in the development of sound and suitable legislation having regard to the resources available to the country.
9. That funding be made available to CAHFSA to develop of a Internet based fisheries sanitation and aquatic animal health email based help service
10. That the EU considers the placement of a fisheries sanitation expert as a replacement for a rural development officer who has completed their term of duty. This placement is designed to assist the private sector and Government by the expert delivering workshops and advising on EU requirements.
11. That funding be provided to CAHFSA that will facilitate improved coordination of development assistance efforts among key development assistance agencies active in the region.
12. That CAHFSA be provided with specific funding to develop a regional consumer awareness program that countries can easily tailor to their specific needs.

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Recommendations, Prioritisation, Costings and Risks

Recommendations in Priority Order	Suitability for Specific Countries	Cost	Risks	Mitigating Risks
1. Provision of baseline funding to assist in the establishment of CAHFSA	Suitable for all countries	Ideally €200,000 pa for five years.	CAHFSA will lose focus particularly into issues related to fisheries sanitation	Review stewardship of funding after two years.
2. Assistance to develop a single agency as Competent Authority and related “foundation stone” activities such as cost recovery, legislation and private sector consultation	More likely at this stage suited to larger CARIFORUM countries	Per country €150,000 (estimate three countries accessing)	Countries will request funds from the facility but will not have the political will to see the changes through in the time the expert is in the country. Cost recovery may prove a difficult issue and some Governments may reduce their base line funding to the agency having regard too the implementation of cost recovery.	Solid commitment from country to move down the path of a single Competent authority agency. With cost recovery the reality is that assuming funds recovered return to the agency they are probably going to be better placed from a sustainability perspective.
3. Assistance to CAHFSA to assist countries in developing and strengthening Competent Authority arrangements particularly in relation to “foundation stone” activities such as cost recovery, legislation and private sector	More likely at this stage to be suited to smaller CARIFORUM countries	For specific fisheries food safety expertise and ability to advise on appropriate organisational arrangements €300,000 per annum	Delay in establishing CAHFSA in context of two-year time frame specified for recommendations of this study.	Ongoing (say 5 years) baseline funding provided for CAHFSA from a development assistance agency

consultation				
4. Development of substantive in-country HACCP expertise and audit capacity	Suitable for most if not all countries	For train the trainer capacity in each country probably €50,000 for each country (estimate of ten countries accessing)	Person trained will quickly move to the private sector	Train more than one person in each country but do so only after sound Competent Authority agency arrangements are in place.
5. Provision of a facility to enable laboratory rationalisation	Suitable for most countries	€50,000 for each country (estimate of three countries accessing)	Rationalisation will not proceed as recommended	Prior commitment from Government and laboratories to be reviewed
6. Provision of a facility to enable laboratory upgrading in specific countries	Suitable only for larger fish exporting countries as volume of tests unlikely to provide sustainable income for smaller countries	For equipment and training of technical staff €150,000 for each country	Insufficient samples and therefore income to sustain complex test equipment, consumables and technical staff. Maintenance and servicing not allowed for when equipment is provided	A rigorous analysis of the sustainability of improvements in laboratory capacity covering maintenance and servicing funding, cost of consumables and availability and training of technical staff
7. Funding of a test to assess feasibility of quick tests being developed in lieu of the provision of sophisticated laboratory equipment.	To be undertaken by the EU	€150,000	Derogation issue can be a complex one	Prior exploration by EU policy officers of the likelihood of derogations being available
8. Provision of facility to enable access to SPS legal expertise	Suitable for most countries and probably can be largely operated from a distance ie via Email	€50,000	No significant risks providing recommended model is followed	Not applicable

9. Provision of funding to CAHFSA to enable an email help service to be established for fisheries sanitation and related aquaculture issues	Suitable for all countries	€75,000 over 3 years	No significant risks if evaluated regularly	Not applicable
10. The installation at the next available opportunity of a fisheries sanitation expert in an EU Delegation Rural Development posting in the region	Location would need to be where an EU Delegation is located	No specific cost other than if workshops are to be delivered under this program	Demands for workshops could be quite high and accordingly costs could escalate	Reasonable contributions to be sought from private sector attendees
11. Provision of a facility that will facilitate better coordination of development assistance in the region	Suitable for all countries	€100,000	Countries will not be forthcoming with the required information	Link EU development assistance to improved coordination efforts
12. Development of a regional fisheries sanitation awareness program for consumers that is able to be easily modified by individual countries to fit their specific needs consumers	Suitable for all countries	€75,000	Countries unable to fund implementation of program	Consider donor assistance priorities
Total Estimated Cost - Euros		3,000,000		