# Assessment report for Belize

Dates of visit; 28 June - 4 July 2015

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# Official agencies

To gather information regarding official control related to SPS measures in Belize three consultations were arranged with staff from official agencies working in this area.

## Consultation held June29th 2015 at CRFM Secretariat in Belize City

In addition to the experts from the mission team this consultation was attended by representatives from the Belize Fisheries Department: please refer to Appendix for the complete lists of attendants. The consultation focused on developing an understanding of the roles and responsibilities of the various agencies/departments in the area of health and food safety in the fisheries and aquaculture sectors in the country.

It was clarified that the Fisheries Department (FD) is responsible for planning and management of fisheries resources, however, aquaculture is presently not part of their responsibilities. At the moment there is open access to catch seafood in Belize waters, but FD wants to introduce a system that requires issuing fishing licenses to fishing vessels and it is foreseen this will be done through a new legislation that hopefully will be passed in September 2015.

The Team was informed that artisanal vessels are most common type of fishing vessels in Belize, but industrial trawlers are used to catch shrimp. Artisanal fishermen are generally members of established fishing cooperatives, as a result the majority of their catch (mainly lobster and conch) is landed at one of these cooperatives where it is processed for export. The fishing cooperatives are owned by local investors and fishermen are the main shareholders.

The Team was informed that the Competent authority (CA) in charge for official controls of fisheries products is the Belize Agricultural Health Authority (BAHA) under the Ministry of Agriculture and Fisheries and BAHA is defined in the regulatory framework (for further details see section Consultation held June 29th with BAHA below) .

## Consultation held June 29th 2015 with BAHA

This meeting took place at the BAHA facilities in Central Farm in Belize and the aim of the meeting was to receive information from a representative of the CA in Belize on the roles and responsibilities of the CA related to health and food safety in the fisheries and aquaculture sectors. The experts from the consultation team and Ms. Vivian Belisle-Ramnarace from FD met with the BAHA Coordinator for Sanitary & Phytosanitary Enquiry Point, Ms. Delilah Cabb Ayala.

The Team was informed that BAHA and Ministry of health are collaborating on issues relating to the establishment, implementation and enforcement of hygienic practises in the entire food chain and a Memoranda of Understanding (MoU) is available between Ministry of health and BAHA regarding these procedures and responsibilities. Based on this agreement BAHA is responsible for official controls in the entire production chain of fisheries product for export. However, the CA is not responsible for inspection of artisanal vessels and establishments processing domestic fisheries products. The CA inspects and licenses all fisheries production establishment for export i.e. high sea vessels, landing sites, processing plants and commercial aquaculture farms and issues health certificates for export of fisheries products. Two BAHA inspectors are designated for fisheries products and they have to inspect 7 processing facilities, 6 high sea vessels and aquaculture sites. The CA also checks HACCP plans for fisheries facilities.

There is a defined structure for the implementation of inspections and written procedures (inspection manual & check list) are available and used to carry out the inspections of the facilities. The CA has the power to take action in case of non-compliance with standards and carries out follow up of producers regarding the deficiencies noted and set deadlines for necessary corrective actions. The written inspection procedures are accessible to stakeholders and therefore transparent to all stakeholders

The CA regularly takes official control samples of the fisheries products, as well as of the water used in the processing establishments producing for export. However, official control of fisheries products intended for the domestic market and drinking water is not part of their responsibilities/task.

The Team learned that a National Program for monitoring of residues of environmental contaminants in fisheries products for export (shrimp, conch, lobster, tilapia) is in place, however, this does plan does not include fisheries products from the domestic market. Furthermore, not all the required chemical analysis according to EU regulations are carried out e.g. not for histamine, PAH, dioxins and PCBs.

The Team was advised that the designated laboratory for official analysis of food in Belize is the Central Investigation Laboratory (CIL) and that the CIL carries out analyses on fishery products and water in the context of official controls. The laboratory is currently working towards accreditation against ISO 17025 standard. The CIL carries out basic microbiological analysis i.e. Total Plate Count, Total Coliform Count, Faecal coliforms, *E. coli, Staphylococcus aureus, Salmonella* and *Vibrio* *spp.* as well as heavy metal and pesticides analysis.

The Team was informed that a National Residue Control Plan is in place for aquaculture products and the residues/substances analysed, maximum limits & the sampling plan is in line with EU regulations (Council Directive 96/23/EC). These analysis of residues of veterinary medicines and environmental contaminants in products from aquaculture are carried out by accredited laboratories in USA.

## Consultation held June 30th 2015 with the Department of the Environment

This consultation was held at the Department of the Environment (DoE) in Belmopan and the aim of the consultation was to receive information from representatives of DoE regarding their role and responsibilities related to health and food safety in the fisheries and aquaculture sectors; please refer to Appendix for the complete lists of attendants.

The Team learned that if a developer wants to start aquaculture or other environmentally intensive project in Belize he has to prepare a project proposal. Based on the proposal it is decided whether it is necessary to carry out full scope Environmental Impact Assessment (EIA) or whether a Limited level-EIA (only tackles the 5 biggest issues) is sufficient. This depends on the size and pollution load of the project. The EIA covers all relevant environmental aspects and is evaluated by 13 people from different backgrounds & if expertise is needed this is added to committee. The developer has to pay for the EIA and it is carried out by independent companies, however, the developer also pays a certain price to DoE for their work.

When the EIA has been evaluated and the project approved an Environmental Compliance Plan (ECP) is prepared, this is a legally binding contract between operator and DoE that the operator signs and therefore should follow. If ECP needs to be renewed then parts of the initial EIA may need to be reviewed. If changes are suggested by Operator to the ECP then DoE needs to accept these e.g. if a >50% expansion is expected then some additional evaluations will have to be carried out.

The Team was informed that a legally binding ECP is enforced for all aquaculture sites in Belize and the DoE carries out an inspection of aquaculture facilities at least once/year and submits the inspection report to the Aquaculture Operator. Operators pay environmental fees to cover the cost of DoE. Aquaculture farms are also inspected by BAHA i.e. they check the quality of water and health/diseases status of shrimp/fish. In addition, the Food Business Operators (FBOs) and Aquaculture Operators regularly have to send their own data regarding water monitoring to DoE.

There is a good cooperation between DoE and BAHA, but no written MoU are available regarding procedures and responsibilities.

The Team was advised that a National water (marine and terrestrial water) quality monitoring program is under development but not implemented yet.

# Sites visited in Belize

To assess enforcement procedures a number of site visits were carried out according to the table below.

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| **Type** | **Number** **of visits** |
| Aquaculture sites | 2 |
| Landing sites | 1 |
| Processing establishment | 3 |
| Laboratory | 0 |

The Team made direct observations regarding the infrastructure, vessels, equipment, production environment, and made further enquiries to stakeholders at the sites visited about harvest and post-harvest procedures, fish transport, processing, etc.

## Landing sites and vessels

Please refer to the section *SPS requirements for fish and aquaculture* in the general background report regarding the minimum SPS requirements for landing sites, vessels and ice production.

Main observations noted:

* The artisanal vessels observed by the Team were made of wood and they had a storage hold filled with ice on board. These vessels had several small wooden canoes stored on the deck. The Team was informed that once the main vessel reached the fishing grounds, these small canoes are used for a submarine fishing of lobster/conch carried out by divers, each small canoe having a captain and a diver. The lobsters and conch are then stored alive on the canoe and at the end of each fishing day the catch is transferred directly to the hold of the main vessel. The fishermen stay out at sea for about 5-6 days, but they stay overnight at base camps on small islands in the shallow waters of the reef.
* Limited hygienic facilities on-board the main vessel and canoes, however, neither the hygienic procedures used by the fishermen during handling of the catch nor the conditions of the base camps could be evaluated by the Team
* Ice production facility was available at the landing site
* Infrastructure of landing sites was adequate in terms of SPS requirements

## Processing establishment

The mission Team visited three processing establishment that all were producing fisheries products for export and the status of this establishments in regards to SPS requirements was satisfactory; please refer to the section *SPS requirements for fish and aquaculture* in the general background report regarding the minimum SPS requirements for processing establishments.

Main observations noted by the mission team:

In two out of the three establishments visited the structure, layout, maintenance and hygiene conditions for the processing and handling of raw material was satisfactory, these two establishments were both producing fisheries products for export. In one establishment producing fisheries products for export some problems related to maintenance were observed e.g. poor walls with cracks and missing tiles; unsuitable walls and floors (tiles), which were rough and not easy to clean. Additionally, the structure and hygienic conditions of the ice producing facility was not optimal e.g. ice stored on floor; considerable condensation at the ceiling; no separation between storage area and walking area.

The managers of all three establishments visited confirmed that the CA (BAHA) inspects their facilities on regular bases and provides them with formal inspection reports and results of analysis of official control samples taken at their facilities. Two of the establishments also carried out own checks in the own quality control laboratory.

A HACCP system was in place in all three establishments.

## Aquaculture sites

The mission Team visited two commercial aquaculture sites. One of these sites was dedicated to farming, production and processing of fresh tilapia, while the other site was farming and processing shrimp. In general, conditions and facilities were adequate for the intended activity also the official control and enforcement of the aquaculture operations seems satisfactory.

Main observations noted by the mission team:

The Tilapia farm was vertically integrated from brood stock to market size fish and the farming was carried out in semi intensive ponds. The water in the ponds was received from a nearby river and after the initial filling of the ponds with water, the pumps in the river are only used to cover the loss by evaporation - this is possible due to a recirculation system. The feed used in this farm was imported from an internationally recognised feed producer. The water quality in the ponds was checked daily by the operator e.g. analysis of ammonia, nitrate, pH and dissolved oxygen.

The Shrimp farm had recently received Aquaculture Stewardship Council (ASC) certification, which means that a third party audits and certifies the farm against ASC standards to assess whether they are operating responsibly. The aim of the ASC standards are to improve farming practises and reduce negative environmental and social impact. In addition the operation had British Retail Consortium (BRC) certification. The water in their ponds was obtained from the sea and was taken approximately 800 m from shore. The Shrimp farm operator emphases on high a standard and good quality control (QC) through the entire processing chain. Therefore, regular own test both regarding water quality in the ponds, water used in the process and on the fisheries products are carried out in their own QC laboratory.

Both aquaculture operators confirmed that their facilities were inspected annually both by DoE and BAHA. Furthermore, BAHA carries out analysis of official control samples of the water in the pond and the aquaculture products. The Team was also informed that no drugs were used in the farming.

## Laboratories

## The mission Team did not visit any laboratory facilities in Belize and could therefore not make any direct observations regarding the infrastructure, equipment or laboratory capabilities in Belize. Some information regarding the laboratory capacity was provided by BAHA at the consultation held June 29th 2015 (see section above) and at the national consultation meeting on July 1st, but this information could not be verified by the mission Team.

# Consultation with stakeholders

On July 1st 2015 a National Consultation with stakeholders was held.

The key challenges highlighted were the following:

* Currently there are no standards regarding monitoring of effluents from fish processing plants only the fisheries products are monitored by BAHA
* There is currently a gap in the monitoring plan on residues of environmental contaminants in fisheries products from the wild fisheries as the present plan does not include analysis of environmental contaminants in fisheries products that are only for sale on the domestic market
* The cost of analysis for e.g. residues of environmental contaminants in fisheries products could pose a problem for domestic producers. Therefore it is important to maximise the financial resources required for analysis of samples taken as part of official control and improve the coordination of the different agencies e.g. regarding samples and test performed, collection of various types of data, sharing of data and evaluation of the data.
* Laboratory capacities could/should be shared between sectors as the same analytical equipment and test procedures can be applied across sectors. To achieve this goal a task force with principal players with relevant technical expertise should be established and their mandate should be to identify how laboratory capacities can be optimised in Belize in order to minimised duplication of work and maximise the use of national resources.

# Conclusion

The Competent authority (CA) in charge for official controls of fishery products is the Belize Agricultural Health Authority (BAHA) under the Ministry of Agriculture and Fisheries and BAHA is defined in the regulatory framework. BAHA and Ministry of health are collaborating on issues relating to the establishment, implementation and enforcement of hygienic practises in the entire food chain and MoU is available between these parties regarding these procedures and responsibilities. Based on this agreement BAHA is responsible for official controls in the entire production chain of fisheries product for export. However, the CA is not responsible for inspection of artisanal vessels and establishments processing domestic fisheries products.

There is a defined structure for the implementation of inspections and written procedures (inspection manual & check list) are available and used to carry out the inspections by the CA of the facilities. These written inspection procedures are accessible to stakeholders and therefore the FBOs are well informed regarding which requirements they must fulfil and how their operation is evaluated which improves the transparency of the inspection process.

The CA takes official control samples for analyses of the fisheries products as well as of the water/ice used in the processing establishments producing for export, this is in line with EU requirements regarding official monitoring and surveillance of fishery products and water.

Accredited laboratories capacities are not available in the country, although this is a requirement for official analyses according to EU and national regulations.

The designated official laboratory carries out some of the official analysis required for export of fisheries products to EU. However, official analysis of some chemical risks (histamine, PAHs, dioxins and PCBs) are not carried out, this is not in line with EU requirements. Furthermore, the National Program for monitoring of environmental contaminants in products from wild fisheries only covers fisheries products for export and does not include products from the domestic market.

A National Residue Control Plan is in place for aquaculture products and the residues/substances analysed, maximum limits & the sampling plan is in line with EU regulations (Council Directive 96/23/EC). However, the analysis of residues in aquaculture products are outsourced as the necessary laboratory capacities are not available in Belize.

Site visits indicated that the regulatory requirements related to health and food safety issues in the fisheries sectors of Belize are generally enforced by the CA for fisheries products intended for export, but not for the domestic market. Therefore, there is difference between the enforcement of regulations for fisheries products for export and production for the domestic market.

There is good cooperation between official agencies in Belize but in some cases written MoU would strengthen the system e.g. no MoU exists between DoE and BAHA

It is important to maximise the financial resources required for analysis of samples taken as part of official control and improve the coordination of the different agencies e.g. regarding collection of samples and analytical test performed, gathering of various types of data, sharing of data and evaluation of the data.

Laboratory capacities could be shared between sectors as the same analytical equipment and test procedures can be applied across sectors.

Good practise in place concerning procedures that are required before initiation of environmentally intensive projects and the operation of such activities e.g. regarding the need for an Environmental Impact Assessment (EIA), scope of the EIA, legally binding Environmental Compliance Plan.

# Recommendations

As the food processors are responsible for ensuring the safety of their production they are expected to exercise due diligence and self-controls (own checks), hence the testing for the microbiological status of food should be carried out by them. The CA should also take official control samples for microbiological analyses to verify that the food processors quality system is working. As this is an essential part of having license to operate it is not unfair that the industry covers the cost related to the analysis of these official control samples. This could for example be part of their annual license fee and if the results obtained are unsatisfactory extra payment from the FBO in question should be required by the CA. This type of user fee would also enable the CA to guarantee financial independence and sustainability of the official laboratories and that official control samples are tested on regular bases to verify the safety of water, ice and fisheries products.

The CA should ensure that official control samples for fishery products intended for export to the EU include official controls on the products, water and ice in line with the relevant Community requirements i.e. Regulation (EC) No 852/2004 and Directive 98/83/EC. The CA should also ensure that laboratories performing official analyses are assessed and accredited in accordance with standards providing guarantees at least equivalent to the requirements Regulation (EC) No 882/2004. The CA should also ensure that these laboratories take into account criteria for the different testing methods laid down in EC legislation. It is recommended that an assessment (including a cost-benefit analysis) is carried out to evaluate which laboratory analyses is feasible to accredit and conduct nationally and which would be more beneficial to outsource. This assessment should also take into consideration which laboratory capacities could be shared between sectors e.g. in case the same analytical equipment and test procedures can be applied across sectors.

Testing for contaminants/undesirable substances that unintentionally come in contact with food/feed and primary products, e.g. PCB's and dioxins, are also the responsibility of the producer as he must secure the safety of his product. However, testing for these undesirable substances in each assignment sold is far too expensive. Therefore it is better to establish a national wide/regional wide monitoring plan that is carried out on regular basis to be able to assess consumer exposure to these undesirable substances. In Belize there is currently a gap in the monitoring plan of environmental contaminants in fisheries products from wild fisheries as the present plan does not include analysis of fisheries products that are only for sale on the domestic market. It is recommended that this gap will be filled so this monitoring plan covers all major fisheries products that are consumed and traded in Belize. Monitoring and collection of data on contaminants detected in fishery products from wild fisheries could also be shared within the region as this type of monitoring covers all marine species caught in Caribbean waters, hence this type of activity would benefit from a regionally coordinated approach.

It is important to make sure that the CA is enforcing one harmonised standard for all fisheries products so that there are not two standards applied i.e. one for domestic market and another for the export market. Such double moral will not only lead to bad attitude towards food safety and public health but will also delay the development of the fishery sector and the fisheries communities and have a negative effect on the sustainable utilisation of the fishery resources.

There is good cooperation between official agencies in Belize, however, in some cases written procedures do not exits, it is recommend to prepare documented MoU between official agencies as verbal agreements are not sufficient e.g. in case of conflict of interest.

Improve the coordination of the different agencies e.g. different organizations are collecting various types of data and should cooperate in the development of a comprehensive data and information exchange system that could be used to monitor, share information and knowledge and report on SPS practices. Increased collaboration and coordination would also lead to better use the financial resources required for the collection and analysis of samples.

Good practise is already in place in Belize concerning procedures that are required before initiation of environmentally intensive projects and the operation of such activities and it is advised that these procedures will be shared with other Caribbean countries that have not come as far in this area.

In order to be able to plan for anticipated future developments of the fish industry it is necessary to start to predict and plan for likely future demands of current export markets as well as look out for additional export markets and identify new fishery and aquaculture products for these markets. This requires increased research & development related to the fisheries sector, e.g. regarding development of new products, as this will assist the fisheries sector to move further up the value chain and create a business environment for entrepreneurs in the fisheries industry. This could be achieved through long term (5-10 years) strategic planning with the participation of key stakeholders in the fishery and aquaculture sectors as well as academia.

Consultation held in conjunction with National Consultation regarding; National programmes related to health and food safety in the fisheries and aquaculture sectors

Attendants at SPS consultation held June 29th 2015 at CRFM Secretariat in Belize City

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Attendants at SPS consultation held June 29th 2015 with Belize Agricultural Health Authority (BAHA) personnel in Central Farm in Belize

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Attendants at SPS consultation held June 30th 2015 at Department of Environment, in Belize

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