# Assessment report for the Bahamas

Dates of visit; 20 - 24 June 2015

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# Official agencies

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

## Consultation held June 22nd 2015 at Department of Marine Resources in the Bahamas

In addition to the experts from the mission team this consultation was attended by representatives from the Department of Marine Resources (DMR) in the Bahamas: 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.

The regulatory framework related to food safety and quality, including fishery products, is currently under major revision. Furthermore, a new bill regarding health and food safety authority has been developed. When these laws have been implemented all food safety and official control regulations related to food will be under one umbrella. Implementations of the new legislation will start in September 2015 and hopefully be in full force by 2016. The present food regulation will be replaced with this new legislation and establish a completely new structure and the DMR staff acknowledged that the implementation and enforcement of this new regulatory framework will be a challenge for the relevant authorities.

The Team was informed that Bahamas has developed, enacted and implemented at national level the relevant fish and fishery product regulations according to EU requirements and is currently exporting fishery products to the EU and USA. The Competent Authority (CA) in charge for official controls of fisheries products for export is the Department of Marine Resources (DMR) under the Ministry of Agriculture and Marine Resources and the DMR is defined in the regulatory framework. The CA inspects and licenses all fisheries production establishment for export i.e. factory vessels, landing sites, processing plants and issues export license for export of 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 of the facilities. An annual inspection plan is prepared that is based on risk assessment and three different risk categories have been defined. In case the inspection reveals that corrective actions are required, the food business operators (FBOs) are given a deadline and time for remedial action. The non-compliances observed have to be corrected before the factory vessels or the processing plants receive an export license for their operation in the next season. As part of the official control service the establishment's implementation of the HACCP-plan is also checked.

The Team learnt that DMR has no mandate for official controls of fishery products sold on the domestic market as these are currently controlled by the public health authorities. Further, the Team was advised that at the moment there is only one trained inspector working on official control in the field, however, the financing of eight additional inspectors is waiting for acceptance by the government. Currently the main focus of inspections is on factory vessels that are mainly producing ready to eat stone crabs (6) and processing facilities for fisheries products (20).

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 potable water is not part of their responsibilities/task. Furthermore, the official control of the ice used in the fisheries products production chain, e.g. on board the vessels, falls under the Environmental Health authorities.

The Team learned that a National Program for monitoring of residues of environmental contaminants in products from wild fisheries is currently not in place. Furthermore, no water monitoring analysis on toxin producing dinoflagellates is currently carried out and limited scientific data is available concerning ciguatera toxicity and the safety of marine reef associated fish species.

The Team was advised that the only designated laboratory for official analysis in the Bahamas is the Food Safety & Technology Laboratory (for details see section on Laboratories below).

## Consultation held June 24th 2015 with Bahamas Agricultural & Industrial Corporation (BAIC)

## This consultation was held at DMR facilities in the Bahamas and the aim of the consultation was to receive information from a representatives from BAIC regarding their role and responsibilities related to health and food safety in the fisheries and aquaculture sector. The experts from the consultation team and Mr. Edison Deleveaux from DMR met Mr. Verron Darville from BAIC and later Mrs. Brikell Pinder from the Ministry of Agriculture & Marine Resources joined the meeting.

The team learnt that BAIC is a quasi-governmental organization and that all industries fall under BAIC including fisheries and aquaculture. BAIC participates in policy making e.g. regarding management of resources, food security and environment. BAIC is also providing supporting to stakeholders e.g. on Good Agricultural Practices and ISO 22000 – Food Safety Management System and their aim is to create link between buyers/retailers and producers.

The team was informed that aquaculture is still in its infancy in the Bahamas and that there are presently no commercial aquaculture sites in the country.

Permits for aquaculture sites should be given based on an Environmental impact assessment (EIA). The EIA is carried out by private companies but reviewed by the so called BEST commission under Environmental ministry prior to permit.

Mrs. Brikell Pinder has been engaged in the drafting the new regulatory framework related to food safety and quality for the country and informed the Team about the main issues that this new legislation covers (for details see information from the consultation held June 22nd at DMR above).

# Sites visited in Bahamas

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** |
| Landing sites | 1 |
| Fishing/freezer vessels | 2 |
| Processing establishment | 1 |
| Laboratory | 1 |
| Retail/ Fish market | 2 |

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, laboratory analysis etc.

## Landing sites, vessels and retail

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:

* Industrial fishing and freezer vessels were the type of vessels observed by the Team
* Poor state of maintenance of the vessels, which were not made of corrosion-resistant material which was not smooth and easy to clean
* Limited hygienic facilities on-board the vessels
* Poor housekeeping (e.g. litter) as well as poor hygiene conditions and cleaning procedures on-board the vessels
* On an industrial fishing vessels that stays at sea for up to 6 weeks, the fish was sorted according to species after it had been caught and then the fish was transferred ungutted into large plastic bags and these bags are then placed on hooks in the freezer of the vessel. This procedure leads to very slow freeing of the fish that will have a negative impact on the quality and safety of the fish
* Absence of temperature recording devices on-board the vessels
* Ice production facility was not available at the landing site and the ice used (cubes) was not optimal to ensure fast cooling of the catch
* Infrastructure of landing sites was adequate in terms of SPS requirements
* Retail and processing of the fisheries product intended for the domestic market was not carried out at the landing site, but was executed at a separate location
* Poor hygiene conditions and cleaning procedures used to process fish and conch intended for the domestic market e.g. unclean wooden cutting boards, seawater from the harbour is used for cleaning, limited use of potable water in the processing
* Waste management was not in place at one of the domestic retail and processing sites, hence discards from the processing and other waste was piling up next to the site
* No hygienic facilities were observed at the domestic retail and processing site

## Processing establishment

The mission Team visited only one processing establishment and the status of this establishments in regards to SPS requirements was very good; 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:

The processing establishment is certified to the British Retail Consortium (BRC) standard and it exports to Europe and the USA. A HACCP plan has been implemented and there is focus on high a standard and good quality control (QC). Regular out own testing on fisheries products and water are performed in their own QC laboratory, but samples are also analysed by an external laboratory as well as the CA. It was confirmed that the CA carries out inspections on a regular bases and submits an inspection report to the FBO. The processing facility has own wells with brackish water and uses reverse osmosis to remove NaCl from it to obtain potable water.

The structure, layout, maintenance and hygiene conditions for the processing and handling of raw material was satisfactory in terms of SPS requirements. The facility uses Ozone in their production for sanitation. The processing establishment was processing conch at the time of the visit and the Team was informed that it receives the conch frozen in big bags and thaws it, then the conch is cleaned e.g. the intestine is removed and skin, when it has been thoroughly cleaned (difficult product to get clean because the conch is slimy) it is frozen again and sold frozen in small units.

## Laboratories

The mission Team visited the Food Safety & Technology Laboratory (FSTL), which has been designated by the CA in Bahamas to carry out analyses on fishery products and water in the context of official controls. The team was informed that FSTL is accredited to ISO standard 17025 for basic microbiological analysis (Aerobic bacteria, Total Coliforms, Faecal Coliforms, E.coli, Salmonella, Staphylococcus & Listeria) and a few chemical analysis e.g. sulphites, TVB-N crude protein. However, FSTL does not have the capacities to carry out analysis of heavy metals, histamine, PAHs, dioxins and PCBs.

The FSTL is not financial independent and depends on the financing of laboratory supplies etc. from the Ministry of Agriculture and Marine Resources, the procurement procedures are often very slow and threaten the sustainability of the laboratory. Fees are charged by FSTL to cover the cost of the analysis carried out for Food Business Operators (FBOs) of these samples, however these fees go into consolidated governmental funds and not directly to FSTL.

# Consultation with stakeholders

On June 23rd 2015 a National Consultation with stakeholders was held

The key challenges highlighted were the following:

* Need to be able to guarantee financial independence and sustainability of the official laboratory so that the laboratory can procure the necessary laboratory supplies for the day to day operation of the laboratory. This can for example be done through user fees to cover the cost of the analysis of samples. Nevertheless, it also necessary to make sure that this user fee is paid directly to the laboratory and not into consolidated governmental funds.
* The problems related to maintenance, poor hygiene conditions and cleaning procedures on-board the vessels were discussed. It was explained that was mainly due to attitude and mind set of fishers and workers in primary production. Generally these workers have very limited education and therefore it is very difficult to transfer knowledge to them e.g. regarding maintenance of facilities, personal hygiene, hygienic handling of fish and the importance of ice for cooling of fish. It was also pointed out that such training could not be delivered by the usual conventional methods and it was suggested that short videos and/or commercials could be more effective.
* The small community of the country sometimes hampers enforcement of regulation at the source of the deficiencies e.g. issuing and revoking licenses of fisheries establishments as the FBOs try to use their connections to avoid the enforcement
* Attitude and mind set of local consumer also needs to be addressed to increase public awareness regarding the importance of SPS measures/sanitation in the entire processing chain for fisheries products as the consumers don’t understand the importance of basic SPS requirements in terms of health and food safety. Some consumers actually prefer that fish is not placed on ice, as ice usage meant the fish was no longer fresh and that flies on the fish are an indicator of freshness. Have to find a way to reach the general consumer and it was suggested that short videos and/or commercials could be useful.
* There is currently insufficient technical expertise and relevant university programs related to food science, environmental science and engineering in the country and this hampers research & development related to the fisheries and aquaculture sector e.g. regarding development of new products and value addition
* Responsibilities regarding monitoring and collection of data on contaminants detected in fishery products from wild fisheries could 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

# Conclusion

The Competent Authority (CA) in charge for official controls of fisheries products for export is the Department of Marine Resources (DMR) under the Ministry of Agriculture and Marine Resources and the DMR is defined in the regulatory framework. The CA inspects and licenses all fisheries production establishment for export i.e. factory vessels, landing sites, processing plants and issues export license for export of fisheries products. An annual inspection plan is prepared that is based on risk assessment and three different risk categories have been defined.

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.

Accredited laboratories capacities according to ISO standard 17025 are available in the country and the designated official laboratory carries out some of the official analysis required for export of fisheries products to EU. However, official monitoring of chemical risks (heavy metals, histamine, PAHs, dioxins and PCBs) are not carried out. Furthermore, a National Program for monitoring of environmental contaminants in products from wild fisheries is not in place, this is not in line with EU requirements. In addition, no environmental monitoring regarding ciguatera toxin in fishery products nor the relevant dinoflagellates in seawater are carried out, despite the relevance for this type of monitoring in this area.

The CA takes official control samples for analyses of the fisheries products as well as of the water 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. The official control of the ice used in the fisheries products production chain, e.g. on board the vessels, falls under the Environmental Health authorities.

Currently there are a number of authorities involved in official food control in the Bahamas and therefore it is difficult to streamline their activities regarding SPS-related monitoring. However, the foreseen changes in the regulatory framework related to health and food safety authority in Bahamas will address this deficiency.

Currently there is no commercial aquaculture carried out in Bahamas and therefore it is not necessary for the CA to implement a National Residue Control Plan (NRCP) for monitoring of residues of veterinary medicines and environmental contaminants in products from aquaculture. However, in case commercial aquaculture will be established the Bahamas in the future it will be necessary to implement the NRCP.

Site visits indicated that the regulatory requirements related to health and food safety issues in the fisheries sectors of Bahamas are generally enforced by the CA for fisheries products intended for export, but not for the domestic market. Many problems e.g. related to maintenance, hygiene conditions and cleaning procedures were observed in the entire production chain for fisheries products intended for the domestic market. Therefore, there is difference between the enforcement of regulations for fisheries products for export and production for the domestic market.

The problems observed in the entire production chain for fisheries products intended for the domestic market are due to attitude, mind set and limited education of fishermen and workers in the primary production. Furthermore, the small community of the country sometimes hampers enforcement of regulation at the source of the deficiencies, e.g. issuing and revoking licenses of local fisheries facilities, as the FBOs try to use their connections to avoid the enforcement.

In the Bahamas the conch is most often served and eaten cooked, but sometimes it is eaten raw in a conch salad which is a ready to eat high risk product and thus good SPS standards are critical in the entire production chain.

Attitude and mind set of local consumers is also a problem as they don’t understand the importance of basic SPS requirements in terms of health and food safety.

There is currently insufficient technical expertise and relevant university programs related to food science, environmental science and engineering are not available in the country and this is hampering research & development related to the fisheries sector e.g. regarding development of new products, value addition and better use of marine resources.

# Recommendations

Inspection manuals are important to enforce regulations and to harmonize the inspection system. It is also important that the Food Business Operators are well informed regarding which requirements they must fulfil and how their operation are evaluated as that will assist them in fulfilling their obligation. Therefore it is recommended that written procedures (inspection manual) that explain in details how inspection should be conducted according to the regulatory requirements will be accessible to all stakeholders, for example on the Internet, free of charge.

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.

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. This type of monitoring plan for contaminants/undesirable substances in fishery products and water is currently not in place in the Bahamas, hence a suitable solution needs to be initiated and implemented.

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.

It is important to place in motion a plan to improve maintenance and hygiene on board fishing vessels as well as improve SPS requirements at landing sites in the DR. This could, for example, be done through wide ranged training of persons working in the primary processing and local fishery products processing facilities e.g. regarding general SPS requirements in fisheries and aquaculture sectors as well as the specific requirements of the EC and USA markets. Training and education of local consumers is also required to improve their understanding and perception regarding food safety of fisheries products. Sharing of experience and best practise as well as success stories from other countries in the Caribbean region could also be a suitable way to create an incentive for persons working in primary processing. In order to transfer knowledge to consumer and workers in primary processing short videos and/or commercials could be useful.

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.

The Caribbean countries should increase their research collaborations regarding ciguatera toxin in fisheries products and the type of dinoflagellates that may pose a risk to public health in Caribbean waters.

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 22nd 2015 at Department of Marine Resources in Bahamas

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