

MALAYSIA

Hamdan Jaafar
Research Officer
Department of Fisheries
Malaysia

INTRODUCTION

Status of fisheries industry

The fisheries sector has been growing in Malaysia. Apart from providing direct employment to more than 84,000 fishermen and 22,000 fish culturist, this sector contributes to RM 5.45 billion or around 1.54% Malaysian GDP in 2001. This value consisted of RM 5.45 billion of marine and aquaculture landings and RM 81 million of ornamental fish production, obtained from 1.4 millions tonnes of marine and aquaculture catch and 338 million ornamental fish.

In the marine fishery sector, a total of 1,231,289 tonnes of fish was landed in Malaysian water, valued at RM 4.166 billion in 2001. In the aquaculture sector, 177,019 tonnes fish was produced, making up to 12.6%

of the total fish production. This aquaculture production was valued RM 1,206.59 million, an increase from RM 970.32 million (24.35%) in 2000.

Export and import

In 2001, Malaysia exported about 144,590 tonnes of fish and fish products valued at RM1.35 billion. Frozen shrimp made up the largest proportion of these export. In the same year, Malaysia imported about 323,199 tonnes fish and fish products, valued at RM 1.17 billion. Table 1 indicates the quantity and value of fish and fish products export from 1999 to 2001 and Tables 2 and 3 specify the breakdown detail of fish and fish product export, based on importing countries.

Table 1. Seafood export, 1999 - 2001

	1999		2000		2001	
	Quantity (tonnes)	Value (RM\$ Billion)	Quantity (tonnes)	Value (RM\$ Billion)	Quantity (tonnes)	Value (RM\$ Billion)
Fish and fish products	136,044	1.155	NA	NA	144,590	1.35

Table 2. Quantity of fishery export to various countries, 1999 - 2000

Country	1999		2000		Change (%)
	Quantity (tonnes)	Percent (%)	Quantity (tonnes)	Percent (%)	
Thailand	25,556	18.8	28,439	19.7	+11.3
Singapore	27,608	20.3	27,191	18.8	-1.5
China	12,383	9.1	12,251	8.5	-1.1
Japan	14,885	10.9	9,871	6.8	-33.7
Hong Kong	7,399	5.4	9,093	6.3	+22.9
Indonesia	6,002	4.4	7,383	5.1	+23.0
Italy	6,581	4.8	7,022	4.9	+6.7
Australia	4,820	3.6	5,591	3.9	+16.0
Others	30,810	22.7	37,749	26.0	+22.5
Total	136,044	100.0	144,590	100.0	+6.3

Source: Department of Fisheries, Malaysia (2000)

Table 3. Value of fishery export to various countries, 1999 - 2000

Country	1999		2000		Change (%)
	Value (RM Million)	Percent (%)	Value (RM Million)	Percent (%)	
Japan	260.0	22.5	255.8	19.0	-1.6
Singapore	144.1	12.5	158.1	11.7	+9.5
Hong Kong	88.9	7.8	118.0	8.7	+32.7
Italy	105.7	9.1	116.6	8.6	+10.3
US	61.8	5.4	90.5	6.7	+46.4
Netherlands	56.8	4.9	79.6	5.9	+40.1
Australia	62.2	5.4	61.1	4.5	-1.8
China	59.2	5.1	58.5	4.3	-1.2
Others	316.4	27.3	411.3	30.6	+30.0
Total	1,155.1	100.0	1,349.5	100.0	+16.8

Source: Department of Fisheries, Malaysia (2000)

DEVELOPMENT OF FISH PROCESSING INDUSTRY IN MALAYSIA

The fish processing establishments in Malaysia can be classified into traditional, small and medium scale and commercial. The fish processing industry is dominated by small and medium scale enterprise (SME), with capital asset of less than RM 100,000. Most of these are small operations and located mainly in the coastal

area, close to fish landing ports. Traditional fish processing establishments also form a sizeable part in Malaysian fish processing industry. Mostly home-based, these establishments produce traditional fish products, e.g. fish cake, fish ball, fish cracker for the domestic market. Some of them only operate during peak season

of fish landings, that is, when fish supply is readily available and the price of fish is relatively low. It is estimated that a total of 30% fish landed is being processed.

Although the fishing industry is expanding, there are still very few big fish processors. In 2002, there were

238 medium and commercial-size fish processing establishments, but only 48 of them export their products. Less than 10 of these establishments were listed in the Kuala Lumpur Stock Exchange. While traditional and SME scale processing cater for domestic market, these medium and commercial size fish processors cater for urban and export markets.

National Policy and Programme on Seafood Safety

The demand for fresh and safe seafood has increased both locally and internationally. The challenge for Malaysia, thus, is to increase production as well as achieving the global needs for safe and high quality food in international trade. HACCP has been recognised as most effective means of managing seafood safety. Importing countries, such as EU, US, Japan and Australia are working toward enforcing HACCP for imported fish products.

In this respect, the Malaysian government has formulated the Third National Agricultural Policy (NAP-3) that emphasize on the enhancement of quality and safety assurance of fisheries product. The Department of Fisheries (DOF) Malaysia is moving toward this direction, in line with this NAP-3, through its Fisheries Act, which includes quality assurance system.

Another emphasise on food safety is the setting up of the National Food Safety and Nutrition Council in 2001. Under this council, the Food Safety Policy is developed to ensure safe food production at all levels. One of the efforts of this council is the attempt to integrate the roles of various agencies in ensuring food safety.

To ensure the safety of fish and fish products, Malaysia has and will take undertake various control measures from farm to table. Such measures include:

1) Quarantine measures on fish health and diseases control for live fish

These comprise the issuance of import and export permit, health certificate and country of origin certificates. It is to ensure that control of import, export and quarantine of live fish can be effectively implemented for the control of fish disease carrying agent that pose a threat to aquaculture.

2) Safety measures at source of fish and fishery products

a) Sanitary and Phytosanitary (SPS) monitoring program on marine fisheries.

This program was initiated by the DOF to ensure that fish are caught from safe and non-polluted areas; and that fish caught is of good quality and safe to consume. The program has been carried out since 1999 where samples from selected landing sites are collected and analysed regularly. Analyses include bacteriology, histamine, heavy metals, pesticides, fish freshness index and plankton identification through water samples susceptible for micro algae biotoxins.

b) Aquaculture Farm Certification Scheme (SPLAM)

The SPLAM will be soon implemented by the DOF, where a certificate and quality mark (logo) will be awarded by the DOF for qualified fish farm which fulfil and comply with the requirements and criteria based on guidelines, standards, and practices set by the DOF. The certificate and logo will be used as an official trademark for the farm and it is valid for a period of two years.

3) HACCP Certification

HACCP IMPLEMENTATION

The HACCP system was first introduced and adopted by low acid canners in Malaysia in the 1990s. However, the Malaysian Certification for HACCP was only officially launched by the Minister of Health in Sep 2001. It describes the procedures for obtaining HACCP Certificate, as well as adequacy, compliance and follow-on audits by appointed certified auditors. Even though the Ministry of Health administers the scheme, it was developed through the collaboration of various government departments, that is Department of Fisheries (DOF), Fisheries Development Board of Malaysia (LKIM), Malaysian Agricultural Research and Development Institute (MARDI), Ministry of Health (MOH) and Standards and Industrial Research Institute of Malaysia (SIRIM). MOH is responsible for the surveillance audit, which ensures that certified plants implement and maintain the HACCP system continuously. The HACCP certificate is valid for one year. Some of the benefits gained by the certified plants are: the issue of health certificate is speedier as it does not depend on end product testing per consignment; the plants can use MOH logo on their products; and the number of routine inspection will be reduced if the proper system is continuously maintained.

MOH is the only recognised agency by EU, and lately by US, to issue HACCP certificate, whereas MARDI is given the mandate to audit HACCP plans for fish processing in Malaysia.

The implementation of HACCP is still on a voluntary basis. Only export-oriented and commercial scale plants are encouraged to apply HACCP to fulfil the requirements of importing countries and some international supermarkets.

As of Jan 2002, there are 238 medium and commercial-sized fish processing plants operating in Malaysia (Table 4). Out of these, 48 are currently HACCP-certified under the HACCP certification scheme, which is being managed by the Ministry of Health. These are mostly export-oriented plants and 45 have approved EU numbers. Another 67 plants applied have yet to be HACCP-certified. An integrated HACCP/ISO certification scheme is currently being plan to integrate both safety and quality assurance as needed by the industry.

Table 4. Status of HACCP implementation of fish processing industry in Malaysia, 2001 - 2002

	2001	2002
No. of fish processing plant*	238	238
No. of HACCP implemented plant	29	48

* Medium and commercial-size plant

With a view to assist the fish processing industries, the government provides various assistances for SME to encourage them to adopt HACCP in their premises. Companies can apply for tax exemption on all costs involved in getting the HACCP certificate. DOF conducts free training programmes for line supervisors

and line workers at the Fisheries Training Institute. MARDI and the Department of Veterinary Services carry out various training programmes that are needed by the industries at very reasonable rate. In addition, courses and seminars are also conducted by some private companies and universities for industries.

Some of the trainings/ campaigns conducted to promote HACCP are:

a. HACCP awareness campaign for fish processing industry

Campaigns were carried out by the DOF in 1999/ 2000 in Taiping Perak, Kuantan Pahang, Sibul Sarawak and Sandakan Sabah. The objective was to create awareness on the importance of implementing HACCP in fish processing industry so as to ensure food safety and enhance export trade. More than 50 processors participated in each session.

b. HACCP courses

MARDI offers regular courses in HACCP for food industry in general. Courses that have been conducted include:

1. Prerequisite to HACCP Implementation
2. HACCP and Its Implementation
3. Hygiene and Sanitation - Prerequisite to HACCP Implementation

4. Course on HACCP Verification and Auditing
5. Introduction to HACCP
6. Documentation for HACCP Programme
7. Concept - Food Safe to be Eaten (for staff from the Ministry of Agriculture)
8. Training Course on Introduction to HACCP Programme in Livestock Industry
9. Microbiology in HACCP Implementation - Methods and Application

c. Other initiative

The FAO/LKIM/INFOFISH Regional Workshop on Verification and Auditing of HACCP System in the Fishery Industry was conducted in Penang, Malaysia on 7 -11 Jul 2003 to about 30 local and foreign participants. A similar workshop had been conducted in 2000.

PROBLEMS/ DIFFICULTIES ENCOUNTERED

- Lack of understanding of the background information on the fish and fishery products processing amongst QC leads to inappropriate selection of CCP (e.g. misunderstanding on the selection of frozen storage step as a CCP or just a CP and as part of GMP)
- Lack of understanding of the background information on the fish and fishery products processing and regulations of importing countries, e.g. EU and US, amongst auditors, leading to HACCP non-compliance
- Lack of proper records as to the step taken in actual implementation of processing, i.e. what is written in the record not being actually implemented
- Insufficient data recording frequency for selected parameter, e.g. temperature in manual recording
- Lack of continuous training for line-workers, production supervisors and QC for better understanding on HACCP and importers regulatory requirements
- Lack of qualified HACCP auditors
- Lack of trained trainers in HACCP in fish and fishery products

FUTURE DIRECTION

There is an urgent need for updating existing legislation and development of new legislation to support a more stringent seafood safety control namely:

- Draft Food Import Regulation
- Draft Food Irradiation
- Draft Food Hygiene

- Draft Aquaculture and Inland Fisheries Regulation
- Draft Quarantine Regulation
- Draft Animal Feed Act
- Draft National Food Safety Policy

There is also a strong need to update existing seafood standards and develop new standards for the industry. Future efforts would include:

- Integration of HACCP/ISO
- Integration of HACCP/HALAL
- Integration of HACCP/ISO/HALAL
- Integration of HACCP/Other QAS

HACCP is acknowledged as an effective food safety control system. It is evolving and more emphasis has been given by different trading blocks (i.e. US and

EU) on the understandings of the actual implementation of HACCP, and later on the requirements of verification and auditing. Codex guidelines would remain as the reference standard in HACCP implementation, and industrial application of the standard guideline would lead to a better understanding of the real situation when implementing HACCP.

Parallel to that, concerted effort to overcome constraints in analytical laboratory capability, manpower capacity on analytical works such as on biotoxin analysis, and qualified trainers in HACCP implementation, verification and auditing; need to be carried out to address the current situation. This is especially so, in view of the requirements of the new paradigm on food safety measures incorporating Risk Analysis.