myGAP: Malaysia’s gift to seafood world

M G A Manap¹ and M F A Pauzi¹

¹Department of Fisheries Malaysia, Level 3, Block Podium 2-4G2, Wisma Tani, 32 Perdana Boulevard, 62628 Putrajaya, MALAYSIA

*E-mail: ghazalimanap@dof.gov.my; ghazalimanap@gmail.com

Abstract. Globalization, consumer expectations, sustainability of food production and sanitary and phytosanitary control measures from importing countries have been identified as a major challenge for the development of the aquaculture industry in the world. Currently, international trade trend has focusing to the production of safe for human consumption aquaculture products and produce which avoids the deterioration of the quality and sustainability of the environment. The United Nations Food and Agriculture Organization has published Aquaculture Certification Technical Guidelines in 2011 as a general global guidance for Good Aquaculture Practice certification. Malaysia has implemented the Certification of Good Aquaculture Practices in 2004 and has national standards since 2007 when Malaysia’s Standard (MS 1998: 2007) General Guidelines for Good Aquaculture Practices was officially publish for certification reference. Certification in Good Aquaculture Practices Malaysia requires farm owner to compulsorily participate in the National Aquaculture Residue Monitoring Program to verify aquaculture products from certified premises to be safe for human consumption and free from harmful contaminants. In 2017, the standards were revised to comply with ASEAN Good Aquaculture Practices (ASEAN GAqP) requirements.

Keywords: food production; aquaculture; ASEAN GaqP; Malaysia.

1. Introduction
Delisted of Malaysian’s Frozen Seafood Company from European Union (EU) approved list of exporters in mid-2008 has given goosebumps and alarming to all stakeholder involved (government and industries) along supply chain. This event alerted the authorities involved in fish and fisheries product business to react and restructure their official control system. The authorities had to ensure that any fish and fisheries product exported from Malaysia to the EU market are met with a stringent requirement and are guaranteed safe for human consumption. Action taken by EU-Directorate General of Health and Consumer Affairs (DG-SANCO) are based on EU Regulations 852/2004 - the hygiene of foodstuffs; Regulations 853/2004 - specific hygiene rules for on the hygiene of foodstuffs; Regulations 854/2004 - specific rules for the organization of official controls on products of animal origin intended for human consumption; and Regulations 882/2004 - official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules.

Immediate necessary action is taken to restructuring by identifying related agency and revamp all function along the value chain of fish and fisheries product export from Malaysia to EU. That action involved establishment of Fisheries Biosecurity Division, gazette Fisheries Regulations (Quality Control of Fish for Export to The European Union, 2009), rebranding farm certification scheme,
promoting certification programmes to stakeholder, strengthening official analysis capabilities and improving SOP for export certificate and official guarantee.

1.1. Malaysia Fisheries and Aquaculture Certification Scheme

In 2004, Department of Fisheries (DOF) Malaysia introduced SPLAM (Malaysia Aquaculture Farm Certification Scheme), the scheme’s main target is to certify shrimp farmers and fish cage owners towards good aquaculture practices. SPLAM were offered without any official reference standard. Difficulties to comply for small and medium size farmer with SPLAM, DOF have to encourage more farmers being certify with minimum requirements by introducing Good Aquaculture Practice Certificate Scheme (SAAB) in 2005.

Rebranding of SPLAM by merging with SALAM (Good Agriculture Practices Malaysia Scheme) and SALT (Good Animal Husbandry Practices – SALT) in 2013 has earmark all agriculture certification scheme under a new brand - myGAP. For the aquaculture sector, myGAP has offered a certification scheme based on two reference standard documents.

2. Malaysia aquaculture certification scheme

Delisted of Malaysia frozen seafood processing exporter to supply for EU market has introduced Fish Quality Certificate (FQC) as an official control mechanism under Fisheries (Quality Control of Fish for Export to The European Union) Regulations 2009. This action is main part of controlling of primary production activities along value chain involves hatchery, feed miller, shrimp farm, fish cage culture, ornamental fishes farm and premises (import and export), less 24 hours fishing vessel and more than 24 hours operation fishing vessel. Only certified FQC premises are allowed to supply a raw material such as fish and shrimp to Ministry of Health approved seafood processor export to EU. An additional requirement imposed to myGAP certifies farm is each farm has to conduct self-monitoring program testing to detect presence of prohibited contaminant substance in fish or shrimp cultured.

Cumulatively, since 2013 after promulgation of myGAP as a single brand in Malaysia agricultural certification scheme, 434 premises of shrimp farms, fish cages, hatcheries, ornamental premises and seaweed cultivation were certified and complied with two main myGAP (Aquaculture) reference documents.

| No  | State          | Year 2013 | Year 2014 | Year 2015 | Year 2016 | Year 2017 | Year 2018 | Year 2019 | TOTAL until 18/8/2019 |
|-----|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------------------|
| 1   | Johore         | 0         | 6         | 3         | 16        | 24        | 8         | 5         | 59                     |
| 2   | Kedah          | 0         | 3         | 2         | 7         | 3         | 2         | 3         | 18                     |
| 3   | Kelantan       | 0         | 4         | 1         | 1         | 1         | 3         | 0         | 9                      |
| 4   | Melaka         | 0         | 0         | 2         | 2         | 3         | 0         | 0         | 5                      |
| 5   | Negeri Sembilan| 1         | 1         | 0         | 0         | 2         | 0         | 0         | 4                      |
| 6   | Penang         | 1         | 5         | 1         | 24        | 5         | 5         | 5         | 46                     |
| 7   | Pahang         | 1         | 14        | 15        | 6         | 7         | 3         | 4         | 50                     |
| 8   | Perak          | 1         | 9         | 21        | 10        | 10        | 4         | 4         | 65                     |
| 9   | Perlis         | 0         | 0         | 0         | 0         | 1         | 0         | 0         | 1                      |
| 10  | Sabah          | 32        | 20        | 12        | 27        | 4         | 4         | 4         | 103                    |
| 11  | Sarawak        | 0         | 2         | 2         | 4         | 1         | 3         | 15        | 27                     |
| 12  | Selangor       | 0         | 4         | 5         | 3         | 11        | 8         | 3         | 34                     |
| 13  | Terengganu     | 0         | 6         | 5         | 0         | 2         | 0         | 0         | 13                     |
| TOTAL |              | 36        | 74        | 69        | 100       | 74        | 46        | 43        | 434                    |
2.1. myGAP certification documents
The United Nations Food and Agriculture Organization has published Aquaculture Certification Technical Guidelines in 2011 as a general global guidance for Good Aquaculture Practice certification. Malaysia has in advance publish national own aquaculture best practices standard in 2007 from multi discussion forum involved stakeholder and private company related directly with aquaculture. The standard developed and officially published in 2007 are general guidelines which are fit for all aquaculture activities. Meanwhile, to tackle on expanding seaweed industry, a new code of practices for seaweed cultivation was published in 2012.

2.1.1. MS 1998:2007 – General guidelines for good aquaculture practices
This standard was published in 2007 and used as a main reference for aquaculture certification. Revised version in 2017 was published to ensure all requirements from previous approved standard are align with standard requirements in ASEAN Good Aquaculture Practices (ASEAN-GAqP) guidelines. Four important ASEAN-GAqP main component for certification are added to previously published requirements in MS 1998:2017. A newly revised standard MS1998:2017 – Good Aquaculture Practices (First Revision) was publish and implemented in 2018. The benchmarking process of Malaysia standard with ASEAN-GAqP are required to ensure Malaysian fish and fisheries product traded within ASEAN member state complied with the standard and are able to access ASEAN market without any hindrance. For certified aquaculture farms, the farm operator has to fully comply to at least 19 certificate requirements from site selection, waste water treatment, hygiene practices, animal health, halal and etc. before the certificate can be awarded. Farm have to participate in an official control (sampling) program conducted by Department of Fisheries and are subject to surveillance audit every 6 months after being certify. Costing of analysis will be bearer by Malaysia Government.

2.1.2. MS 2467:2012 – Code of practices for seaweed cultivation
The seaweed industry in Malaysia is concentrated in East Coast of State of Sabah, Malaysia. Government of Malaysia has identified a seaweed cultivation activity as a potential’s new income for Malaysia in 2011. With approval of MS 2467: 2012 standard, 32 seaweed farmers successfully complied with standard requirements and were granted myGAP Certificate through a clustered process in 2012. This standard required farmers to comply with site selection process, farm construction, cultivation practices, approval to use of exotic species, farm workers, traceability and record keeping, and social responsibilities towards safety, welfare and training of workers.

2.2. Additional requirements for certified farm to comply
As a certified farm, farmer’s produce is compulsory to be collected and participate in an annual official control and official analysis program through sampling of aquaculture sample and surveillance process conducted by Fisheries Biosecurity Unit, Department of Fisheries from each state in Malaysia. Sampling program including monitoring the presence of prohibited substances as well as the presence of aquatic animal disease in aquaculture.

2.2.1. Surveillance program
Participatory certified aquaculture farm is subject to be visit for every 6 months after granted a myGAP certificate. myGAP Certificate is valid for 2 years and team of officers from Fisheries Biosecurity Unit for each state will schedule a surveillance audit for every 6 months, 12 month and 18 months subsequently after certificate awarded. Three months before expiry date of certificate, farm owner has to request a recertification audit from Department of Fisheries Malaysia Headquarters and external auditor will be dispatched weather to evaluate implementation of myGAP’s standard are practiced continuously.
2.2.2. Sampling and analysis program
Concurrent with surveillance programs conducted by Department of Fisheries Malaysia, certified myGAP farm also have to allow State Fisheries Biosecurity Unit officer to collect an aquaculture product sample and test for presence on prohibition contaminant substance and contagious disease aquatic animal pathogen in official sampling program. Sample is taken after every six months after farms have been certified. Since 2008, Department of Fisheries Malaysia already conducted an official control role through various sampling programme;

i. Aquaculture Residue Monitoring Program (ARMP)
ii. Sanitary and Phytosanitary for Aquaculture Product (SPS Aqua)
iii. Sanitary and Phytosanitary for Marine Fishes Product (SPS Marine)
iv. National Seashell Sanitation Program (NSSP)
v. Fishmeal and Fish Feed Sampling Program (FFSP)
vi. National Fish Disease Surveillance Program (NFDS)

3. Discussion and conclusion
Compared to other certification schemes, the myGAP certification scheme which are supervised and fully govern by Malaysia government agency, competent authority regulate the processed of certification from farm registration; auditor registration and training; auditing documentation; testing of sample; monitoring and surveillance of practices and presence of contaminant; and certification for export fish and fisheries product along of value chain. With sufficient information from farm to fork, the fish and fisheries product which are produced under myGAP supervision scheme are officially guaranteed safe for human consumption, free from contagious aquatic organism pathogen and are obtain from sustainable environment practice aquaculture farm.

With strict regime of monitoring, surveillance and sampling under direct supervision of regulatory bodies competent in fisheries, myGAP product are guaranteed safe and are produce with environmentally friendly practices and hence they are a special gift which Malaysia has to offer to the whole seafood world.

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