Markets and Marketing Trends for Aquaculture Products in Southeast Asia

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Abstract

Despite the fact that Southeast Asian countries are among the main producers and exporters of fish and fishery products in the world, the region has also increasingly become an important market. According to the Food and Agriculture Organization (FAO), imports of fish and fishery products into countries comprising the Association of Southeast Asian Nations (ASEAN) increased from only US$471 million in 1984 to more than US$2 billion in 1997. High per capita fish consumption, huge market size (population), increasingly strong purchasing power, coupled with relatively liberal trade policies are among the factors behind this trend.

Even though the economic crisis in the region has scaled down the degree of market expansion for the last two years, it has, on the other hand, provided trade opportunities among the regional countries for fishery products, including those from aquaculture. Tens species are being cultured commercially in the region, but only a few are important in the intra-regional trade.

Shrimp, particularly black tiger shrimp (*Penaeus Monodon*), is the most important species being cultured and traded in the region, both in terms of volume and value. The other major species are carps, tilapia, and milkfish, but these are mostly consumed locally and only a limited quantity is traded between countries in the region. Meanwhile, cultured Asian sea bass, grouper, snappers and mud crab are relatively small in production, but these are important species in the intra-regional trade.

This paper reviews the current trends in Southeast/Far East Asian markets for major aquaculture products, including marketing issues on demand and product trends, safety and quality issues as well as marketing access in major Asian markets.

Introduction

Southeast Asian countries are important markets for fish and fishery products due to the following factors 1) seafood consumption in the region is comparatively high, above the world's average; 2) market size is huge in terms of the population; more than 550 million consumers live in ten ASEAN (Association of Southeast Asian Nations) Member Countries; 3) consumer purchasing power is strong

in some countries like Singapore, Malaysia and Brunei and improving in others like Thailand, the Philippines and Indonesia; and 4) the region, in general, is an open market where there are very minimum trade barriers.

Table 1. **ASEAN per capita fish supply in 1995 (kg/year; FAO, 1998)**

Country	Population ('000)	Per capita fish supply (kg) in live weight
Brunei	313	27.4
Cambodia	10,024	9
Indonesia	206,000	17.4
Laos	4,882	9.2
Malaysia	21,400	55
Myanmar	45,107	15.6
Philippines	72,200	33.4
Singapore	3,500	31.9
Thailand	59,600	32.5
Vietnam	76,700	12.9
Total	553,726	**ASEAN (average) 24.4** **World (average) 15.3**

Average per capita fish consumption in 10 ASEAN Member Countries is around 24.4 kg (live weight), far above the world's average of 15.3 kg. Even though per capita fish consumption in some countries is relatively low, such as in Cambodia (9 kg), Laos (9.2 kg) and Vietnam (12.9 kg), in other Member Countries the rate is relatively higher (Table 1).

It is obvious however that the growth in the regional seafood market has been hindered by the prevailing economic and financial turmoil, which began two years ago. The crisis has badly hit the trade of high-value seafood species, as consumers have switched to lower-priced species and reduced their expenses on dining-out and family celebrations (Pawiro, 1999b). This paper reviews the current market and marketing trends of aquaculture products in the region.

Market Briefs on Selected Asian Countries

In the intra-regional trade of fish and fishery products within the ASEAN countries, Malaysia, Singapore and also Thailand play an important role as the main importing countries while others are mainly suppliers (exporting countries). Besides those three ASEAN countries, Hong Kong, China and Taiwan import a large quantity of seafood through intra-regional trade (Table 2). The following brief reviews will focus on these markets.

Malaysia

Consumption of seafood has been growing in Malaysia for the last 7-8 years. Per capita fish consumption is currently 45 kg and is projected to be 56 kg by 2010. To cater to the growing demand, annual imports also grew over the years, totalling 253,659 mt in 1997 and increasing further to 293,000 mt in 1998 (Anon., 1999c). The main suppliers of imported seafood products are Thailand, Indonesia, Taiwan, India, Bangladesh, and New Zealand. The most popular species sold in the market

Table 2. **Total imports of fishery products into selected asian countries from 1993 to 1998**

		1993	1994	1995	1996	1997	1998
Hong Kong	Q (mt)	324,336	339,730	332,030	328,157	317,831	271,227
	V (HK$ million)	10,643	12,700	14,142	14,879	16,627	16,845
Malaysia	Q (mt)	261,631	275,880	260,568	257,084	253,659	293,005
	V (RM million)	691	808	824	835	916	1,237
China	Q (mt)	936,362	1,253,766	1,343,737	1,388,847	1,513,261	1,140,000
	V(US$ million)	576	856	962	1,206	1,216	1,020
Singapore	Q (mt)	167,077	178,537	181,090	156,077	150,257	114,390
	V(S$ million)	902	921	929	901	901	500*
Taiwan	Q (mt)	592,569	581,720	553,920	508,044	515,337	282,738
	V (NT$ million)	15,741	16,722	17,504	18,881	22,028	16,782
Thailand	Q (mt)	760,919	893,585	872,824	797,386	710,115	728,960
	V (Baht million)	21,629	21,329	21,925	22,425	27,439	36,497

* Excluding ornamental fish and fry.

are: mackerel, scad, squid/cuttlefish, sardinella, threadfin bream, shrimp, and pomfret.

The devaluation of the Malaysian currency since mid-1997 has however affected the import trade of fishery products. The effect has been more prominent with regard to high-valued items and those imported from distant nations. As fish is one of the main sources of cheap protein and the government still maintains its open trade policy, demand has shifted to medium and lower value species. Imports from the ASEAN sources (Thailand, Indonesia and Myanmar) have increased as payment can now be made in regional currencies.

Singapore

With a population of about 3.6 million, fish is the major source of protein for Singaporeans. Its annual per capita fish consumption of 35 kg is among the highest in Asia. With its excellent infrastructure and services, Singapore has become an important seafood import and re-export trade and processing center in the region. Its wholesale market complex at Jurong plays an important role as the landing point for foreign vessels and trucks bringing in fish from neighboring countries like Indonesia, Malaysia, and Thailand.

Domestic fish production in 1997 was only about 9,247 mt, thus around 90% of total seafood supply comes from imports. In that year, imports of fishery products totalled 150,257 mt, valued at S$901.2 million (US$608.9 million). A large volume of products is imported in live, fresh/chilled, and dried/salted forms.

Singapore is primarily a market for fresh products and there are very active wholesale markets

serviced daily by fishing vessels and airfreight consignments from all over the region. Even though neighboring countries like Malaysia, Indonesia, and Thailand are the main suppliers, there has also been an increase in imports from other countries such as India, Taiwan, Japan, Australia, New Zealand, and Norway.

Thailand

Thailand has become the main player in the world seafood industry. Within the last decade, there has been a great deal of expansion in the frozen shrimp, cephalopods, and canned tuna processing industries. The Thai Frozen Food Association (personal communication) estimates that domestic landings can supply only 60% of the raw materials needed by the processing industry, while the rest (40%) has to come from imports. A large portion of the imports comprises tuna/skipjack for canneries, while other important items include shrimp, cephalopods, and frozen fish. The total import of fish products in 1998 was 728,960 mt. Of the finished products, the bulk is re-exported with a very small percentage used for the domestic market.

Hong Kong

Effective July 1997, Hong Kong has become a part of China with the status of "Special Administrative Region (SAR)," allowing the territory to retain its position as a free trade zone. Being a large market for seafood, Hong Kong imports a substantial volume annually for domestic consumption. In addition, it has always been a major trading channel for goods, including fishery products, to the Chinese market.

On average, over 300,000 mt of seafood are consumed in Hong Kong annually and most of it is imported. About 88% of these products are consumed in live, fresh/chilled, and frozen forms. It is estimated that about 27,735 mt of live finfish and shellfish were consumed in 1997, besides some 255,000 mt of fresh/chilled and frozen products. In 1998, for the first time in many years, Hong Kong's economic growth rate was negative, which had a similar effect on consumption of seafood, particularly the high value items (Pawiro, 1998).

Mainland China

With its population of more than 1.2 billion, China has become one of the world's major markets for fish and fishery products, causing supplying countries and individual exporters to watch closely any developments in the country. Even though China is the top producer of fish and fishery products in the world, supplies of preferred species are insufficient to meet the high domestic demand. Thus imports of fishery products into the country have increased steadily over the past five years. From a negligible volume in the early 1980s, China now imports more than 1.1 million mt of fish and fishery products annually.

In 1997, imports reached 1,513,261 mt valued at US$1.2 million of which fish for human consumption was around 524,000 mt and the rest was fishmeal. Until mid-1998, imports into China continued to rise, but of late, government intervention to curb illegal imports and misuse of duty-free import quotas has created great uncertainty in the market. Consequently, imports in 1998 dropped by 24% in terms of volume to 1.14 million mt valued at US$1,020 million.

Taiwan

Taiwan's current per capita fish consumption is around 45-50 kg compared to 35-40 kg ten years ago. Despite the high volume of domestic production, which reached 1.3 million mt in 1997, Taiwan

also imports a considerable amount of fishery products to cater to increasing local demand. Imported fishery products in 1997 totalled 515,337 mt valued at US$705 million, showing an increase compared to the previous years. However, in 1998, imports dropped by 45% in volume to 282,738 mt compared to 1997 due to the current regional economic crisis. Imports of edible seafood dropped by 30% from 152,019 mt in 1997 to 106,358 mt in 1998, while imports of non-edible products such as fishmeal dropped by 51% during the same period. Although import duties on fishery products in Taiwan are high compared to other countries in Asia, the high disposable income of the population in this affluent country offers great potential for market expansion.

Table 3. **ASEAN: Aquaculture Production (mt) from 1990 to 1997 (FAO, 1999)***

Country	1990	1991	1992	1993	1994	1995	1996	1997
Brunei	6	1	17	36	72	103	119	156
Cambodia	6,400	6,700	8,550	7,900	8,200	9,511	9,600	11,800
Indonesia	499,824	517,507	550,368	600,404	597,522	635,288	733,088	754,610
Malaysia	52 306	64,845	79,700	105,241	114,112	132,745	109,505	103,360
Myanmar	7,087	26,033	51,876	65,079	73,648	74,255	68,135	87,320
Singapore	1,857	2,000	2,350	2,350	2,360	3,625	3,567	4,088
Philippines	379,940	408,618	386,876	392,072	387,588	361,540	349,442	330,443
Thailand	291,719	353,367	370,974	457,314	509,800	559,504	551,431	575,901
Vietnam	160,076	165,104	167,899	183,061	217,056	394,316	402,500	480,000
Laos	10,000	12,000	12,000	12,000	12,800	14,400	14,400	14,000
Sub-total	1,409,215	1,556,175	1,630,610	1,825,457	1,923,158	2,185,287	2,241,787	2,361,678
World total	13,084,142	13,731 381	15,477 350	17,888 258	20,790 848	24,484 132	26,764 875	28,808,414
Percentage of world total	10.8	11.3	10.5	10.2	9.3	8.9	8.4	8.2

* Fish and shellfish.

Markets and Marketing Trends for Major Cultured Species

Aquaculture production of fish and shellfish in all ASEAN member countries reached 2.36 million MT in 1997 where Indonesia, Thailand, Vietnam, Philippines, and Malaysia were the main producers (Table 3). Ten species are being cultured commercially in the region, but there are only a few species which are important in the intra-regional trade. Shrimp, particularly black tiger shrimp, is the most important species in the region in terms of quantity and value, both produced and traded in Southeast Asia. Meanwhile, carp, tilapia and milkfish are the most important finfish being cultured in Southeast Asia but only a limited quantity is being traded between countries in the region.

There are also some farmed species, which are relatively small in production but are important in intra-regional trade, namely: Asian sea bass (*Lates calcarifer*), grouper, snapper, and mud crab. Of the molluscs, blood cockle (*Anadara granosa*) is another important species being cultured and traded, but it is almost exclusively limited to Malaysia and Thailand (Table 4).

The following are brief reviews on markets and marketing aspects of the above-mentioned major species groups.

Table 4. **Aquaculture production (mt) of ten ASEAN Member Countries by major species group from 1990 to 1997 (FAO, 1999)**

Species Groups	1990	1991	1992	1993	1994	1995	1996	1997
Common carp	94,533	90,318	101,613	138,898	143,197	161,444	187,487	213,607
Tilapia (all species)	154,22	161,563	199,531	219,045	222,881	238,875	259,088	288,781
Milkfish	343,314	375,147	318,148	313,413	314,099	302,114	312,278	329,696
Asian sea bass	6,315	10,156	7,734	9,507	9,259	8,264	11,191	13,419
Grouper	3,107	7,471	1,835	2,680	4,271	2,324	2,299	2,340
Snapper	482	189	380	1,059	1,609	2,071	2,087	1,463
Shrimp (black tiger & banana shrimp)	280,824	361,147	419,936	469,941	509,210	525,303	493,570	471,248
Mud crab	2,492	2,062	5,764	7,831	7,111	5,698	4,600	4,964
Blood cockles	48,232	73,067	74,391	98,332	93,659	114,679	87,631	73,820
Total	933,421	1,081,120	1,129,332	1,260,706	1,305,296	1,360,772	1,360,231	1399,338

Table 5. **Fresh/frozen shrimp imports (mt) from 1990 to 1998**

Countries	1990	1991	1992	1993	1994	1995	1996	1997	1998
Taiwan	10,000	12,000	13,355	19,217	25,104	23,461	22,880	23,239	16,754
Singapore	34,236	22,001	21,848	22,815	23,553	18,303	17,445	16,716	15,119
Hong Kong	58,800	49,294	37,595	28,417	33,191	28,817	29,687	23,019	22,044
Malaysia	22,497	28,794	25,799	24,053	25,000 (e)	27,513	24,735	21,548	20,000*
Korea, Republic of	2,564	1,184	1,345	1,036	4,824 (e)	NA	NA	9,407	2,740
Indonesia	-	-	-	-	-	386	531	1,453	1,000*
Thailand	1,088	2,179	3,472	4,765	7,367 (e)	9,954	9,344	12,199	14,492
Total for Southeast Asia	129,185	115,452	103,414	100,303	119,039	108,434	104,622	107,581	92,030
Japan	283,448	284,433	272,761	300,489	302,975	292,909	288,762	267,247	239,151

* Projected figures.

Shrimp

Besides being the main producer for cultured shrimp, Asia has also become a major market. The main markets in the region are Hong Kong, Taiwan, Singapore, Malaysia, and Thailand as well as the Republic of Korea. It was estimated that imports of fresh and frozen shrimp in these countries in 1998 were about 93,000 mt but in reality the figure would be much higher due to the large volume of unrecorded traditional trade among ASEAN countries such as between Indonesia and Singapore (Table 5).

Hong Kong and Singapore are established as the non-producing shrimp exporting countries in the

region. Hong Kong imported more than 22,000 mt of fresh/frozen shrimp in 1998. Imports of shrimp into Hong Kong have been declining for the last five years, due to the falling trends in processing and re-exporting activities. Thus, most of the shrimp imported is now consumed locally. A similar trend is noticed for the importation of shrimp into Singapore. In 1990, Singapore imported 34,236 mt of fresh/frozen shrimp but in 1998, the volume was less than half at around 15,200 mt. The main reason is that neighboring countries such as Indonesia, Malaysia, and Thailand have developed their own shrimp processing industries and exports are increasingly sent direct to the country of destination rather than going through Singapore.

Imports of shrimp into Taiwan have expanded since the devastating crop failures in the 1980s crippled the domestic cultured production. Around 17,000 mt of fresh/frozen shrimp are imported into Taiwan with the main suppliers being Thailand, Singapore, Australia, and Indonesia. Meanwhile, Malaysia and Thailand are important markets for raw materials where imported shrimp are mostly being re-processed into value-added products and re-exported to other developed markets. Imports of fresh/frozen shrimp into Thailand have been growing steadily from only 1,088 mt in 1990 to 14,492 mt in 1998. Current imports of shrimp into Malaysia are around 20,000 mt. Indonesia and Vietnam also import shrimp as raw materials to feed their processing industries; in 1997, Indonesia imported 1,453 mt of frozen shrimp.

Carp and milkfish

The worldwide production of common carp is more than 1.4 million mt and in the ASEAN region alone, it is more than 200,000 mt (FAO, 1999). However, we can hardly see this species being traded in international markets or in intra-regional trade. Thus, although carp are an important freshwater fish species in the region, they are almost exclusively cultured and consumed locally. In the ASEAN region, common carp is the most extensively cultured and utilized, particularly in Indonesia. It is particularly popular in many parts of the Java Island of Indonesia and the northern part of Sumatra. There is a significant quantity of other carps, mainly bighead carp and grass carp, which are involved in cross-border trade between Malaysia and Singapore and mainland China and Hong Kong. In 1997, Singapore imported 510 mt of live carps from Malaysia, mostly from areas near the border such as from Johor. Meanwhile, Hong Kong imported 22,085 mt of live carps from China in 1998; most (85%) were grass carp and bighead carp.

A similar pattern is also seen for milkfish, which is extensively cultured and consumed in Indonesia and the Philippines. Milkfish is very popular along the north coast of central and east Java Island of Indonesia as well as in the southern part of Sulawesi Island. It is also among the most important foodfish in the Philippines. Like carps, however, milkfish also contributes an insignificant amount in international trade. There were some reports of shipments of milkfish products to the USA and Canada, targeted to Filipino communities living abroad and from Indonesia to the Netherlands and Saudi Arabia, targeted to Indonesian communities living in these countries. Exports are also reported for tuna bait but the quantity is unknown. Taiwan exports around 10,000 mt of frozen milkfish annually with the main markets being the USA, Canada, and Saudi Arabia. In 1998, Taiwan exported a small quantity of frozen milkfish to the region namely to Hong Kong (21 mt), the Philippines (53 mt), Singapore (20 mt), and Malaysia (25 mt).

Tilapia

This “aquatic chicken” is increasingly popular both in the local market and in international markets. The Philippines, Indonesia, Thailand, and Malaysia are the main producers of Nile tilapia and Mozambique tilapia. However, Indonesia and Thailand are the main suppliers of frozen tilapia fillets to the international market mainly to the US.

The intra-regional trade in tilapia is dominated by live fish, which are exported from Thailand to

Malaysia or from Malaysia to Singapore. Processed tilapia such as in fillet form are expected to gain popularity in the near future. Processors/exporters in the region are still focusing on the US market where tilapia is the fastest growing cultured product. Imports of fresh and frozen tilapia into the US in 1998 were 27,820 mt, of which Thailand and Indonesia supplied 173 mt and 885 mt, respectively, in frozen fillet form. Taiwan is the main supplier of frozen tilapia from this region and, in 1998 it exported 35,119 mt of frozen tilapia with the main markets being the USA, Saudi Arabia, Canada, and the UK. Within the region, Taiwan exported tilapia to Hong Kong (87 mt) and to the Philippines (10 mt) during 1998. Live and fresh forms, which are mostly sold through traditional outlets, dominate the regional market for tilapia; thus the markets are very sensitive to the supply situation, resulting in price fluctuations.

Marine finfish

Marine finfish culture is a relatively young industry compared to shrimp or to freshwater aquaculture. As it is still in the initial stages in many parts of the region, production levels are also relatively low. The most popular species for marine culture in the region are Asian sea bass, grouper, and snapper. Even though the production from aquaculture is relatively small, the above species are widely traded within the region, mainly in live and also fresh/chilled forms.

The main producers of sea bass in the region are Thailand, Malaysia, and Indonesia, while the main markets are Singapore, Malaysia, Thailand, and Hong Kong. Sea bass is sold live to seafood restaurants and in fresh/chilled form to retail outlets, including wet markets and supermarkets. Demand in Thailand and Malaysia are satisfied by local production, while Singapore and Hong Kong import significant amounts of sea bass annually.

Singapore is considered the main market for low-value live marine finfish such as sea bass. It is estimated that more than half of the live marine finfish imported into Singapore is sea bass, with Malaysia being the main supplier. Hong Kong also imports a considerable amount of sea bass from China and also Taiwan, but the exact quantity is unknown. Considered as low-value fish, sea bass is mostly consumed by households.

Hong Kong and the southern part of China are considered the markets for high-value marine finfish such as live grouper and also snapper. The Hong Kong Agriculture and Fisheries Department (AFD) estimated that in 1997 the apparent consumption of live marine finfish was 27,735 mt. From various sources, we can predict that live grouper consumption in Hong Kong is around 5,000 - 6,000 MT per year (Pawiro, 1999a).

The main suppliers of live grouper into Hong Kong are Indonesia, the Philippines, and Thailand. As a result of the economic crisis, demand has declined and prices have weakened for most live seafood especially high-value species, including grouper. Less consumers dining out as well as budget cuts for business entertainment are the main factors behind the negative trends. Even though imports of grouper into Hong Kong increased in 1998, most of the fish were re-exported to meet growing demand in southern part of China. Imports of live marine finfish and live grouper into various markets are presented in Tables 6 and 7.

Mud crab

The most commercially important species of crab that is widely cultured in the region is mud crab (*Scylla serrata*). The production of the species in all ASEAN countries was nearly 5,000 MT in 1997 (FAO, 1999). Traded in its live form, Hong Kong, Singapore, and Malaysia are the principal markets and the restaurants are the main outlets. The average c&f price for live mud crab in Singapore is around US$ 5/kg. Singapore imports around 3,000 mt annually of live and chilled crab with the live crab originating from India, Sri Lanka, Bangladesh, and the Philippines.

Table 6. **Imports of live marine finfish, excluding fry and ornamental fish, into major markets in the Asian region from 1994 to 1998**

Country		1994	1995	1996	1997	1998
Hong Kong	Q (mt)	NA	28,213	NA	20,001	19,366
	(HK$1000)	-	-	-	1,027,898	907,488
Taiwan	Q (mt)	-	111	81	135	71
	V (NT$1000)		17,605	13,553	28,838	19,722
Singapore	Q (mt)	1,841	1,549	1,466	1,244	541
	V (S$1000)	9,724	11,582	9,829	7,943	1,137
Malaysia	Q (mt)*	-	-	-	14,218	6,341
	V (RM1000)	-	-	-	49,220	63,794

* All live fish.

Table 7. **Import of live grouper, excluding fry, into selected Asian countries from 1994 to 1998**

Country		1994	1995	1996	1997	1998
Hong Kong	Q (mt)	-	-	-	5,715	6,555
	V (HK$1000)	-	-	-	352,565	404,383
Taiwan	Q (mt)	-	20	9.3	17.5	28.6
	V (NT$1000)	-	3,567	1,832	3,500	6,436
Singapore	Q (mt)	270	232	220	187	81
	V(S$1000)	NA	NA	NA	NA	NA

Figures are based on industry sources that around 15% of imported live fish consist of grouper.

Future Prospects and Marketing Issues

Demand trends

Recent studies by FAO (1999) estimated that global demand for fish and fishery products (including aquaculture products) in 2010 is likely to be 105-110 million mt (live weight). This is less than the predicted estimate in 1995 due to the following reasons:

- The current economic downturn in East Asian countries;
- Slower global population growth;
- Competition from cheaper poultry and pork products from Europe; and
- Fall in per capita demand by 8% in Asia, 4% in North America and 6% in Europe.

It was predicted that the fall in demand, if it proves correct, will be felt more in Asia than in other parts of the world due to its position as a major producer of cultured products (Nambiar, 1999). The fall in demand especially for high-value species has been noticed for the last two years since the beginning of the economic problems in the region. It was reported for example, that per capita fish consumption in the Philippines has dropped from 31 kg in 1995 to 27 kg in 1997 due to lower supply and price increase of fishery products (PCAMRD, 1999).

For high-value species such as shrimp and grouper, future demand in Southeast Asian countries will largely depend on the economic situation and disposable income of the consumers as most of those products are utilized in hotels and restaurants. Therefore, based on the current economic situation, demand for high-value species will remain weak for the next two to three years and will increase only when the economic growth in the region gets back on track.

For medium to low-value species such as sea bass, tilapia, milkfish, etc., future demand will be determined by availability of supplies and prices of the products. A production-driven approach will be needed to boost demand through increasing output and reducing costs, thus lowering the sale prices of the cultured products.

The development of the salmon industry can be taken as a lesson for the aquaculture industry in the region. Atlantic salmon used to be a very expensive product at the beginning of the 80's, but nowadays it has become a commodity, which is available worldwide including in the region. This industry has successfully increased production and reduced production cost, thus the end product can be sold at cheaper prices. It has been reported that the Norwegian farmed salmon industry has successfully cut its production cost by half within the last decade, allowing the industry to stay profitable even though prices have dropped a lot during the period. Moreover, salmon producers have also succeeded in entering new markets especially in Southeast and Far East Asia. The question is, can our local cultured species such sea bass or tilapia do the same?

Product trends

Traditional presentations are no longer adequate for today's market places whether they are in the developed countries such as Japan, the USA and the European Union or in the developing countries of Southeast Asia and the Far East. While the processing of value-added seafoods for traditional developed markets requires much preparation and changes in raw materials, for the emerging Asian markets, improved harvesting technology, handling, packaging and transportation could be the means to add value to fishery products.

Future product development in the region will be based on the consumer preference for live and fresh fish. Therefore, fresh/chilled products in various forms such as fillets, and in various presentations and packaging will dominate the markets. Fish fillets or breaded fillets in convenience packs suitable for the catering and retail sales as well as international products such as breaded or tempura shrimp will become more popular in the future where more people will buy fish products from supermarkets and hypermarkets.

Safety and quality issues

The fisheries industries in Southeast Asian countries are very good in responding to any new requirements from developed importing countries regarding seafood safety and quality. For example, most ASEAN countries have implemented Hazard Analysis Critical Control Points (HACCP) programs as requested by the main importing countries in the European Union (EU) and North America. This program is currently being expanded to the aquaculture sector. There are HACCP plans for cultured catfish and crayfish in the USA, and some countries in the region such as Thailand and Indonesia will follow suit. FAO and WHO are now also revising a Code of Hygienic Practice for the Products of Aquaculture (FAO, 1999).

There is an increasing interest in the region for safety and quality of products to be given more attention especially for products, which are sold locally and traded within the region. Eco-abelling is another issue in the aquaculture sector where its implementation seems to be a matter of time.

Marketing access

In general, countries in the region apply a liberal policy in trade of fish and fishery products where there are relatively minimum trade barriers or, as in the cases of Hong Kong and Singapore, a free market for imported products. Even though Hong Kong has joined China, its status as a free port remains unchanged where there are no import tariffs, quotas or value-added taxes for any goods, including fishery products. Clearance procedures for imported consignments are very straightforward following international practices.

Similarly, Singapore is also a free port and most products, including fish and fishery products, enter duty free with no qualitative restrictions. However, a 3% Goods and Services Tax (GST) is levied on most products including seafood. Import controls on fish and fishery products in Singapore are enforced under the Fisheries Act (Import, Export and Marketing) to ensure that only safe and wholesome products are imported. Except for high-risk fish products, import control requirements for other products follow international standards. The imports of high-risk products (oysters, crabmeat, blood cockle meat, and cooked shrimp) must be accompanied by a Health & Competent Authority certificate from the country of origin and samples are collected from every consignment for microbiological testing.

In Thailand, generally, import duties for fishery products are applied at different rates ranging from 10% up to 60%. The current normal import duty rates for fishery products are as follows:

HS Code	Import Duty
– 0301-0307 (live/fresh/frozen/salted/dried/smoked)	60%
– 15.04 (fat/oil)	10-30%
– 16.04-16.05 (prepared/preserved/canned products)	30%
– 23.01 (fish meal)	10%

The above rates will be reduced by up to 50% by 1999 according to a WTO agreement, while under the ASEAN Free Trade Area (AFTA) agreement, the import duties for all product categories will be reduced to 5% in 2003. However, there are also import duty exemptions for most products intended for further processing (such as raw materials) and fish caught in international waters by Thai fishing vessels under joint agreements. Quota restrictions do not apply in the importation of fishery products into Thailand.

No quantitative restrictions are applied for the import of fish and fishery products into Malaysia. Import duties of between 10 and 20%, and a 5% sales tax are applicable only to processed and value-added products, while for live, fresh and frozen fish and crustaceans there are no import duties or sales taxes. The Malaysian Fisheries Development Authority (LKIM) is responsible for checking fresh and frozen products at the point of entry at minimal charges (RM0.05/kg).

Conclusion

Despite the current economic downturn faced by countries in the region, fish trade has increasingly played an important role especially for exporting nations. At a time when many businesses have closed, the fisheries business is in relatively stable condition. In fact, it has become the main export hard currency earner for certain nations.

Even though the economic crisis has scaled down the degree of market expansion for the time being, it has on the other hand promoted trade among the regional countries. While imports of high-value

species have declined to some extent in the regional markets, lower value species are in greater demand as these markets strive to keep fish supply stable. The introduction of Bilateral Payment Arrangements (BPAs) among the ASEAN members is another factor allowing more fishery trade within the region as payment can be made using local/regional currencies.

Value addition will be the key word for success in the future in order to limit pressure on fishery resources and promote better utilization of raw materials by giving more attention to responsible fanning, proper handling, and quality control from harvesting to processing. Asian markets will certainly demand quality fish in the future.

The most important factor for possible market expansion in the region is the fact that fish is not a luxury item for Southeast Asian consumers but is a necessity. Therefore, once economic recovery is complete, the demand for fishery products, including high value species, will improve.

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