

IMPORT AND EXPORT OF MOLLUSC SHELL PRODUCTS IN THAILAND

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ABSTRACT

Data from a 5 years period (1988-1992) from the Customs Department, Ministry of Finance, concerning import and export of shell products have been analysed. Japan, Germany, U.K., Italy, Greece and USA placed the largest orders of shell products in Thailand. The total value of exported shell products tended to decrease from 1988 to 1992, with 29.4 million baht in 1988 and 14.5 million baht in 1992. The largest amount of imported shell products came from the Philippines and China. The total value of imported shell products tended to increase during the five years period to 2.8 million baht in 1992. The shell products are separated into 3 categories: MPP : worked mother-of-pearl and articles ; SCP : other worked shells of crustaceans and molluscs and articles ; and OTH : other. The highest value of shell products is MPP for export and SCP for import.

INTRODUCTION

A survey of Thai import-export of mollusc meat and sea shells was reported in the 2nd Proceedings of TMMP (Aungtonya & Khokiattiwong, 1992). The study showed that the amount of meat and shell trade had been quite large during the past 12 years and tended to increase in the future. The sea shell business at local markets seems very good, especially since tourism has been blooming in Thailand the last few years. The value of trade with sea shells and their products were many million baht each year. The amount of sea shell products used for import-export were not included in the 2nd Proceedings of TMMP. Sea shell products consist of processed shells; home decoration: *e.g.*, curtains, mobiles, vases, mirror frames; ornaments: *e.g.*, ear-rings, bracelets, necklaces etc. In order to complete the study of mollusc economics, sea shell products were studied for this report.

MATERIALS AND METHODS

The import-export data of mollusc shell products are recorded by the Customs Department, Ministry of Finance, in Bangkok as Miscellaneous manufactured articles based on the Harmonized System. From the invoice of import-export, the shell products are shown in 3 categories; 1) MPP: worked mother-of-pearl and articles, *e.g.*, vases and tissue

boxes. 2) SCP: other worked shells of crustaceans, molluscs, and articles. 3) OTH: Others, that differ from SCP in terms of the product itself. SCP's are many kinds of shell products usually used for ornamental purposes, while OTH's usually are used for household items, *e.g.*, plate, bowl and spoon. However, data of SCP and OTH obtained from the Customs Department consist of many marine materials. OTH's include, *e.g.*, turtle shells. It is not possible to separate shells of molluscs from other shells, because of the invoice form. It is difficult to search information from the invoice form itself because there are enormous amounts of forms accumulated in the collection. The invoice forms will be kept for about 2 years. After that, they will be destroyed because of limited space for keeping. Therefore, data used in this study were obtained from invoices already treated by the Customs Department in Bangkok. The data of shell products are in terms of value (baht) from 1988-1992.

RESULTS AND DISCUSSION

Exported Shell Products

The total value of exported shell products in big and small markets in each continent are shown in Table 1. The total value of exported shell products tended to decrease, from 29.4 million baht in 1988 to 14.5 million baht in 1992. The main export was to

Table 1. Export of shell products from Thailand, during the period 1988-1992. Amounts in 10,000 bath.

COUNTRY	YEAR					Total	COUNTRY	YEAR					Total
	1988	1989	1990	1991	1992			1988	1989	1990	1991	1992	
ASIA							AUSTRALIAN REGION						
Hong Kong	0.7	4.8	11.2	8.5	63.3	88.5	Australia	8.1	14.1	3.6	8.7	54.7	89.1
Japan	290.9	102.5	78.3	94.7	244.8	811.2	New Zealand	21.8	6.8	0.9	-	-	29.6
Korea.Rep	11.2	32.5	-	0.4	-	44.2	Total	29.9	20.9	4.5	8.7	54.7	118.7
Malaysia	1.4	11.0	1.8	0.3	1.7	16.1	AFRICA						
Singapore	6.0	9.5	0.8	10.3	6.7	33.2	Mauritius	2.2	-	-	-	-	2.2
Taiwan	7.1	4.7	5.8	0.2	7.8	25.6	Gambia	0.1	-	-	-	-	0.1
Philippines	-	-	-	1.3	-	1.3	Djibouti	-	3.4	-	-	-	3.4
India	4.1	-	-	-	-	4.1	Ivory Coa	-	-	7.7	-	-	7.7
Maldives	-	2.9	1.4	-	-	4.3	Seychelle	-	-	-	-	0.3	0.3
Turkey	-	-	7.6	-	-	7.6	South Africa	-	-	-	-	0.1	0.1
Sri Lanka	-	-	-	0.1	-	0.1	Total AFRICA	2.3	3.4	7.7	-	0.4	13.8
Kampuchea	-	-	-	-	1.3	1.3	SOUTHSEA ISL. COUNTRIES						
Total ASIA	321.3	167.9	107.0	115.7	325.6	1037.5	Fiji	-	-	-	3.3	-	3.3
EUROPE							OTHER COUNTRIES						
Belgium	20.6	4.7	2.2	1.8	2.3	31.6							
France	135.5	59.8	37.5	33.8	22.2	288.8	TOTAL	2940	2307	1558.6	1385.6	1452.6	9634.8
Germany	223.3	378.3	249.6	276.2	139.6	1267.0							
Spain	12.0	9.5	4.4	14.8	120.2	160.9							
U.Kingdom	137.6	151.3	65.4	48.3	92.5	495.1							
Cyprus	-	19.2	14.0	17.3	25.4	75.9							
Italy	329.0	195.1	244.5	155.5	76.1	1000.3							
Switzerland	4.7	-	0.1	21.3	10.1	36.3							
Netherlands	69.6	62.8	9.5	11.2	22.8	175.8							
Denmark	31.5	-	1.6	1.9	8.9	43.9							
Finland	0.2	0.2	-	-	-	0.5							
Greece	28.8	31.2	48.5	52.6	1.7	162.9							
Norway	3.2	2.9	0.8	-	0.1	6.9							
Sweden	7.0	36.0	0.1	0.1	2.6	45.7							
Ireland	0.6	-	6.5	-	-	7.1							
Poland	-	0.7	-	-	-	0.7							
Portugal	-	13.9	10.7	4.1	13.1	41.8							
Czechoslovakia	-	-	4.6	-	-	4.6							
Gibraltar	-	-	-	0.7	4.2	4.9							
Yugoslavia	49.7	-	-	2.5	-	52.2							
Total EUROPE	1053.4	965.7	700.0	642.1	541.7	3902.8							
AMERICA													
U.S.A.	1453.5	1108.7	697.4	581.8	479.0	4320.4							
Canada	49.4	4.5	21.2	0.4	0.4	75.8							
Mexico	-	0.5	-	0.2	-	0.7							
Ecuador	-	-	-	0.2	-	0.2							
Jamaica	-	-	-	-	25.4	25.4							
Bahamas	-	-	-	-	2.1	2.1							
Total AMERICA	1502.9	1113.7	718.6	582.6	506.8	4424.5							
MIDDLE EAST													
U. Arab. Emirates	19.5	24.7	9.3	3.3	11.3	68.1							
Saudi Arabia	0.6	0.3	1.2	5.2	5.4	12.7							
Kuwait	-	2.4	0.8	-	-	3.2							
Israel	3.0	4.3	-	-	3.3	10.6							
Oman	0.2	-	-	-	-	0.2							
Bahrain	1.1	3.9	4.4	-	-	9.3							
Jordan	3.0	-	1.3	3.2	-	7.6							
Lebanon	2.9	-	3.7	0.3	-	6.9							
Total													
MIDDLE - EAST	30.3	35.6	20.7	12.0	20.0	118.5							

Table 2. (see opposite page). Export of shell products from Thailand. Articles are divided into 3 groups:

- MPP = worked mother of pearl and articles thereof.
 SCP = worked shells of molluscs and crustaceans, and articles thereof.
 OTH = other articles.
 Amounts in 10,000 Bath.

Commodity COUNTRY	1988			1989			1990			1991			1992			Total		
	MPP	SCP	OTH	MPP	SCP	OTH	MPP	SCP	OTH	MPP	SCP	OTH	MPP	SCP	OTH	MPP	SCP	OTH
ASIA																		
Hong Kong	0.7	-	-	-	-	4.8	5.2	5.6	0.5	8.5	-	-	28.5	15.5	19.3	42.9	21.1	24.5
Japan	3.4	134.5	153.0	18.2	3.5	80.8	33.4	0.7	44.3	6.4	17.3	71.0	4.8	62.9	177.1	66.2	218.8	526.2
Korea Rep	11.2	-	-	-	-	32.5	-	-	-	-	-	0.4	-	-	-	11.2	-	32.9
Malaysia	-	1.4	-	-	2.0	9.0	-	1.8	-	-	0.3	-	1.1	0.6	-	1.1	6.0	9.0
Singapore	5.1	0.8	-	5.5	0.8	3.2	0.8	-	-	9.3	-	1.0	-	-	6.7	20.7	1.7	10.9
Taiwan	7.1	-	-	-	-	4.7	-	5.2	0.6	-	0.2	-	-	-	7.8	7.1	5.3	13.1
Philippines	-	-	-	-	-	-	-	-	-	-	-	1.3	-	-	-	-	1.3	-
India	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.1	-	-
Maldives	-	-	-	2.9	-	-	1.4	-	-	-	-	-	-	-	-	4.3	-	-
Turkey	-	-	-	-	-	-	-	7.6	-	-	-	-	-	-	-	-	7.6	-
Sri Lanka	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	0.1	-	-
Kampuchea	-	-	-	-	-	-	-	-	-	-	-	-	1.3	-	-	1.3	-	-
Total ASIA	31.6	136.7	153.0	26.6	6.3	135.0	40.8	20.8	45.4	24.3	19.0	72.4	35.7	79.0	210.9	159.1	261.8	616.6
EUROPE																		
Belgium	16.9	-	3.7	0.9	3.8	-	1.9	0.3	-	1.8	-	-	1.6	0.4	0.3	23.1	4.5	4.0
France	94.7	38.9	1.9	2.4	44.9	12.5	3.1	14.5	19.9	3.5	8.9	21.4	4.3	8.8	9.0	108.1	116.0	64.7
Germany	102.7	109.8	10.8	137.3	212.7	28.4	211.6	0.2	37.8	126.8	141.1	8.2	132.5	4.1	3.0	710.9	467.9	88.2
Spain	1.3	10.7	-	0.1	9.4	-	0.1	4.2	-	3.5	10.7	0.7	61.2	43.0	16.0	66.2	78.0	16.7
U.Kingdom	85.5	33.8	18.3	51.0	82.7	17.5	38.9	26.5	-	4.0	44.1	0.1	58.9	23.0	10.6	238.4	210.1	46.6
Cyprus	-	-	-	-	19.2	-	4.9	9.0	-	-	17.3	-	-	-	25.4	4.9	70.9	-
Italy	291.1	10.6	27.3	70.7	124.4	-	195.7	38.8	10.0	105.3	50.2	-	15.2	7.0	53.8	678.1	231.1	91.1
Switzerland	4.7	-	-	-	-	-	0.1	-	-	-	-	21.3	0.2	-	9.9	5.0	0.1	31.2
Netherland	48.9	6.1	14.5	13.4	21.2	28.2	9.5	-	-	3.8	7.4	-	21.7	-	1.1	97.4	34.7	43.8
Denmark	16.8	14.6	0.1	-	-	-	1.6	-	-	1.9	-	-	3.8	5.1	-	24.1	19.7	0.1
Finland	0.2	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	0.2	0.2	-
Greece	16.8	12.0	-	0.3	31.0	-	8.1	19.0	21.4	52.6	-	-	-	1.7	-	77.9	63.7	21.4
Norway	-	3.1	-	2.9	-	-	0.8	-	-	-	-	-	-	0.1	-	3.7	3.2	-
Sweden	-	7.0	-	35.5	0.3	0.3	-	0.1	-	0.1	-	-	-	1.7	0.9	35.5	9.0	1.2
Ireland	-	0.6	-	-	-	-	6.5	-	-	-	-	-	-	-	-	6.5	0.6	-
Poland	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	0.7	-	-
Portugal	-	-	-	-	13.9	-	4.7	-	6.0	1.5	2.6	-	2.6	10.4	-	8.8	27.0	6.0
Czechoslovakia	-	-	-	-	-	-	4.6	-	-	-	-	-	-	-	-	4.6	-	-
Gibraltar	-	-	-	-	-	-	-	-	0.7	-	-	-	-	-	4.2	0.7	-	4.2
Yugoslavia	-	-	49.7	-	-	-	-	-	-	-	-	2.5	-	-	-	-	-	52.2
Total EUROPE	679.9	247.2	126.3	315.1	563.7	86.9	487.6	117.3	95.1	305.5	282.4	54.2	302.1	130.7	108.9	2090.2	1341.3	471.3
AMERICA																		
U.S.A.	860.9	438.1	154.5	386.4	611.4	110.9	316.7	293.3	87.4	344.0	185.1	52.7	297.3	138.7	43.0	2205.3	1666.6	448.5
Canada	47.3	1.7	0.4	4.1	-	0.4	10.2	3.1	7.9	-	-	0.4	-	-	0.4	61.5	4.8	9.4
Mexico	-	-	-	0.5	-	-	-	-	-	0.2	-	-	-	-	-	0.7	-	-
Ecuador	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	0.2
Jamaica	-	-	-	-	-	-	-	-	-	-	-	-	16.5	8.9	-	16.5	8.9	-
Bahamas	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	-	2.1	-
Total AMERICA	908.2	439.8	154.8	391.0	611.4	111.3	326.9	296.4	95.4	344.2	185.1	53.3	313.8	149.7	43.3	2284.1	1682.4	458.1
MIDDLE EAST																		
U. Arab Emirates	19.5	-	-	13.8	2.2	8.7	0.2	-	9.1	-	-	3.3	6.7	1.5	3.0	40.2	3.7	24.1
Saudi Arabia	-	-	0.6	-	0.3	-	1.2	-	-	0.4	0.6	4.1	2.6	2.8	-	4.2	3.8	4.8
Kuwait	-	-	-	2.4	-	-	-	-	0.8	-	-	-	-	-	-	2.4	-	0.8
Israel	3.0	-	-	-	4.3	-	-	-	-	-	-	-	3.3	-	-	6.3	4.3	-
Oman	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-
Bahrain	-	-	1.1	-	3.9	-	4.4	-	-	-	-	-	-	-	-	4.4	3.9	1.1
Jordan	-	-	3.0	-	-	-	0.8	0.5	-	-	-	3.2	-	-	-	0.8	0.5	6.3
Lebanon	-	-	2.9	-	-	-	3.6	-	0.1	0.3	-	-	-	-	-	3.9	-	3.0
Total MIDDLE-EAST	22.7	-	7.6	16.2	10.7	8.7	10.1	0.5	10.1	0.7	0.6	10.6	12.6	4.4	3.0	62.4	16.1	40.0
AUSTRALIAN REGION																		
Australia	6.4	1.6	0.1	12.3	1.8	-	1.9	1.6	0.2	-	0.8	7.8	4.6	9.1	41.0	25.1	14.9	49.1
New Zealand	20.1	1.8	-	6.8	-	-	-	0.9	-	-	-	-	-	-	-	26.8	2.7	-
Total AUSTRALIAN	26.4	3.4	0.1	19.0	1.8	-	1.9	2.5	0.2	-	0.8	7.8	4.6	9.1	41.0	52.0	17.6	49.1
AFRICA																		
Mauritius	-	1.8	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8	0.4
Gambia	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Djibouti	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-
Ivory Coa	-	-	-	-	-	-	-	7.7	-	-	-	-	-	-	-	-	7.7	-
Seychelle	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	0.3	-
South Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	0.1
Total AFRICA	-	1.8	0.5	3.4	-	-	-	7.7	-	-	-	-	0.3	0.1	3.4	9.9	0.6	-
SOUTHSEA ISL. COUNTRIES																		
Fiji	-	-	-	-	-	-	-	-	3.3	-	-	-	-	-	-	3.3	-	-
OTHER COUNTRIES																		
	-	-	-	-	-	-	-	-	-	-	-	21.3	-	0.6	2.8	-	0.6	2.4
TOTAL	1668.8	828.9	442.4	771.3	1193.9	341.8	867.2	445.3	246.1	678.0	488.0	219.6	668.8	373.8	410.0	4654.3	3329.7	1659.8

Table 3. Import to Thailand of shell products, during the period 1988-1992. Amounts in 10,000 bath.

COUNTRY	YEAR					Total
	1988	1989	1990	1991	1992	
ASIA						
Hong Kong	0.3	-	7.8	7.9	8.7	24.8
Japan	0.2	0.1	3.0	16.0	5.7	25.0
Korea, Dem	-	-	-	0.6	-	0.6
Singapore	-	11.8	-	-	1.0	12.7
Taiwan	1.5	12.2	-	2.5	1.4	17.6
China, Pe	3.4	2.1	7.4	148.5	107.6	269.0
Philippines	18.9	72.9	43.7	23.0	62.9	221.3
India	1.2	0.8	-	-	-	2.1
Indonesia	-	1.7	-	-	-	1.7
Total ASIA	25.5	101.6	62.0	198.6	187.2	574.9
EUROPE						
Spain	-	-	-	-	0.4	0.4
Italy	-	-	7.8	0.3	20.9	29.0
Total						
EUROPE			7.8	0.3	21.3	29.5
U.S.A.	0.5	-	-	0.1	12.5	13.0
Australia	-	-	-	14.7	55.2	69.9
TOTAL	26.0	101.6	69.7	213.7	276.2	687.2

Table 4. Import of shell products from Thailand. Articles are divided into 3 groups:

MPP = worked mother of pearl and articles thereof.

SCP = worked shells of molluscs and crustaceans, and articles thereof.

OTH = other articles.

Amounts in 10,000 bath.

Commodity COUNTRY	YEAR																	
	1988			1989			1990			1991			1992			Total		
	MPP	SCP	OTH	MPP	SCP	OTH	MPP	SCP	OTH	MPP	SCP	OTH	MPP	SCP	OTH	MPP	SCP	OTH
ASIA																		
Hong Kong	0.3	-	-	-	-	-	5.0	-	2.9	7.9	-	-	7.2	-	1.5	20.4	-	4.3
Japan	0.2	-	-	-	0.1	-	-	-	3.0	-	-	16.0	-	-	5.7	0.2	-	24.8
Korea, Dem	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	0.6	-	-
Singapore	-	-	-	-	11.8	-	-	-	-	-	-	-	-	-	1.0	-	-	12.7
Taiwan	1.0	-	0.5	12.2	-	-	-	-	-	-	-	2.5	-	-	1.4	13.2	-	4.4
China, Pe	3.4	-	-	2.1	-	-	4.3	-	3.1	2.3	146.2	-	0.6	106.9	-	12.8	253.1	3.1
Philippines	18.9	-	-	31.2	-	41.6	32.2	4.3	7.2	23.0	-	-	39.9	21.7	1.3	145.3	25.9	50.1
India	-	-	1.2	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	2.1
Indonesia	-	-	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7
Total ASIA	23.8	-	1.7	47.3	-	54.3	41.5	4.3	16.2	33.8	146.2	18.5	47.7	128.6	10.9	194.2	279.1	101.6
EUROPE																		
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-	0.4
Italy	-	-	-	-	-	-	7.8	-	-	-	-	0.3	-	-	20.9	7.8	-	21.3
Total																		
EUROPE							7.8					0.3			21.3	7.8		21.7
U.S.A.	0.5	-	-	-	-	-	-	-	-	-	-	0.1	-	10.1	2.4	0.5	10.1	2.4
Australia	-	-	-	-	-	-	-	-	-	-	-	14.7	-	-	55.2	-	-	69.9
TOTAL	24.3	-	1.7	47.3	-	54.3	49.3	4.3	16.2	33.8	146.2	33.7	47.7	138.7	89.8	202.5	289.2	195.6

America and Europe in 1988. This export tended to decrease in both markets. Other markets in Asia, Australia, and Middle East purchased low amounts. The main market in Asia was Japan. The remaining countries such as Hong Kong, Korea, and Singapore played minor roles.

The many countries in Europe represented a diverse market but in general the export to this market tended to decline. The largest market was the American continent. USA was the biggest importing country. Although the export to this country declined, the exported amount was still high, 15 million baht in 1988 to 5 million baht in 1992. The exported amount was still high when compared to other countries.

Looking at the categories of exported shell products (Table 2), the export of MPP in Asia seemed stable but for SCP and OTH fluctuated. They declined in the beginning of the study but then soared high in the last year. It is difficult to extrapolate data in order to predict the future trends, because of the variation from year to year, and the limited amount of data. However, the existing data indicate that much of the export depends on the demand of SCP and OTH. In Europe, the trend was that SCP and OTH decreased while MPP varied. SCP in America showed decreasing value while MPP decreased remarkably in 1989 and thereafter tended to stay constant.

Imported Shell Products

The total amount of imported shell products during the last 5 years, 1988-1992, showed that the amount of export was about 14 times higher than the import. However, the total value of imported shell products increased from 0.26 million baht in 1988 to 2.8 million baht in 1992 (Table 3). Most of the imported shell products came from countries in Asia. Only small amounts of shell products were imported from Europe, America, and Australia.

Mainly the Philippines and China, especially China had a high export during the period 1991-1992. Hong Kong, Japan and Taiwan displayed slight annual variation.

The amount of imported shell products tended to increase during the last three years. The imported value

of MPP seemed almost constant but SCP and OTH tended to increase drastically, as well as SCP, but it increased a little from 1991 to 1992. This indicates that SCP and OTH might be potential categories for import in the years to come.

CONCLUSION

Data obtained from the 5 years period make it difficult to make predictions about the future of shell product trade in Thailand. However, in general, the value and amount of exported shell products showed declining tendency. It might be due to unstable world economics. Especially USA, which was the biggest market, with about 35%-50% of the total export, had a steep import decline during the last five years.

The export of shell products decreased, but the import to Thailand increased. This might be due to the expanding tourist industry in Thailand since 1989, which was the "Visit Thailand Year". Also the demand for shell products to local markets has increased. From this point of view it could be, that the domestic trade was higher than the export, especially during the last few years.

There is a clear difference between the Asian and American and European countries. The Asian market imported more SCP and OTH while the American and European countries mainly imported MPP and SCP. The Asian markets mainly imported unworked shells (Aungtonya & Khokiattiwong, 1992), while America and European markets mainly imported shell products.

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