FISHING IN THE SULU SEA: ASIAN CAPITAL AND ASIAN LABOUR FOR ASIAN MARKETS

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Abstract

The reality of Southeast Asia cannot be simply understood as the interfacing of several nation-states on a bilateral basis within a defined geographical locality. The overemphasis on relations between modern nation-states that are marked by territorially defined land boundaries obscures the open frontiers of Southeast Asia. The people of Southeast Asia meet at production markets, labour markets and commodity markets, which recognize no boundaries. The marine resources of Southeast Asia are one sector, which has created a community of peoples from the region. People extracted the riches of the seas for trade in distant markets that were linked by seas. The Sulu Sea was historically the marine stock reservoir of the region. It brought together Asian investors and Asian labour power for Asian markets.

I. THE PERIOD OF THE BRITISH NORTH BORNEO CHARTERED COMPANY (1881-1941)

The Historical experience of the fishing industry of North Bomeo, which faces the Sulu Sea, has witnessed epochal changes. These gradual and imperceptible changes can only be detected in changes in market demand, specifically at the level of international markets. In the period of the Sulu Sultanate before the mid-nineteenth century, the essential commodities in the market were trepang (beche-de-mer), pearls, tortoise shells and shark's fin. These commodities were in great demand by the China market, especially for members of the upper levels of society.

The first perceptible change was during the period of the British North Borneo Chartered Company (1881-1941), when the economy shift-ed from a sea-based economy to a land-base economy. The company extracted raw materials from the vast unexploited terrain of North Borneo for industrial European markets. The marine resources that once supported the Sulu sultanate were not the mainstay of the new administration. The commodities extracted and cultivated included tobacco, timber and mining, and, in the twentieth century, rubber. The development of

this new industrial sector required the importation of migrant labour into an acutely under populated countryside. The labour force was drawn from mainland China and the island of Java. People from the many islands that make up The Philippines also migrated into the interior of the Borneo (Table 1). The sharp population increase in the land-based economy of agriculture, mines and logging created a ready food market on the island of Borneo.

The domestic food market comprised dried and salt fish for the labouring migrant class of workers. Fresh fish was not available in the hinterland markets, as the technology to pre-serve the catch had not yet arrived. The most efficient method of preserving fish was in the form of either dried fish or salted fish. The fishing industry switched from the extraction of the trepang, pearls, tortoise shells and shark's fin to fish. Ikan kurau (Polynemus indicus), merah (dorab), kembong (Caranx (carangoides) praeustus) and belanak (Epzaelorynchus spp.) were caught for the market (Table 2). The dried and salted catch not only catered for the domestic market but

Table 1. Population of North Borneo, 1891 - 1931

Community	1891	1901	1911	1921	1931
Kadazan	t. d.*	33,456	90,267	104,865	110,483
Murut	34,166	12,230	27,226	30,355	24,444
Bajau	11,150	10,885	24,228	33,070	34,099
Malay	1,488	1,138	6,305	5,931	5,792
Sulu	3,733	6,373	5,503	6,637	5,766
Orang Sungai	t.d.	4,784	9,168	7,422	6,999
Brunei	3,546	6,767	9,537	11,753	14,051
Bisaya	t.d.	6,784	4,878	7,092	7,061
Tidong	t.d.	t.d.	1,777	1,847	2,315
Chinese	7,156	12,282	27,801	39,256	50,056
Indonesia	2,232	3,960	5,501	11,223	10,014
Others	3,591	5,868	2,529	3,801	6,396
Total	67,062	104,527	214,729	263,252	277,476

Source: Compiled from data obtained from Population Census, North Bomeo, for the years 1891, 1901, 1911, 1921, and 1931. 4.d.: data not available.

also filled the needs of other colonial centers dependent on migrant labour, such as Singapore and Hong Kong. The destination of marine commodities had changed from the once dominant upper class China market to meet labouring class food needs.

The Japanese market in the late 1920s had a preference for canned tuna fish. The Japaneseowned Borneo Fishing Company was established in 1927 to cater to this market. The species of tuna caught included skipjack, stripe tuna and yellow-fine tuna. The tuna were caught with long-line tuna nets and pukat_jeruk (seine nets), which were dragged by motorized boats. This was the first time that motorized boats were used in the fishing industry in the Sulu Sea. The company was stationed at Pulau Balambangan at Marudu Bay and Pulau Si Amil at Darval Bay. It supplied tuna to huge 3,000-ton factory ships stationed in the Sulu Sea, which processed the fish, canned it and shipped it in to Japan. These factory ships had cold storage facilities. In 1935 another Japanese-owned company listed as the Borneo Pearl Company was established. It leased 2,000 acres of waters at Pulau Mabul off Semporna for the purpose of pearl culture. There was a specialized market in Japan for culture pearl. Both these companies ceased operations

during World War II. In terms of the total volume and value of catch in the fishing sector the dominant trade need was for dried and salt fish for the labour market.

The key to the production process of salted fish was the control of salt. Coarse salt was brought in from manufacturing centers on the west coast of the Kingdom of Siam. Chinese junks regularly brought in this precious commodity to the Port of Sandakan, where it was re-distributed to the many coastal fishing villages for the manufacture of salted fish. Bangsals erected from split bamboo acted as drying platforms for salted fish and dried fish. This scene was typical along the east and west coasts of Borneo until the Japanese Occupation.

II. THE POST-WAR PERIOD

The collapse of international and domestic markets that marked the Japanese Occupation period (1942-45) had its impact on the food markets. The production and manufacturing of fish for the market shrank dramatically. The fishing industry was reduce to the level of fishing for daily home consumption.

Table 2.

The List of Types of Fish Processed into Commercial Dried Fish in North Borneo

Cantonis	Teo Dhew	Malay	English	Sclentific
amtiang	seng he	bedukang	Catfish	Arius venosus
	· · · · · · · · · · · · · · · · · ·		Gallon	Arius spp.
chai yu	ow he	belanak	Mullet	Mugil spp.
chiak yu	seng he	manyong	Catfish	Ariidae
chong yu	chea he	duai puteh	white pomfret	Stromateus cinereus
chong len	che lang kia	tamban	sardines	Clupea sp., some clupieds
chai		turiburi	Sardines	Ciupea sp., some ciupieus
chong lun		ulu-ulu	silversides	Atherinidae
kong		0.5 0.6	31110131303	Amenindae
chow pak	chaw peh	bulan-bulan	sardines	Pellona elongata
fah chee	hu ti he	rumahan	horse mackerel	Rastrelliger kanagurta
hak chong	ow chea	duai hitam	black pomfret	Apolectus niger
hong kai	an koi	ikan merah	red reef snapper	Lutianue sanguineus
hong yu	ang he	ikan merah	red reef snapper	Lutianidae
	ug.,10	Man moren	red reet strapper	(generic term)
kai loong	chaw sih	sapi	moon fish	Drepane punctata
chong	Gridin din	осри	11100H HSH	Diepane punciata
lai man	li kui	belais	spinefoot	Siganus sp.
lin chim	leng chiang	andoping	sweet lip	Lethrinus nebulosus
татоо	ow chui ngoh	kurau	threadfin	Polynemus indicus
mang chow	kim mak loh	sulung-sung	estuary perch	Psammopperca & Lates
matek	peh he	ikan puleh	trevally	Caranx (c) ignobilis
тауи	ngoh he	menangin	threadfin	Eleutheronema
,,,,,,	ilgon no	menangii.	difeadiii	Tetradactylum
pak choon	khang he	puşu (bilis)	anchovies	Engraulis spp.,
pan shoon	rolling no	paga (biiis)	and to vice	Stolephorus sp.
риуи	feng he,	pari	rays & skates	Selachii
7-7-	ham he	Pan .	Tayo a shales	GEISCH
sar yu	sua he	yu	sharks	Selachii
taw loo	tau low	aguhud	javelin fish	Pomadasya hasta
tik lap	pak tik chow	ikan tidor		Labotes surinamensis
wak yu	wak he	gelama	jew fish	Otolithoides, Johnius
'		jarang gigi	1	
wang chak	nang chak	tamban laut	sardine	Dussumeria hasseltii
wong cheong	wong siong	talang-talang	queenfish	Chorinemus spp.
wong fah	sam ngea	jarau	jewfish	Otolithes sp.
wong yu	ng he kia	kuasi	shad	Dorosoma chacunda,
1	-			D. nasus
wo yu	chaw ow	andopong	diamond scaled	Mugil waigiensis
		, ,	mullet	J. T. T. G. T.
yu lap	kea kea	pulot-pulot	silver bream	Leiognathus eguulus

Source: Dao' Chin Phui Kong Collections.

In the post-war period, the market once again changed. Fresh fish became available in the domestic and later international markets. The growth of towns created urban markets, in addition to the working class markets of the agricultural, mining and logging sectors that had characterized the pre-war period. Fresh fish were transported and sold in fish markets established

in all towns. The demand for dried and salted fish gradually declined as consumer taste became more sophisticated. The range of species of fish sold in the market expanded considerably, in contrast to the limited variety that could be either dried or salted.

The key mechanism for the control of the storage and transport of fresh fish was ice and coldstorage facilities. It was this newly available technology that allowed fresh fish be transported and sold. Ice was manufactured in ice plants that required substantial capital investments. Huge cold-storage rooms were built with substantial capital outlay. Chilled fish were transported overland to fish markets on lorries that also required heavy capital expenditure. Diesel was the primary fuel for the manufacture of ice and the storage of ice and fish, and for powering the lorries that transported the chilled fish. It was the controllers of salt who realized the new economic opportunities and extended their domain to include ownership of ice plants, cold storage and lorries.

It was only in the 1960s that the international markets for marine produce once again developed. In 1960, the Japanese-owned Taiyo Fishing Company was established at Pulau Si Amil for tuna fishing. The huge 3,000-ton factory ship returned to Sulu waters. The company went on to establish a fish processing plant on the island of Si Amil in 1961. However, a year later, on 26 December 1962, the plant was raided by thirteen armed pirates who looted the place and killed two of the company's personnel. The Taiyo company closed down its operations at great loss.

The first frozen prawn company was established in 1961. The Borneo Fishing Company, later renamed as the North Borneo Fishing Company, was a Japanese-Chinese joint venture company. Its headquarters was at Sandakan. In the early years, prawns were caught with a 68-feet-long motorized boat dragging a German-designed Gulf Coast trawler net. The Company had acguired five boats by 1962 and trawled in the Kudat and Sandakan waters. The company built one ice factory and two prawn-processing plants at Sandakan. Local fisherman also participated in the early development of the frozen prawn trade. They fished close to the shoreline and depended on the ebb and flow of the tides to bring the prawns into their nets. Many indigenous fisherman were dependent on prawn for their daily income. The development of the prawn industry in the Sulu Sea is a Japanese initiative for the Japanese market.

The marine commodities in the international markets were not the produce that were extracted during the Sulu period, were they the salt and dried fish of the British Chartered North Borneo Company period. It was frozen prawns that were marketed in industrialized destinations such as Japan and the United States of America, and regional ports such as Singapore. The biggest three Japanese dealers are Matsuoka (Osaka), Iwatani (Nagoya), and Nissho Iwai Corporation (Tokyo and Fukuoka). The average purchase price per kilo ranged from \$35-50. In the 1990s, the market figures have again showed a change in commodities. Tuna has rapidly emerged as an important catch this time for markets in the United States of America.

The frozen prawn industry demands extremely large capital investment, much more than was made for chilled fish. An average prawn-processing plant costs \$2 million. The operations of the plant include grading, cleaning, freezing and packaging of the prawns. The sealed plastic boxes of frozen prawns are air-lifted and shipped from Sabah to international markets. The ice plant, cold storage and lorry owners once again raised the capital to finance these investments. They stopped short, however, of buying ships or aeroplanes.

III. EMERGENCE OF THE FROZEN PRAWN INDUSTRY

The contemporary importance of the fishing industry has been seriously underestimated by government agencies. Government publications visiting the major exports for Sabah do not even mention the export of marine commodities. However, base on value of exports in 1986, marine commodities (\$85,080,358) ranked by sixth after timber, petroleum, oil palm, sawn planks and cocoa (Table 3). Their value had overtaken that of rubber exports. In the period 1966-1990, frozen prawns accounted for 83.62% of the total average value of marine exports and 59.84% of the total weight of marine exports (Table 4). In 1987 Japan purchased 2,668.22 metric tons valued at \$53,928,850.00. The Japanese market in that year purchased 72.26% of the total value of frozen prawns exported from Sabah. Singapore purchased 723.12 metric tons (16.82%) valued at \$7,199,295.00 (9.65%). The third place went to the Unite States of America, which imported

321.54 metric tons (7.48%) valued at \$6,041,793.00 (3.29%) (Table 5).

Table 3.

Main Export Commodities of Sabah, 1963 – 1986

('000 Ringgit)

						(ovo ranggii)
	1963	1965	1970	1975	1980	1986
Palm oil	30	1,280	18,097	131,010	159,564	202,663
Rubber	32,065	34,039	36,454	40,030	82,255	44,877
Cocoa	514	417	4,441	16,955	67,626	312,321
Logs/timber	150,640	185,437	395,807	567,781	1,777,515	1,554,507
Sawn timber	-	-	-	809	77,642	317,722
Petroleum	_	-	- 1	85,503	1,779,651	1,177,561
Total	183,249	221,173	454,799	842,088	3,944,253	3,663,651
% of the six	67	73	85	83	89	74
commodities out of export total						

Source: Pang Teck Wai. 1989. "Economic Growth and Development in Sabah: 25 Years After Independence", Sabah 25 years Lalers 1963-1988. J.G. Kilingan and M.J. Ongkili. (eds.) Kota Kinabalu; Institute for Development Studies. Pp. 105.

Table 4.

Frozen Prawn as a Component of Export Fishery Commodities of Sabah, 1966-1990

Year	Quantity	% of Total	Value	% of Total
	(m.ton)	Export Quantity	('000 \$)	Export Value
1966	1,084	55	4,860	81
1967	1,494	65	6,613	88
1968	1,550	71	7,703	92
1969	1,310	59	6,593	90
1970 -	1,412	60	7,611	87
1971	1,610	71	9,708	92
1972	1,635	63	11,551	93
1973	1,929	70	16,353	88
1974	1,747	67	12,115	88
1975	1,484	55	11,158	75
1976	2,316	59	22,032	74
1977	2,637	74	29,953	92
1978	2,574	68	31,084	89
1979	2,892	68	40,674	90
1980	2,193	61	29,878	85
1981	2,801	69	39,751	85
1982	2,728	65	44,751	79
1983	3,901	66	68,580	80
1984	4,037	59	64,491	74
1985	3,898	57	55,764	75
1986	4,304	59	70,614	83
1987	4,298	46	74,634	80
1988	4,405	52	79,656	88
1989	4,195	32	74,766	74
1990	4.833	25	82,888	68
Average	2,692	60	36,150	84

Source: Sabah Fisheries Annual Report. 1966-1990.

Table 5.
Frozen Prawn Export by Destination, 1987

State	Quantity (m.ton)	Percentage	Value (*000 \$)	Percentage
Japan	2,668	62.1	53,929	72.3
Singapore	723	16.8	7,199	9.7
U.S.A	322	7.5	6,042	8.1
Pen. Malaysia	280	6.5	2,458	3.3
United Kingdom	65	1.5	1,256	1.7
Thailand	95	2.2	1,142	1.5
Netherlands	66	1.6	999	1.3
Germany	30	0.7	811	1.1
Australia	35	0.8	692	0.9
Hong Kong	10	0.2	68	<0.1
Brunei	2	<0.1	25	<0.1
Sarawak	2	<0.1	4	<0.1
Total	4,298	100.0	74,634	100.0

Source: Sabah Fisheries Annual Report. 1987.

There are 22 species of commercial prawns in the water of Sabah. However, only 9 species were caught in large quantities and they formed the backbone of the frozen prawn industry of Sabah. The white or banana prawn is the most prized and accounts for 80% of all prawns landed. Three have been species identified with the white prawn: Penaeus merguiensis, Penaeus indicus and Metapenaeus brevicornus. The brown prawn forms another 10% of the total catch. The rock tiger or cat prawn is seasonal in nature and during the rainy season the catch can be as much as 20% of the total landing.

The Department of Fisheries, Sabah have identified a total of 3,330 square nautical miles as suitable areas for prawn trawling. On the west coast of Sabah, it includes Brunei Bay (480 square nautical miles) and Marudu Bay (350 square nautical miles). On the east coast of Sabah, the areas around Sandakan from Marchesa Bay to Tambisan island cover a vast area of 2,400 square nautical miles. The fourth area for prawn trawling is at Kuala Apas, covering 100 square nautical miles. The most efficient method of catching prawns is the use of trawler net. The traditional methods were unable to meet the volume required for international markets.

The core owners of trawler boats are the owners of the frozen-prawn processing plants. Their centers are located at Sandakan, Kota Kinabalu, Tawau and Beluran, which form the

major prawn landing centers of Sabah. The huge export demand of the international markets has also attracted other local investors into the industry. The newcomers are located at small towns such as Semporna, Lahad Datu, Beuford, Kota Belud, Kota Marudu and Kuala Penyu. These investors acquired their initial wealth in the timber, hotel, agriculture, and business sectors. There are also a handful of local political personalities who have invested in the industry. Other heavy capital investors have come from Sarawak, peninsular Malaysia, Brunei Darussalam and the island republic of Singapore. The older core group of investors of long association with the industry owned about 750 out of 1,046 trawlers in 1990. The local newcomers own 105 boats, while peninsular Malaysians own 51 boats, Singaporeans 42, Bruneians 20 and Sarawakans 9. The Sabah government, through its agency called Ko-Nelayan, has purchased 69 trawlers (Table 6). The cost of a trawler depends on its size. The bigger ones weighing 100 tons cost \$500,000 and the smaller 40-ton vessels cost about \$50,000. The production of prawns is clearly monopolized by Asian capital investors. The arrival of trawler boats in large numbers destroyed the active participation of indigenous fisherman in the prawn fishing industry. These boats devastated their nets, depleted the prawn catch along the shoreline and destroyed breeding grounds.

Table 6.
The Number of Trawler Boats Based on Ownership in Sabah, 1990

District	S/M'sia	S'awak	B'nei	S'pura	Sabah	КО-	Total
						NELAYAN	
Sandakan	12				439	12	463
Tawau					90	4	94
Kudat	39				11	8	58
Kota Kinabalu				42	117	26	185
Semporna					13	5	18
Lahad Batu					10		10
Beluran					138		138
Beaufort		5	10		10	3	28
Papar			,			2	2
Kota Belud					9	4	13
Tuaran	·				1		'
Kuala Penyu	,	4	10		15	4	33
Sipitang		7 6 6 6				1	1
Kunak							
Kota Marudu					3		3
Total	51	9	20	42	855	69	1,046

Source: Compiled from the trawler boats licensing registration by individual fisheries district in Sabah, 1990.

In the period 1965-1990, the number of trawler boats increased from 135 to 1,046. The largest number of boats were located at Sandakan (601) and Tawau (122) on the east cost (Table 7). Investors were responding to an international prawn market that was rapidly include one taikong (skipper) and four awak-awak (crew). In 1992, the total number of workers in this industry numbered 5,230, accounting for 29% of the total number of fisherman in Sabah. The prawn trawler workers were concentrated in Sandakan (3,005), Tawau (610), Kudal (305) and the balance were distributed on the west coast at Kota Kinabalu, Kuala Penyu, Beaufort, and Kota Belud. In a trawler boat, the skipper acts as the captain of the boat and manager of the trawling operations. He is also the representative of the boat owner on the seas. He is extremely experienced in handling the boat, possesses detail knowledge on the emerging. The landing of prawns increased from 4,742 tons in 1967 to 10,209 tons in 1990 (Table 8).

The prawn trawling industry is extremely capitalintensive. On the average, each of the 1046 trawler boats carries five workers, which engineering aspects of the boats and knows intimately the main trawling grounds for prawns. The crew are often unskilled labourers who perform the manual work on deck.

IV. THE SEA-BORNE COMMUNITY OF ASEAN WORKERS

The skippers in the Sulu Sea do not come from the surrounding islands. They are employed from peninsular Malaysia, especially from Pangkor, Lumut, and Pantai Remis, and Thailand. The majority of Thai skippers come from South Thailand, including Pattani, Yala, Narathiwat, Songkhla, Satun and Nakon Si Thammarat. There are 879 skippers employed from peninsular Malaysia and 167 Thai skippers in the prawn trawling industry. It is extremely significant that the Thai skippers are employed by the local newcomer investors as well as Brunei and Singapore capital. The Thai skippers gained their experience trawling for prawns in the Gulf of Siam, working for Singapore and Thai investors. They earned salaries as low as \$350 per month. The old capital in the fishing industry and those from Sarawak employed their skippers from Pangkor and neighboring areas. These centers formed a network of Hokka peoples involved in the fishing industry. These skippers manage the crew of unskilled workers who are of Filipino and Indonesian nationality. In 1990, there were about

2,000 workers from Indonesia and further 2,000 from the Philippines.

Table 7. The Number of Licensed Trawler Boats in Sabah 1965-1990

Year	West Coas	t Sandakar	Sandakan Tawau			
1965	17	108	08 10		135	
1966	16	125	125 11		152	
1967	29	179	19		221	
1968	29	268	14		311	
1969	30	260	2 2		312	
1970	32	237	25		294	
1971	30	242	29		301	
1972	33	241	60		334	
1973	34	230	60		333	
1974	53	218	88		359	
1975	48	203	71		322	
1976	67	217	76		360	
1977	171	237	117	,	525	
1978	208	227	101		536	
ar	West Coast	Sandakan	Tawau	Kudat	Total	
79	196	211	130	57	594	
80	170	190	99	57	516	
81	294	193	90	43	620	
82	155	166	81	42	444	
83	229	442	52	66	789	
84	196	552	83	77	908	
85	236	647	65	106	1,054	
86	179	535	59	83	856	
87	222	689	105	84	1,100	
88	242	557	104	69	972	
89	253	600	116	67	1,036	

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262 Source: Sabah Fisheries Annual Report, 1966-1990.

1990

The Indonesian come from Manado, Tolitoli, Ujong Pandang, Butung and Donggala on the island of Sulawesi. The other area in Indonesia where labour was recruited is Kalimantan, at Tarakan, Nunukan Timur, Tanjungselor, Bontang, Samarinda, and Balikpapan. All the Philippine islands surrounding the Sulu Sea provided labour reserves for this industry. The crew come from Tawi-tawi, Pulau Pengutaraan, Pulau Jolo, Pulau Basilan, Pulau Pahlawan, and small towns on the island of Mindanao. The average skipper was 45 years old and usually a family man. He sold his skills on the labour market and left his

family at his home village. The average age of crew members was 18 years old. These teenage workers were bachelors.

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1,046

The mode of payment for skippers and crew has changed considerably since 1965. In the period 1965-1980, the metode of payment was based on a system of sharing of the catch. The skippers sold the total catch either to the wholesaler or to the boat owner. The gross cash value less operations cost was divided into two halves. One half was paid to the boat owner and the second half was left with the skippers. This balance was divided into 5.5 parts, of which each of the fourcrew members received one part and the skipper the remaining 1.5 parts. In addition, the skipper was paid a bonus by the boat owner of 3 percent the total net cash value. The wholesaler also paid the skipper "coffee money" of \$100 each time he sold to the wholesaler. The skipper had the right to receive about 2-3 kg from the catch in recognition of his daily food needs. By selling these prawns, he would obtain a further \$25-35. Whenever the boat was docked for repairs and cleaning it was the responsibility of the boat owner to pay the skipper a daily salary of about \$20.00.

Table 8.

Prawn Landing, 1962 – 1990

				0,				(tons)
		Tı	awler nets			Oth Equip		Total
		East Coast		West	Trawler			
				Coast	Total			
1962		209	1		206	t. d. *		t. d.
1963		813		103	916	t. d.		t . d.
1964		761		151	912	t. d.		t. d.
1965		1,353		306	1,659	t. c		t. d.
1966		2,191		216	2,407	t. c		t. d.
	Tawau	Sa	ndakan	West	Trawler	Oth		Total
				Coast	Total	Eguip	ment	
1967	70		2,912	160	3,142	1,6		4,742
1968	52		2,998	226	3,276	1,6		4,876
1969	83		2,294	200	2,577	1,2		3,777
1970	70		2,568	224	2,862	1,500		4,362
1971	143		3,526	136	3,805	1,600		5,405
1972	241		2,962	165 313	3,368	1,500		4,868
1973	514		3,119		3,946	1,324		5,267
1974	557		3,261		4,055	1,321		5,376
1975	431		2,890	210	3,531	1,5		5,031
1976	720		3,435	497	4,652	90		5,552
1977	731		3,526	1,242	5,499	90		6,399
1978	570		3,979	991	5,540	1,0		6,540
	Tawau	Sandakan	West Coast	Kudat	Trawler Total	Other me		Total
1979	529	3,834	875	180	5,418	1,0		6,418
1980	899	3,251	840	160	5,150	1,6		6,800
1981	1,054	3,631	782	248	5,715	-		7,215
1982	1,121	3,762	897	515	6,295	1,500 1,500		7,795
1983	1,121	4,819	1,076	622	7,722	1,000		8,722
1984		5,043	746	665	8,337	-		9,337
	1,883	-				1,000		9,233
1985	2,946	4,029	874 562	384 437	8,233	1,000 1,000		9,352
1986	2,641	4,712			8,352			
1987	3,633	4,773	398	401	9,205		150	10,655
	Tawau	Sandakan	West Coast	Kudat	Trawler Total	Other equip.	Aqua- culture	Total
1988	2,117	4,108	367	335	6,927	200	500	9,427
1989	2,151	4,219	372	277	7,019	200	700	9,719
1990	2,642	4,189	351	227	7,409	200	800	10,209

Source: Compiled from Sabah Fisheries Annual Report. 1966-1990.

^{*}t. d. : data not available.

The share of the crew included the one portion mentioned earlier and a bonus if the landing of prawns exceeded the estimated catch for a particular trip. Members of the crew are also provided with their daily food needs by having the right to receive 2-3 kg from the catch. During repairs the crew were paid \$10 daily by the boat owner.

After 1980 the method of payment for skippers and the crew in the prawn-trawling sector was changed to monthly salaries. The system of sharing which was popular during the earlier fishing period was replaced, although it still continues in the small-scale fishing industry. The switch favored the boat owners, increasing their profit margins, and was the result of the excess supply of trawler skippers in the region. All skippers are paid \$1,000 a month, but they still enjoy the right to keep 2-3 kg of the catch and in the lay-off period they continue to be paid \$20 a day. They lost their 3 percent bonus and "coffee money". Under the new arrangement, the skipper delivers the entire catch to the wholesaler, who deals with the boat owner. The selling capacity of the skipper, which was once his strength in the industry, was removed. There are deeper structural explanations as to why this happened. The fundamental reason was that the boat owners, who were also the owners of the prawn processing plants, initiated the salary system. The wholesalers purchase the catch not from the skipper but from the boat owner, and send the prawns to the plant.

The towkay (boat owner) is the paymaster of the salaries of the skipper and his crew. He also extends cash on short-term credit to his workers upon request. Loans are immediately redeemed from the following month's salary. The towkay was also entrusted with his workers' savings. He forwards savings to the families of his workers. The Thai skippers more than others tend to send back their entire salary earnings to their families. The cash they earn on the side is more than enough to support their basic needs.

In the period 1980-1993, the skippers continued to play their old role as sellers in a new sector of the new economy. Trash fish, which once had no markets, now had a dollar value because of the fertilizer industry. The skipper and the crew share the sale of trash fish. The former takes 50

percent of the sale value and the balance is shared by the four-crew members. It is estimated a skipper can earn as much as \$600.00 a month from his portion of the sale of trash fish.

The salary of the crew ranges from \$350-400 depending on their length of service with the trawler owner. They too lost out on the bonus system but, like the skipper, retained the right to receive 2-3 kg of prawns. During boat repairs they are paid \$10-15 daily. They enjoy 12.5 percent each of the total trash fish caught, which is valued at \$150.00.

The trawler is the work place and the permanent living quarters of the skippers and his crew. In a real sense the trawler boat consists of ASEANs living and working together on the high seas. Each prawn trawling operation takes 3-10 days. Upon return to the jetty the boat still remains their permanent dwelling place. The skipper maybe either a Chinese skipper of Hakka descent or a Thai national of Malay lineage. The crew will always be two Filipinos of Suluk descent and two Indonesians of Bugis heritage. The composition of the skipper and the crew reflects the larger ethnic backgrounds of the Sulu Sea. The language spoken on board the boat is Bahasa Melayu with a Sabah accent. In selecting his crew, the boat owner will always evenly mix the Suluks with the Bugis. The real fear is the threat of an ethnically uniform crew who can form an alliance to undermine his profits or, at worst, take the boat to one of the many Phillipine and Indonesian islands. The sleeping quarters of the skipper and crew are the closed area between the engine and the pilot's wheel. The community on board the boat is close-knit and no divisions exist in terms of living conditions amongs the ranks. The boat owner supplies mattresses, rafia mats, pillow and blankets. They all sleep in a single row, taking turns to do the night watch on a four-hour basis.

The normal working day of the ASEAN labour force begins with the identification of possible prawn grounds. The crew lowers the trawler net and the skipper pilots the boat at 2-3 knots for two or three hours. The catch is mechanically hauled on board, and then the crew will begin the process of grading the prawns and filling crates layer by layer with prawns and crushed ice. This work normally takes an hour. They fin-

ish their job only when the work place is washed down. The process is repeated three or four times a day. It is commonly held by those involved in the prawn trawling industry that a better catch is made during the night. The lights of the boat attract the prawns. The skippers returns to harbor once he has a full load of prawns. However, if the catch is poor, he will have to return on the tenth day as supplies will be depleted.

The supplies of the boat include diesel, crushed ice, fresh water, food (rice, flour, noodles, cooking oil, salt, onions and chilies, curry powder, biscuits, milk, coffee sugar), medicine, cigarettes, beer, stout, clothes, and other utilities. The boat owner underwrites all these supplies. Crew members take turns to cook the daily meal. Breakfast is coffee and biscuits at 8.00 am. The afternoon meal is around 2.00 p.m. and consists of rice and fish. The next meal is at around 7.00 in the evening consisting of noodles, and the last meal is eaten at around 11.00 at night. The work time, meal time and sleep time are fixed for the work community living on board the boat. In between these hours time is whiled away in entertainment. Cigarettes, beer and stout are consumed excessively during card gambling or video watching. Favorite videotapes include Japanese and Thai hard cord pornography, American female wrestling, Hindustani soap operas and Malay comedies. The old boat culture with its established customs and practices has withered away in the age of technological advances. The umat that consisted of Thai Muslims, Suluk Muslims, and Bugis Muslims that made the Alam Melayu never existed as the crew faced the elements.

The clearly defined boss of the industry is the towkay (boat owner). It is his goodwill the determines industrial relations between him and the workers. The older core towkay carry with them the ways of an earlier period. They will meet the arriving boat at the jetty and be briefed on the operations just completed over drinks with the skipper and crew. His office and his living quarters are usually at the jetty and all members of his family are involved in the business. The office space is extremely frugal and simple. Typically, it has one old cabinet, one old ceiling fan, one table with a few chairs and, in one corner of the room, the tokong (family alter). The walls are decorated with calendars that were designed to

arouse the cravings of men at sea. He entertains his workers at night at a Japanese-style karaoke lounge. These lounges cater for all the fantasies of a crew returning after long periods of isolation. There is much goodwill forged between the towkay and his workers. The newer investors in the industry carry a different culture. Their dress code is only completed with the indispensable portable phone, gold bracelets, gold chains, jade rings and all the other indicators of newly acquired wealth. Their offices are fully airconditioned and furnished with computers, facsimile machanes, salaried secretaries, and topped off with a non-reflective glass framed photograph of the towkay shaking hands with the one of the top political leaders on the winning side. Only the skipper is invited into the office and is constantly reminded not to smoke, not to talk loudly, not to dirty the floor while he reports on the operations just completed. The workers are only permitted in once a month to collect their wages. They are made to bathe first and leave their slippers outside before they can enter the august building. They are left to entertain themselves by their own devices.

The sea-borneo community of ASEAN workers breaks up when its members arrive on shore. The crew immediately splits along ethnic lines as they go in search of entertainment. The Suluks frequent the nightspots owned by Manila-based Filipinos. The Bugis make a beeline for the Jakarta-based Indonesian dandud discos. Their nights are spent among the own kid. The Suluk crew immediately begin to communicate in the Suluk language and abundant the Malay language. Similarly the Bugis crew on land speak the Bugis language. Blood ties are thicker than water. The Thai skipper on land is left without his command. He hangs out at either the Filipino, Indonesian or Chinese establishments. The towkay do not provide residential facilities for them on land, so they return to their boats to be rocked to sleep. Their days are spent at snooker establishments, where the ethnic emerges, as teams are form in competition. It is usually the Suluks versus the Bugis, and stakes are placed on who will win. The Thai skipper is a passive onlooker. These heavy gambling sessions end with great celebration that continues well into the night. After spending their fury for a couple of nights the skipper and crew head out to begin work and at sea again.

Work at sea knows no weekly holidays. Skippers and crew work seven days a week. The only leave they get is when their boat breaks down or when they land their catch. Their annual leave is determined by the religious celebration of their towkay, either Chinese New Year or Christmas. Workers are also laid off during Hari Raya Puasa and Hari Raya Haji. These holidays are never used by the crew to return to their kampong (villages). They celebrate the festivities with the migrant groups on land.

At Chinese New Year, the Chinese skipper is sent back home to peninsular Malaya by plane for a week at the expense of the towkay. The Thai skipper enjoys the same privilege for Hari Raya Puasa. He usually flies from Kota Kinabalu to Kuala Lumpur and takes a connecting flight either to Hadyaii or Kota Bharu, returning home after a year at sea.

CONCLUSION

This study on the Sulu Sea makes the case that production, labour and commodity markets know no boundaries. Marine produce in the markets

have changed over time. The market-led change attracted those who could command capital investments and labour power from the region to extract marine resources. Markets, production and labour break down the artificial boundaries imposed by nation-states and constructs of culturally close ethnic communities. The academic-led Southeast Asian Studies should recognize this reality.

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