

STATUS OF THE FISHERIES SECTOR IN MALAYSIA FROM 1987 AND 1988

1. Background of the Fisheries Sector

- 1.1 Malaysia has a total coastline of 3,400 km inclusive of Peninsular Malaysia, Sabah and Sarawak. With the declaration of the Exclusive Economic Zone (EEZ), Malaysian waters has increased from 47,000 to 160,000 square nautical miles. With the expansion, the fisheries industry become an important economic sector in the development of the country.
- 1.2 The fisheries industry can be divided into marine captured fishery and aquaculture. In 1988, the marine captured fishery sector produced 825,631 tonnes of fish valued at \$1,375.9 million. The aquaculture industry in the same year produced 46,957 tonnes valued at \$89.6 million. On the whole, the total production of the fisheries industry was at \$1,465.5 million contributing about 2.3% to the Gross Domestic Product (GDP).
- 1.3 The fisheries industry (captured and aquaculture) had directly contributed employment opportunities totalling about 1.7% of the nation's manpower. Captured fisheries created a total of 88,963 employment as fishermen whilst the aquaculture industry provided a total of 15,860 employment as culturists.

1.4 Promotion and encouragement by the Government to develop the deep sea fishing industry and aquaculture had positive results. The number of deep sea fishing boats increased from 328 units in 1987 to 399 units in 1988 and contributed about 11.1% of the total landings. For aquaculture, productions of selected species like Tiger Prawns, Sea Bass and Mussels in Peninsular Malaysia increased by 17.9%, 18.8% and 126.3% to 754.8 tonnes, 1,267.1 tonnes and 1,368 tonnes respectively. At the same time, the production of cultured Tiger Prawns in Sabah recorded a harvest of 350 tonnes.

2. Employment

2.1 In 1988, the number of fishermen in Malaysia dropped by 2.6% to 88,963. The decrease is in-line with steps taken to reduce surplus in-shore fishermen by reallocating them to other more productive economic sub-sectors.

2.2 In Peninsular Malaysia, the number of fishermen dropped by 3.8%, to only 58,283 fishermen, (Table 1). The reduction is mainly due to the decrease in the number of fishing boats as compared to 1987.

2.3 The composition of fishermen according to ethnic groups are as follows :-

Malays 32,386 (55.6%) reduced by 4.2%, Chinese 21,367

(36.7%) increased by 1.2%, Thais 3,754 (6.4%) and others 776 (1.3%). By geographical distribution, most Malay fishermen were concentrated in the East Coast of Peninsular Malaysia (55.5%) whilst the Chinese were more in the West Coast (92.0%) especially in the states of Penang, Perak and Selangor. The Thais were involved mainly in the deep-sea fishing sub-sector as skilled workers.

Table 1: Number of Fishermen Working on
Licensed Boats, 1987 and 1988

State	Number of Fishermen		
	1987	1988	% Change
Pen. Malaysia	60,569	58,283	- 3.8
Sarawak	12,690	12,579	- 0.9
Sabah	17,730	17,730	0
Labuan	330	371	+12.4
Total	91,319	88,963	- 2.6

2.4 The total number of fishermen in Sarawak, Sabah and Labuan were 12,379, 17,730 and 371 respectively. The number decreased a little in Sarawak (0.9%), remained the same in Sabah and increased by 12.4% in Labuan. The increased in Labuan was mainly due to the development of the deep sea fishery in this area. The composition of fishermen in

Sarawak, Sabah and Labuan consisted of Bumiputra, Chinese and others like Indonesia and Philipinos.

3. Fishing Boats

3.1 On the whole, the number of fishing boats licensed in Malaysia (1988) dropped by 2.6% to 37,802 units as compared to 1987.

3.2 The number of fishing boats in Peninsular Malaysia in 1988 was 21,341 units decreasing by 3.6% as compared to 1987. The decrease, especially for small out-board boats and non-powered boats coincided with the government's policy to reduce the level of exploitation of resources in the in-shore waters. (Table 2).

3.3 On the other hand the number of deep sea fishing boats increased from 328 units to 399 units that is by 21.6% as compared to 1987. The increase is mainly due to the intense encouragement and promotion by the government to develop our deep sea fishing industry.

3.4 Changes in the number of fishing boats in 1988 by types were as follow:

- i. The number of inboard boats decreased by 0.4% to 14,760 units. However the number of deep sea fishing units shot up to 399 units from 328 units in 1987 registering a growth of 21.65%.

ii. The number of outboard boats also decreased by 9.3% to 5,832 units.

iii. The number of non-powered boats decreased by 15.5% to 749 units.

Table 2: Number of Licensed Fishing Boats,
1987 and 1988

Type of Boat	Number of fishing boats		
Year	1987	1988	%change
SEMENANJUNG	22,138	21,341	- 3.6
Inboard	14,822	14,760	- 0.4
Out-board	6,430	5,832	- 9.3
Non-Powered	886	749	- 15.5
SARAWAK*	7,482	7,030	- 6.0
SABAH	9,026	9,250	+ 2.5
LABUAN	174	181	+ 4.0
TOTAL	38,820	37,802	- 2.6

*Inclusive of boat not licensed.

in Sabah 9,250 units and in Labuan 181 units. The number fishing of boats in Sabah and Labuan recorded an increase of 2.5% and 4.0% respectively. On the other hand, the number of units in Sarawak dropped by 6.0%.

4. Number of Fishing Boats by Gear Groups

4.1 Table 3 shows the breakdown of the number of fishing boats licensed in Peninsular Malaysia by Gear Groups in 1988.

Table 3: Number of Licensed Boats By Gear Groups
Peninsular Malaysia, 1987 and 1988

Gear Group	Number of fishing boats		
	1987	1988	% Change
Trawlers	4,101	4,200	+ 2.4
Fish Purse Seiner	675	660	- 2.2
Tradisional Gear	17,362	16,481	- 5.1
Total	22,138	21,341	- 3.6

It can be seen that the number of trawlers increased by 2.4% to 4,200 units. The number of fish purse seiners dropped by 2.2% and the number of tradisional gears dropped by 3.1% to 16,481 units as compared to the year 1987. The decrease in tradisional boats coincided with the steps taken by the Government to reduce the number of in-shore fishermen by reallocating them to other economic sectors and also to the deep sea fishing industry.

4.2 The breakdown of fishing boats by gear licensed in Sarawak is as follows :-

Gear Type	Number of Units in Sarawak	Number of Units in Sabah	Number of Units in Labuan
Trawlers	727	2,021	-
Fish Purse Seiners	23	210	-
Traditional	6,280	7,019	181
Total	7,030	9,250	181

5. Fishing Gears

- 5.1 The total number of gears licensed in 1988 increased by 5.7% to 31,272 units. This increase was mainly due to the steep increase in the number of licences issued in Sarawak that is by 85.7% as compared to 1987.
- 5.2 The number of fishing gears licensed in 1988 in Peninsular Malaysia dropped by 6.0% to 21,341 units. The break-down by gears are as follows: Trawlers 4,200 units (19.7%), Fish Purse Seiners 660 units (3.1%), and others mainly traditional gears 16,481 units (77.2%).
- 5.3 Gear licences issued in Sarawak was 7,597 units, in Sabah 2,300 units and in Labuan 181 units. A total of 727 (9.8%) trawler licences, 23 (0.3%) purse seiner licences and 6,700 (89.9%) traditional gear licences were issued in Sarawak. In Sabah a total of 852 (37.0%) trawler licences, 77 (3.4%) fish purse seiner licences and 1,371 (59.6%) traditional gear licences were issued in 1988. On the other hand all 181 gear licences issued in Labuan were for traditional gears.

6. Fishing Efforts

- 6.1 Fishing efforts relate closely to the number of trips, number of days and number of hauls. The annual average

fishing trips for trawlers and fish purse seiners in Peninsular Malaysia was 228 trips and 161 trips respectively. The total number of fishing trips in the East Coast Peninsular Malaysia was lower than those in the West Coast mainly because of the monsoon in the area. The number of fishing trips per year for trawlers and fish purse seiners in the West Coast were 252 trips and 165 trips as compared to 228 trips and 161 trips in the East Coast respectively.

- 6.2 The total number of fishing days by major gears in Peninsular Malaysia are as follows :-

Trawlers 271 days, Fish Purse Seinners 207 days and drift netters 229 days per annum. The average fishing days was more for the West Coast, Peninsular Malaysia as compared to the East Coast also because of the monsoon period in the later.

7. Landings of Marine Fish

- 7.1 On the whole, the total marine fish landings in Malaysia dropped by 3.9% but the wholesale value increased by 1.4% as compared to last year.

7.2 The landings in Peninsular Malaysia in 1988 was 694,449 tonnes dropping by 1.4%. The decline is mainly due to poor landings of pelagic fishes (round scads, mackerels, selar scads and others) and trash fish, which dropped by 17.1% and 10.1% respectively. (Table 4).

The decline was further evidenced by the lesser catch of fish purse-seines, dropping by 20.3% as compared to that in 1987. This could be due to the migratory patterns of pelagic fishes. Apart from that, the decline in Peninsular Malaysia was also due to the decreased landings of trash fish and poor harvest of mussels dipping by as much as 10.1% and 92.5% respectively. The poor landings of trash fish could mainly be due to tight enforcement on trawler boats which normally caught the most trash fish. On the other hand poor harvest of mussels was mainly due to adverse climatic situation.

Table 4: Landings of Marine Fish by Main Species (tonnes) 1987 and 1988 - Peninsular Malaysia

Species	1987	1988	% Change
Pelagic	284,344	235,662	- 17.1
Demersal	151,926	181,213	+ 19.3
Prawns	67,048	81,265	+ 21.2
Trash Fish	216,780	194,780	- 10.1
Mussel	20,467	1,529	- 92.5
Total	740,565	694,449	- 6.2

7.3 Table 5 shows the break-down of fish landings in Peninsular Malaysia by gear groups:-

- i. The trawler landings increased by 1.2% to contribute 56.8% of the total landings. The increment was due to more trawlers operating in 1988 as compared to 1987 (increase of 2.4%).
- ii. Fish Purse Seiners contributed 129,980 tonnes, dropping by 20.3% thus comprising only 18.7% of the total marine fish landings in 1988. The decrease did not coincide with the 2.5% drop in the number of Fish Purse Seiners.
- iii. Landings by traditional boats dipped by 9.4% to 170,269 tonnes. This was mainly due to the poor harvesting of mussels.

Table 5: Landings of Marine fish by Gear Group in Peninsular Malaysia 1987 and 1988

Gear Group	Total Landings (tonnes)		
	1987	1988	% Change
Trawlers	389,688	394,200	+ 1.2
Fish Purse Seiner	163,012	129,980	-20.3
Tradisional	187,865	170,269	- 9.4
Total	740,565	694,449	- 6.2

7.4 The fishes in Peninsular Malaysia were graded into 3 main categories apart from groups like prawns, mussels and trash fish. Grade I fishes include, Chinese Pomfret, Silver Pomfret, Black Pomfret, Thread Fins, Spanish Mackerel, Groupers and Snappers. Grade II fishes include Longtail Shads, Other Shads, Red Snapper, Sweetlip, Horse Mackerel and Sea Perch. Grade III fishes include Anchovies, Squids/Cuttlefish, Crabs, Jelly Fishes and others. The landings of Grade I and Grade II fishes increased, both contributing 3.8% and 2.5% of the overall total landings. On the other hand the contribution of Grade III fishes decreased to only 53.6% of the total. Landings of prawns increased by 21.2% to 81,265 tonnes, whilst the landings of molluscs and trash fish dropped by 92.5% and 10.1% respectively compared to 1987.

7.5 However, even though the landings in Peninsular Malaysia dipped by 6.2%, the wholesale value of the landings dropped only by 1.4% to \$978.5 million. This was because the average wholesale price increased from \$1,330/tonnes in 1987 to \$1,409/tonnes in 1988. This improvement was mainly due to more Grade I and Grade II fishes being landed and as such, pushed up the average price and thus the value. (Table 6).

7.6 The landings in Sarawak in 1988 was 79,642 tonnes increasing by 14.7%. Landings in Sabah was 48,000 tonnes, recording an increase of 0.8% as compared to 1987 whilst landings in Labuan increased by 160.3% to 3,540 tonnes.

7.7 The value for Sarawak, Sabah and Labuan increased by 1.3%, 12.0% and 130.0% to \$190.1 million, \$197.7 million and \$10.2 million respectively.

Table 6: Quantity and Value of Marine Fish Landings
1987 and 1988, Malaysia

State/Grade	Quantity (tonnes)/Value (\$Million)		
	1987	1988	% Change
Peninsular Malaysia			
Grade I Fish	26,603 (\$163.3)	27,006 (\$165.8)	+ 1.3 (+1.5)
Grade II Fish	14,973 (\$ 43.4)	17,450 (\$ 50.6)	+16.5 (+16.6)
Grade III Fish	394,694 (\$501.3)	372,416 (\$473.0)	- 5.6 (-5.6)
Prawns	67,048 (\$231.9)	81,267 (\$253.7)	+21.2 (+9.4)
Trash Fish	216,780 (\$ 39.0)	194,780 (\$ 35.1)	-10.1 -10.0)
Mussels	20,467 (\$ 6.1)	1,529 (\$ 0.5)	-92.5 (91.8)
SARAWAK	69,443 (\$187.9)	79,642 (\$ 190.1)	+14.7 (+ 1.2)
SABAH	47,640 (\$165.5)	48,000 (\$197.0)	+ 0.8 (+19.0)
LABUAN	1,360 (\$ 4.7)	3,540 (\$ 10.2)	+160.3 (+117.0)
Quantity/ (tonnes)	859,443 (\$1,343.1)	825,631 (\$1,375.9)	- 3.0 (+ 2.4)

8. Aquaculture

8.1 The aquaculture industry in Peninsular Malaysia can be grouped into various culture systems.

- i) Freshwater fish culture in ponds and ex-mining pools declined in terms of numbers and area by 12.0% and 23.3% respectively as compared to 1987. On the other hand the total production and value increased by 30.5% and 50.2% respectively. This improvement was mainly due to better technology and the usage of superior fish species (Table 7).
- ii) Freshwater fish culture in cages increased from all aspects that is number, area and production by 39.6%, 103.7% and 477.8% respectively. The remarkable improvement occurred because of better management and the practice of intensive culture system..

Table 7: Number, Area, Production and Values of
Fresh Water Fish Culture in Peninsular Malaysia
1987 and 1988

	1987	1988	% Change
A. Ponds and ex-mining Ponds			
Numbers	13,804	12,151	- 12.0
Area (ha)	3,270	2,508	- 23.3
Production (mt)	2,734	3,567	+ 30.5
Value (\$,000)	8,255	12,400	+ 50.2
Cages			
Numbers	656	916	+ 39.6
Area (sq.m)	6,353	12,944	+103.7
Production (mt)	9	52	+477.8
Value (\$,000)	35	171	+388.6

- iii) Fish/Prawn culture in brackish water ponds also improved. The number, area and productions increased by 17.9%, 10.6% and 20.8% respectively. This development was made possible with the greater involvement of private sector in this culture system. (Table 8)
- iv) Fish culture in brackish water cages also recorded a rapid expansion. The number, area and productions increased by 26.1%, 36.7% and 25.3% respectively. The improvement was mainly due to accelerated development of this system throughout Peninsular Malaysia.

Table 8: Numbers, Areas, Production and Values
of Fish Culture in Brackish Water -
in Peninsular Malaysia, 1987 and 1988

	1987	1988	% Change
A. Ponds			
Numbers	636	750	+17.9
Area (ha)	558	617	+10.6
Productions (mt)	798	964	+20.8
Values (\$,000)	14,765	17,624	+19.4
B. Cages			
Numbers	13,071	16,488	+26.1
Area (sq.m)	111,481	152,385	+36.7
Productions (mt)	1,260	1,579	+25.3
Values (\$,000)	12,005	15,877	+32.3

v. The total area for and the production of mussel culture system increased by 70.1% and 126.1% respectively mainly due to expansion of this system throughout Peninsular Malaysia. (Table 9)

vi For cockle culture, production dropped by 14.5%, even though the total area remained the same and the number of areas increased to 216.

Table 9: Numbers, Areas, Productions and Values of Mussels and Cockle System in Peninsular Malaysia 1987 and 1988

	1987	1988	% Change
A. Mussels (Raft)			
Numbers	60	42	- 30.0
Area (sq.m)	15,000	25,521	+ 70.1
Productions (mt)	605	1,368	+126.1
Values (\$,000)	184	471	+156.0
B Cockles			
Numbers	166	216	+ 30.1
Area (ha)	4,187	4,178	- 0.2
Productions (mt)	40,794	34,867	- 14.5
Value (\$,000)	13,556	11,535	- 14.9

8.2 On the whole, the production of aquaculture in Peninsular Malaysia declined by 8.2% from 46,200 tonnes in 1987 to 42,387 tonnes in 1988. This decline was caused by poor harvesting of cockles, sliding by 14.5% as compared to 1987.

Nevertheless, the production of other culture systems increased.

8.3 Even though the total aquaculture production in Peninsular Malaysia declined, the total production value for both freshwater and brackishwater systems increased to \$58.1 million because of better performance of high quality culture systems. Overall, the value of freshwater aquaculture production was \$12.6 million increasing by 51.6% and the value of brackish water production was \$45.5 million increasing by 25.1%.

8.4 The number of culturists involved directly with the industry in Peninsular Malaysia was 10,750. The break-down figures by culture systems were as follows:-

(i) Fresh water culture system - 9,077³ declining by 7.2%;

(ii) Brackish water culture - 900 increasing by 13.6%.

(iii) The total number of mussels and cockles culturists on the other hand increased by 123.3% and 764.4% to 134 and 1,409 respectively.

8.5 The expansion of aquaculture in Sabah was encouraging. In 1988, there were 7,445 freshwater ponds covering 825.4 ha producing 4,100 tonnes valued at \$25 million. Apart from that there, were 359 brackishwater ponds covering an area of

300 ha with a production of 350 tonnes (Tiger Prawns) valued at \$6 million.

8.6 In Sarawak, the fresh water aquaculture productions was 110 tonnes valued at \$0.5 million. In contrast the aquaculture industry in Labuan has yet to take off.