

PROPERTY RIGHTS IN THAI FISHERIES

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Outline

- Thai fisheries
- Overfishing in the Gulf of Thailand
- Thai marine fishing units, crews, households and employees
- Investment and returns of selected Thai fishing vessels
- Thai fisheries management
- Trends for Thai fisheries management
- The vessel buy back program

Thai fisheries

- Starting from stationary gears
- 1925: Development of Chinese purse seine
- 1959: Adoption of otter board trawl
- 1961: CPUE = 298 kg/hr
- 1968: Fishing outside Thai waters
- 1972: Being top ten fishing nations, CPUE = 63 kg/hr
- 1973: Development of FAD purse seines

Thai fisheries (2)

- 1970s: Overfishing
- 1980s: Catch fluctuation, around 2 mill. ton
- 1990s to present: Resource degradation in the Gulf of Thailand, larger vessels fishing in non-Thai fishing grounds
- 2006; CPUE = 29 kg/hr
- Fishing capacity reduction
- DoF proposed buy back program

Overfishing in the Gulf of Thailand

Item	Effort	Catch	Revenue	Cost	Profit
	mill.st.hr.	th.ton	mill.EU\$	mill.EU\$	mill.EU\$
1963-1982 MSY	15.7	958	119	77	42
1963-1982 MEY	11.8	900	105	51	54
1982 ACTUAL	19.2	1,000	124	94	30
<i>(%Change of ACTUAL compared to MEY)</i>	62.71	11.11	18.07	84.59	-44.16
1971-95 MSY	34.76	993	133	48	84
1971-95 MEY	28.74	960	128	40	89
1995 Actual	56.62	896	120	79	41
<i>(%Change of ACTUAL compared to MEY)</i>	97.01	-6.67	-6.71	98.99	-54.00

Source: Calculated from Panayotou and Jetanavanich(1987) and Boonchuwongse and Dechboon (2003)

Thai Marine fishing units, crews, households and employees

Item	Units or Vessels	Crews/unit	Households	Employees
w/o boat	3,763	1	3,550	4,962
Non-powered	2,876	1	2,559	3,282
Outboard engined	47,457	2	41,225	71,386
< 5 GT	3,336	2	3,249	6,170
5-10 GT	2,709	3	2,760	8,429
Total small-scale	60,141		53,343	94,229
10-20 GT	3,378	7	1,994	9,957
20-50 GT	4,667	10	1,340	12,597
50-100 GT	2,799	13	517	10,682
100-200 GT	438	22		
200-500 GT	59			
>500 GT	2	26	607	40,675
Total large-scale	11,343		4,458	73,911
TOTAL	71,484		57,801	168,140

Source: Lymer, Funge-Smith, Khemakorn, Naruepon, and Ubolratana (2008)

Investment and returns of selected Thai fishing vessels

Item	Hull	Engine	Initial investment	Catch	Revenue	Cost	Profit	Rate of return
	EU\$/vessel	EU\$/vessel	EU\$/vessel	ton/yr/vessel	EU\$/yr/vessel	EU\$/yr/vessel	EU\$/yr/vessel	%
Otter board trawler								
<14 m	11,380	1,879	13,259	77	23,437	22,843	594	3
14-18 m	22,174	3,286	25,460	177	60,898	43,818	17,081	39
18-25 m	67,095	10,484	77,579	381	81,416	59,293	22,123	37
>25 m	117,920	25,000	142,920	n/a	103,928	77,780	26,148	34
Pair trawler								
14-18 m	69,729	7,408	77,137	228	102,566	87,114	15,452	18
18-25 m	181,766	22,457	204,224	497	156,768	141,997	14,771	10
>25 m	256,197	50,000	306,197	n/a	664,400	377,019	287,381	76

Source: Calculated from Tokrisna, Kaoian and Kraimark (2006)

Investment and returns of selected Thai fishing vessels (2)

	Hull	Engine	Initial investment	Catch	Revenue	Cost	Profit	Rate of return
Item	EU\$/vessel	EU\$/vessel	EU\$/vessel	ton/yr/vessel	EU\$/yr/vessel	EU\$/yr/vessel	EU\$/yr/vessel	%
Beam trawler								
<14 m	12,011	2,188	14,199	16	10,837	9,354	1,483	16
14-18 m	18,933	1,969	20,903	35	31,770	27,613	4,156	15
18-25 m	41,985	3,400	45,385	31	69,336	68,866	470	1
Push netter								
<14 m	7,473	1,222	8,694	32	13,336	12,259	1,077	9
14-18 m	13,077	2,337	15,413	73	23,099	20,416	2,683	13
18-25 m	74,762	18,811	93,573	88	54,664	51,483	3,182	6

Source: Calculated from Tokrisna, Kaoian and Kraimark (2006)

Thai fisheries management

- Banned trawl and push net within 3 km from shoreline
- Limited new entry, non-transferable license on trawl and push net
- Closed areas and closed season
- Restriction on destructive fishing
- CBM/Co-management for coastal fisheries
- Artificial reefs

Thai fisheries management (2)

- Problems
 - Lack of property right
 - Overfishing and degraded fishery resources
 - Inadequate personnel, equipment and budget
 - Inefficient monitoring, control, and enforcement
 - Lack of cooperation from the fishers
- Attempts
 - Buy back program to reduce trawlers and push netters
 - Community based management and
co-management for coastal fisheries

Trends for Thai fisheries management

- For commercial fisheries
 - Preference of DoF on buy back program
 - Multi-species, multi-gears fishers --- reluctant on ITQ
 - Question on efficiency on limited entry licensing following the buy back program
 - Collaboration from the fishers
- For coastal small scale fisheries
 - CBM and co-management
 - Strengthening fishery management capacity for local organization
 - Pilot project on CBM

The vessel buy back program

- Targeted for trawlers and push netters
- Half decrease in trawlers and push netters would increase the return by 74%, an increase about 98 mill. EU\$
- Management criteria
 - Control and reducing number of vessels
 - Zoning
 - Data base

The vessel buy back program (2)

- Control and reducing number of vessels
 - Register unlicensed vessels, rigid penalty and terminate violator
 - Regulate building new vessels via Provincial Fishery Committee (PFC)
 - Capacity control on vessel size, power and mesh size
 - Revise licensing system and fees
 - Reducing number of vessels on voluntary basis
 - Alternative job opportunity
 - Financing for buyback from tax on exports, shift from artificial reef program, licensing fee

The vessel buyback program (3)

- Zoning
 - 3 km from shore: Banned trawlers and push netters.
 - 3-6 km from shore: single trawl is allowed.
 - Beyond 6 km: All are allowed.
- Data base and enforcement
 - Better stock assessment
 - Thai Fishery Association
 - Fishers
- Need effective and responsible controlling agencies

THANK YOU