

COASTAL FISHERIES MANAGEMENT IN CAMBODIA

by

Heng Sok
Department of Fisheries, Cambodia

1. Introduction

Cambodia has 1/6 of boundary is coastline that stretch for 435 km from the Thai border to the Vietnamese border. The coastal provinces are Koh Kong, Kompot and Sihanouk Vill. Cambodia had declared its Exclusive Economic Zone in 1978 (FAO) with an area of 69,000 sq. miles.

The average depth of Cambodia's sea is 50 m and the maximum of about 75 m but the seabed is flat. There is a great deal of island near the coast. The marine science was late developed in the past. Surveys have been carried out by the former Soviet Union scientists from 1983-1986, stocking assessment had only 50,000 tones per year. Even though the marine fisheries is located in the Gulf of Thailand which is endowed with rich fisheries resources if we compare to other parts of the Gulf of Thailand.

2. Marine Capture Fisheries

The marine capture fisheries are carried out by a wide range of small-scale and mid-scale gears including gill nets, seines and long lines used by inshore fishermen. The industrial fisheries further offshore uses motorized boats in the range of 10 hp to > 50 hp with trawls, gill nets, seines and long lines.

There aren't activities of the marine capture fisheries and even fisheries science during the period 1975-79. Moreover, the oceanography institute and other marine fisheries infrastructure were completely destroyed during the same period.

The marine capture fisheries activities restarted in 1979 with very few fishing boats, but the number rose up very fast to 4,000 motorized and unmotorized boats in 1990's then stabilized until today.

Coastal communities are less crowded than inland communities and the people devoted in the marine fisheries is rare. The number of fishermen and other fisheries employees record in 1994 were not higher than 10,000 persons. The fishing activities in coastal areas in Cambodia are mostly inshore rather than offshore since the majority of fishing boats are low power and unmotorized.

Unmotorized boats are used to operating in beach seining, fishing barrier, gill nets, crab traps, lift nets etc. The fishing operation are less than one day period. The production of this sub-sector was steadily increased since 1987 while the last record

in 1995 was reached to 30,500 tones. We estimated that in the year 2000 the fishing capacity will be 35,000 tones because we strongly effort to protect the illegal fishing.

There are little fishing activities by Cambodian boats in offshore areas because Cambodia boats are not equipped for staying there overnight and can not reach these areas in one day round trips. These areas are under-exploited. There are little patrolling or monitoring in the Exclusive Fishing Zone by the Cambodian authorities.

Following are the catching record of fish production and fishing boats for the past few years:

Fish production (Marine, tones)

year	Komport	Sihanouk Vill	Koh Kong	Total
1990	3,030	9,300	22,570	34,900
1991	8,100	8,300	20,000	36,400
1992	8,100	8,600	17,000	33,700
1993	7,940	8,560	16,600	33,100
1994	7,600	8,700	13,700	30,000
1995	7,300	9,200	14,000	30,500

Fishing boats (Marine)

Fishing Boat Type	1990	1991	1992	1993	1994	1995
No engine type	1,985	1,667	632	882	746	733
Less 5 tones	1,176	1,357	632	882	746	423
More 5 tones	809	310	0	0	0	310
With engine type	2,236	1,372	1,527	1,959	2,427	1,406
Less 10 hp	903	590	0	1,082	1,267	260
10 hp - 29 hp	489	263	1,162	601	705	658
30 hp - 49 hp	413	200	187	163	273	245
More 50 hp	431	319	178	113	182	138

3. Management of Exploitation in Marine Fisheries domain

All kinds of fishing in marine fisheries domain of Kingdom of Cambodia can be taken place on the contingency that the permission is available except small scale-family fishing.

- Small scale-family-fishing gears and other fishing gears allowed to operate in the marine fisheries domain of Kingdom of Cambodia must be defined by the proclamation of the Ministry of Agriculture Forestry and Fishery.

- Fishing boats or vessels of local fishermen must additionally have licenses allowed to operate in the sea issued by the fisheries authorities after technically controlled.

The foreign fishing activities in the Cambodia's marine fisheries domain must have the permission after approving from the Council of Ministers.

- Fishermen who are permitted to do fishing in the marine fisheries domain must:
 - (a) respect the order as mentioned in the fishing license.
 - (b) regularly record the fishing yield caught daily in the statistic books and monthly report to the provincial-urban fisheries authorities.
- Locating all kinds of fishing gears extended and caused the obstruction to the boat navigation are forbidden.
- Locating all kinds of fishing gear extended across the streams, inlets or navigable channels of the coastal zone must keep free space of 1/3 of width during low tide to enable the navigation of all kinds of vessels.
- The location of fishing or all kinds of fishing gears must dismantle at a longest date for 15 days after cease-fishing.
- Mackerel (Camong or Pla Thu) fishing in the sea during spawning season from 15 January to 31 March are forbidden.
- Trawling in the shallow depth from inshore up to 20 m of depth line are absolutely prohibited, except a special permission of the requirement of the Department of Fisheries for doing the experimental research.
- Using the electrocuted fishing gears, all kinds of explosives or modern fishing gears not yet mentioned in the proclamation of the Ministry of a Agriculture Forestry and Fishery are absolutely forbidden.
- Hiring of marine fisheries domain for exploitation must be up to the size of fishing gears and the horse power of fishing boats.
- Coastal Marine Aquaculture that have bigger than 0.5 ha of the pond areas must have the permission and the statistic books for recording all the production. The book must be signed monthly by the provincial urban fisheries authorities.

4. Coastal Aquaculture

At present, a relative small proportion of the world aquatic production comes from marine Aquaculture; most of this is centered on coastal water, estuaries, lagoons and semi-enclosed seas (FAO, 1996). Shrimp farming are the recent activities initiated in coastal areas in Koh Kong, Kompot and Sihanouk Ville.

Presently, most of shrimp farming activities are concentrated in Koh Kong. An estimated 598 ha of land is reported to be under shrimp culture. There are similar environmental concerns about this fishery as in neighboring countries particularly with conversion of mangroves to shrimp ponds and uncontrolled development leading to water and disease problems.

5. Inundated Forest in coastal areas

Inundated forests in Cambodia have been operated by the fisheries authorities especially mangrove forests that have an important role for fish sanctuaries and nurseries. Mangroves are now found mostly in Koh Kong province with an estimated for about 16,000 ha among the total of about less than 60,000 ha in Cambodia's coastal areas (FAO 1960).

So far, there have been illegal destroying of mangroves for making charcoals, firewood and rice growing.

6. Problems of the coastal fisheries management in Cambodia

The fisheries management and fishermen communities in coastal areas have faced the following condition :

- Most fishermen families incomes have declined since 1990 because of low harvested technology and transportation, depletion of stock resources and security.
- Fish maintenance system of the fishing boats have used only ices from inland. So the duration of fishing is only one night.
- The fishing boats have difficult been harboured at a few small wooden fishing ports because we haven't got a suitable concrete one. As a result, most of the fishermen have sold their yields directly to neighbouring countries' boats at offshore.
- There are illegal fishing in Cambodia sea, including neighboring countries' fishing boats. The local fisheries authorities are unable to police and arrest those illegal fishing boats because of haven't high speed petrol boats.

- There are little fishing activities by Cambodian boats or vessels in offshore because those boats or vessels do not equipped to stay there over night and can not reach these areas in one day round trips. There are little patrolling or other monitoring of the exclusive fishing zone by the Cambodian inspectors.

There are a great deal of fishermen anarchy houses in any places of coastline caused the water in those areas to become stagnant.

7. Marine Fisheries Planing Projects of Socio-Economy During 5 years (1996-2000)

7.1 Construction of Marine Fishing Port in Sihanouk Ville

Present situation of marine exploitation has more developed than in the past and the average total fishing boats are 40,000. All fishing boats are difficult to harbor because of our Government not yet construct the suitable fishing port as international style. At the present time we have had only small wooden fishing ports and the boats has been able to harbor only small numbers. A large numbers of fishing boats have harbored every places without tidy. In 1992 the Department of Fisheries had made a construction project of Fishing Port in Sihanouk Ville but the fund has not yet been available.

7.2 Establishment of Oceanography Institute in Sihanouk Ville

Previously, Fisheries Department existed an Oceanography Institute in Sihanouk Ville but presently, every kinds of the laboratory facilities have lost, so it also necessarily demands to rehabilitate and reconstruct in order to study and research the marine resources, Aquaculture and processing technology of marine fisheries.

7.3. Establishment of Marine Aquaculture Research Station

The establishment of this station for researching the technology of fish, shrimp, crab and mussel culture and breeding etc.

To promote the technological documents which are relevant to the aquaculture task in order to spread out the information to the people to promote the Marine Aquaculture without affected to the environment.

8. Conclusion

Coastal fisheries in Cambodia is complicated in management. The Government regulation have been instituted but enforcement is difficult. Marine fisheries resources have not much deteriorated but the seabed have little destroyed with trawl nets on the bottom. So far marine fisheries science have late development, so there are no results in marine resource research as well as other practice technology. Even though, Fisheries Department has special consideration of project

preparation plans and marine science development, but until right now all the projects have not yet been implemented because of lacking funds.

9. References

- Fisheries Laws, Department of Fisheries, Cambodia
- Annual fisheries reports of Fisheries Department, Cambodia 1995
- FAO 1995. Living Marine Resources and their Sustainable Development
- CORIN : Report of Coastal Zone Management Workshop in Thailand
- Planing Project of Socio-Economy During 5 years (1996-2000), Fisheries Department Cambodia.