

Chinese puzzle

Despite devolution of power, only better co-ordination between the central and provincial/local governments will save Chinese fisheries

With a seaboard of 320,000 km and a continental shelf of 374,000 sq km, China is the largest producer of fish in the world. In 1997, its marine fish production amounted to over 20 million tonnes. Most of the marine production is taken from the Bohai Sea, the Yellow Sea, the East China Sea and the South China Sea. The most commercially significant species are hairtail, small yellow croaker, large yellow croaker, filefish, round scad, Japanese anchovy, chub mackerel, Japanese Spanish mackerel, golden thread fin, pomfret, blue crab, conger pike, Chinese herring and various species of shrimp.

According to Chinese sources, the notion of fisheries management in China can be traced back to the Xiayu Dynasty (2100 to 1600 BC), which prohibited fishing during the summer spawning season. There is reference to the finite nature of resources of the lake and the sea in a book titled *Guanzi, baguanpian*, written during the time of the Chun Qui Dynasty (770 to 476 BC). This is interesting because, until recently, the world at large believed in the inexhaustible nature of the sea. During the Ming and Qing Dynasties (1369-1911 AD), fisheries management-related activities were specified — perhaps the earliest attempt in the world to manage the fisheries.

In spite of this hoary past, the marine fishing industry developed in China mainly after the 1940s. Bottom trawling, introduced from the US and Japan, has been the principal fishing method, accounting for over half the current fish production. The open-door policy of the Chinese Government led to privatization of fisheries since the 1980s, which led thousands of new entrants into the marine fisheries, many of whom are not even

licensed. Worse, the price liberalization policy of 1985 allowed fishers to sell their catch anywhere, even at sea.

There are basically three kinds of ownership structure in Chinese fisheries: ownership under the State; under the private sector; and under collective units. 'Collective' is the generic name for communes. Since the introduction of the open-door economic policy, the collectives have, in fact, become small-scale private fishing companies. So, essentially, fishing vessels operate under either State or private ownership.

The State-owned enterprises are operating at a tremendous loss because of decline in production and high operational costs of large fishing vessels. More and more fishers are becoming owners of fishing vessels, and, increasingly, smaller and smaller vessels are replacing large vessels in Chinese fishing grounds. This puts tremendous pressure on the enforcement machinery, which is basically designed to cater to fisheries with large vessels. The authorities also have problems in controlling indiscriminate fleet expansion. There is, for example, a marked increase in vessels under 20 m length. There is a tremendous growth in the sales of outboard motors, which are numerous — there are no reliable statistics on how many are, in fact, operating.

Unreliable statistics

Chinese fisheries statistics, which were fairly reliable about 15 years ago, are no longer so accurate because of the difficulty in keeping track of the fishing effort of smaller vessels. There are reportedly about 300,000 fishing vessels in China today, most of which would be less than 24 m in length. The vessels, however, are classified according to horsepower (HP).



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Most of the boats in operation are the small ones (below 20HP) and they have been growing at an annual rate of about 15 per cent.

Fisheries managers are acutely aware of the need to reduce capacity, but they do not know what to do with the large fishers population, about five million in the marine fisheries sector. There is a smattering of labour migrants to Taiwan and countries like Korea and Japan but there are certainly more people moving into the marine fisheries than moving out.

The Chinese fisheries management currently relies mainly on input control measures, which are perceived to be inadequate by the fisheries authorities themselves. The most significant management measure currently in use is the closed season. Since 1978, there was a two-month closed season, which in 1998 was extended to three months. During the closed season, it is illegal to even have your fishing gear either in the water or on board a vessel, irrespective of whether you are fishing or not. Although this is the most effective Chinese fisheries

management tool, it does not really take care of the overcapacity problem: fishing power continues to exist; it is not reduced as a result of the annual closed season. According to official sources, Chinese fisheries managers would actually like to see a combination of input and output control as well as technical measures to resolve the problem, but the political will at, and below, the provincial level is still not strong enough.

One of the political means to reduce fishing pressure in Chinese waters has been to encourage distant-water fishing (DWF) operations. The Chinese have been in DWF since 1985 and about 1,200 Chinese trawlers are currently operating in DWF. About 15,000 Chinese work on board these vessels, which operate in the EEZs of Mauritania, Guinea-Bissau (for octopus and fin fish), Morocco (squid and octopus), Senegal (fin fish and octopus), Sierra Leone (shrimp and squid), Yemen, Argentina (squid) and some South Pacific countries (tuna).

Capacity limits

Capping capacity is an important policy consideration and there is a moratorium

Inside view

A small-scale fishing unit that I visited in San Yan town, Jinsan District, Shanghai, mainly operated 10-m set-net units. Crews of three, at a depth 10-20 m, operate these units. The catch composed mainly of trash fish. Another collective fishing unit operated larger fishing vessels.

My visit was at a time when the fishery was closed. Most of the boats that I saw were over 20 years of age. They looked really dilapidated and old. Some of them had heavy stone weights; none was painted and those that were, had the paint all peeled off. It was said that some of the boats were, in fact, over 60 years old.

An average fishing trip reportedly lasts 10 days. There are about 180 fishing days in a year. During the closed season, no financial assistance is made to the fishers by the State. On an average, a fisher earns about us\$100 a month. For State-owned companies, however, the Government pays the minimum wage during the closed season.

The investment in fisheries is made, in most instances, from own or family savings. There are, however, instances when bank loans are taken. There is no auction of fish. The fish is sold according to prevailing market prices. The captain of the boat receives a payment about 20 to 30 per cent above the crew.

Stock declines due to increased fishing effort is a major problem. In the past, women were involved in making fishing nets. None of the women who belong to the commune is involved in fishery-related activities now; they all work in industries owned by the commune that produce textiles, shoes or car safety belts.

The fishers above 50 years of age are often illiterate; however, those younger than that have mostly completed secondary education. To join fisheries, you should be at least 17 years old and should have completed secondary school. The fishers have to be licensed but there is no licence fee. Fishing without a licence can lead to the confiscation of the craft and gear as well as the imposition of a fine.

A company in trouble

The Shanghai Marine Fisheries Co. Ltd. used to be one of the biggest in China and is owned by the municipal government. Once it operated 238 fishing boats, mainly trawlers and purse-seiners. Now only 23 fishing boats are operating in the Chinese waters.

The largest vessels owned by the company are factory trawlers fishing in the northwest Pacific, which have a capacity ranging from 2000-3000GRT. These vessels were imported second-hand from Germany. Large squid jiggers, about 63 m long, are also operated.

Due to the decline in fish production, 10 big trawlers that belong to the company have been tied up in the wharf. The resources are declining very fast. Collective fishing operations, which are small-scale, make it difficult for the vessels to effectively compete. The company has ceased its trawling operations in, for example, the East China Sea, because of competition from collective fishing operations, which operate much smaller fishing vessels with lower capacities.

As a result, since 1985, the company has been diversifying into distant-water fishing operations and factory trawling. Distant-water fishing operations take place in Yemen, Argentina, Mauritania, Morocco and the South Pacific. The company operates 69 vessels under 17 joint ventures with local companies. Thirty-three of these vessels are in squid jigging.

Three reasons were attributed to overfishing of Chinese marine fisheries resources: first, there

was too much capacity built into the fishing companies under State control; second, the emergence of smaller fishing vessels under the collective ownership; and third, marine pollution from industrial activities. It was observed that the stocks will not recover in the short run and that controlling fishing effort is very important for stocks to recover, which means many fishing units should withdraw from fishing.

About 1,900 workers were laid off as a result of fleet restructuring. Those above 50 years of age were given compulsory retirement although some were absorbed into non-fishery jobs. Some went back to their villages. And some were retrained to participate in the distant-water fisheries.

The workers on Chinese vessels are paid salaries linked to production. Although a basic minimum is guaranteed, the ceiling is not fixed. There are labour unions in fisheries, and their representatives participate in management decisions. All policies of the company have to be discussed and approved by the labour union. The company provides housing, health and schooling facilities to its workers.

Faced with overfishing and overcapacity, the company wants to decrease its participation in fisheries. The main problem they face is with the big vessels, which are less amenable to diversification. The alternative options they are considering are marine transportation, starting mariculture/aquaculture operations and concentrating on shore-based fisheries-related business.

on building new vessels, except to replace existing ones. There was a ceiling, for example, in 1981 on the total number of vessels, but the provincial and local governments would not comply with it. The ceiling is periodically revised and observed mainly in its violation. There is even a thriving market for old vessels between the provincial government and the collective fishing units. Now, with the collapse of several stocks, the market for second-hand vessels is poor.

Any planning for better fisheries management in China has to overcome the most pressing problem of the lack of co-ordination between the Central and provincial/local governments. While the

Central Government is interested in effective fisheries management, the provincial and municipal governments are still concerned with recovering their investments in fisheries. The local governments apparently have an investment protection policy. They are primarily interested in protecting the short-term interests of their fishing industry. The management measures proposed by the Central Government are often not implemented.

Devolution of power in the case of China seems, sadly, to have led to a situation of overfishing and overcapacity. The Centre is concerned about these problems but it has yet to find a positive response from the

provincial and local governments. Several of the controls introduced by the Central Government are apparently violated. The total quantum of fish production has a significant proportion of lower trophic-level species and juveniles.

Although, for instance, a potential collapse of green filefish stocks was predicted as early as 1988, no action was taken to prevent their collapse, which finally happened in 1991. The output of hairtail is now high, but the size of fish caught is getting progressively smaller, which makes scientists fear a repetition of the green filefish collapse.

In the national waters, the Bureau of Fisheries is responsible for implementing both the central and provisional fisheries legislation. The enforcement capacity of the Bureau is, however, rather weak. It is beleaguered by lack of financial resources, a dearth of trained staff and a shortage of patrol boats. Retired army hands often man the enforcement activities.

To make matters worse, there is a large influx of peasants into marine fishing operations. About 10 to 20 per cent of fishers are believed to be formerly agricultural peasants. There is migration of peasants into fisheries in Sichuan, He Nan, An Hui and Guanzhou Provinces.

Most of these farmer-turned fishermen are in the small-scale sector and work as crew for fishermen who own boats. Since the labour is cheap, owner-operator fishermen hire workers from the hinterland.

On the whole, it is reported that the quality of life of a fisher is better than that of a farmer, even in the prosperous coastal belt.

The Chinese capture fisheries are increasingly beleaguered by overfishing and overcapacity. How long China will be able to maintain its high production levels in relation to capture fisheries is open to question.

Unless quick measures are implemented, China will lose its primacy in marine capture fisheries to other countries. Although attempts are being made to diversify into distant-water fisheries, the

Lobsters and King Cobras

Shanghai Chaoan Siping Aquatic Market is the biggest fish market in China. Its frozen fish market is more than 30 years old. In addition to fishmeal, which goes entirely to the aquaculture industry, it imports an amazing variety of fish, ranging from hairtail to Patagonian tooth fish, which is sold at us\$150 a kg in some fancy restaurants. The high-value fish are all consumed in restaurants. The most expensive fish caught in Chinese waters is the golden-coloured large yellow croaker, which fetches about us\$100 a kg. The main market for high-value species is big businesses that buy expensive fish on entertainment expense accounts. The Chinese love to take their guests out to restaurants, as part of their tradition. In the restaurant where I was taken out for dinner, there were live lobsters from Australia, New Zealand and Norway, and stone crabs from the us. Of course, there were also live King Cobras in cages!

One of the marketplaces that I visited was recently set up and managed by a woman. It is now in the process of developing facilities to handle imported live fish. The market is owned by a co-operative that has a variety of businesses, including tea. The market not only handles fish, cephalopods and crustaceans but also farmed snakes and turtles.

future prospects in these fishing grounds look rather bleak, since they are also increasingly overfished. Unless the problems of overfishing, overcapacity and underemployment in fisheries are effectively managed, the Chinese fisheries will face a major crisis in the near future.

This article by Sebastian Mathew, executive Secretary of ICSF, is based on a recent visit to Beijing and Shanghai

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