About to Disappear

A field trip to Teluk Bahang, a fishing village on the northwestern tip of Penang in Malaysia, shed light on the lives of small-scale fishers

Malaysian fisherwoman Ani Zubaida did not mince words when she spoke about the adverse impact of trawlers on her life: "Trawlers are stealing our fish. They should not be allowed to fish in the territory of small-scale fishers. Else, we will be forced to quit this job."

What provoked Zubaida was the abysmally low catch she got in February this year. The average daily income of the 52-year-old from Teluk Bahang, a fishing village in Malaysia's Penang state, fell from Malaysian Ringgit (RM) 200 (about US$50) to RM 50 (less than US$15).

The dwindling catch is a result of indiscriminate trawling; Teluk Bahang has a large concentration of small-scale fisherpeople, who have been seriously concerned about the trawlers for a while now. In February, they interacted with journalists, members of non-governmental organizations (NGOs), policymakers and researchers from six Asian countries—they had gathered in Penang for a week-long workshop on 'small-scale fisheries, food security and wholesome nutrition', organized by the WorldFish in association with the Food and Agriculture Organization of the United Nations (FAO).

For the 400-odd small-scale fisherpeople in Teluk Bahang, trawlers are the biggest adversaries because of their unscientific fishing practices. "Trawlers are not supposed to fish between 14.8 km and 28 km from the shore. But they often violate the practice, denying us our livelihood," complained Zubaida.

Zubaida, one of the two fisherwomen in Teluk Bahang, started fishing at the age of 20 after her marriage with Rahim. "I turned to fishing to support my family," she said. "Now, my husband does not have to employ a helper. It helps us save money," she said.

Of late, the reduction in catch has cut a hole in the family's revenue. Zubaida and Rahim said they may be forced to quit fishing if the government fails to take action. "What is the point in continuing in this job without getting decent returns for your effort?" she asked. "Only the government can help us now," she said.

Persatuan Pendidikandan Kebajikan Jaringan Nelayan Pantai Malaysia (JARING), the Malaysian Inshore Fishers' Association for Education and Welfare, estimates that trawling has caused a 50 per cent drop in fishers' income in Malaysia.

Besides, said the organization's chairman, Jamaluddin Mohamad, the trawlers are causing large-scale environmental damage. "The trawl gear traps juvenile fish during their sweeping action. In the process, they destroy mangroves and the marine ecosystem," he said.

"Juvenile fish should be left to grow in the sea. Trawlers have to catch 92 juvenile fish to make one kg of fish. If the fish is left to grow, each fish may attain an average weight of 12 kg. We are losing huge quantity of marine wealth because of trawlers," he said. Jamaluddin added that the government should allow trawl gear only in 'Zone C' fishing area that lies beyond 28 km from the coast.

Abundant commodity

Fish was an abundant commodity in Teluk Bahang until a few years ago. It was a time when small-scale fishers never ventured too far to get a good catch.

Sixty-five-year-old Nurdin Hussein, one of the oldest fishermen in the village, said his village is experiencing

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T A AMEERUDHEEN

A small-scale fisherman in Teluk Bahang on the island of Penang in Malaysia. The dwindling catch – a result of indiscriminate fishing by the trawl boats – has been a major cause of concern for the small-scale fishers in Teluk Bahang

the adverse effects of trawling now. "The fish came to us when I started fishing 35 years ago. We had to put in little effort then," reminisced Hussein. "But we have to search for fish now. Fish wealth has dwindled because of trawlers." The fishers said indiscriminate development activities too have destroyed marine life.

Thirty-six-year-old fisherman Faisal said jellyfish population is on the rise in Teluk Bahang. And he believes it is linked to the extinction of sea turtles. "Turtles eat jellyfish. The number of turtles decreased drastically due to nonavailability of nesting space and this caused an increase in the jellyfish population," he said.

The Resonance of MuSIC

The capture fisheries of Bangladesh comprise nearly 70,000 fishing boats, offering livelihood to about 3.3 million artisanal fishers. They catch nearly 1.8 million tonnes of fish, which is almost 80 per cent of the total capture fisheries production of the country. Despite such a large contribution, the fishers and their livelihoods have been given scant attention by the authorities concerned, including the national policymakers.

The Multi-Stakeholder Information and Communication (MuSIC) Workshop, jointly organized by the WorldFish Center and FAO in late February 2019 in Penang, Malaysia, gave an opportunity for some Bangladeshi government organisations (GOs), NGOs and communication personnel to share their understanding and views with some of the regional country representatives, including international agency personnel and experts.

The workshop, designed with a high degree of professionalism, could establish a common platform for the respective stakeholders who are expected to act as the forerunners for the betterment of small-scale fisheries in their own country. To this end, WorldFish Bangladesh has organised some formal and informal consultation meetings/discussion sessions on small-scale fisheries, where the participants shared their experiences and took the learning back to their respective countries. Meanwhile, WorldFish Bangladesh has taken the initiative to design a future project that will address issues related to the small-scale fisheries of the country. In this regard, the MuSIC participants are trying to contribute in designing the project with the knowledge and learning.

The MuSIC platform requires further strengthening with the facilitation of the organisers. WorldFish and FAO can organise similar refresher workshops in regional countries with GO/NGO support.

– by **Masood Siddique,**
Natural Resource and Fisheries Expert, CNRS, Bangladesh

Man-made Islands and the Future of Penang's SSF Communities

The Multi-Stakeholder Information and Communication (MuSIC) Workshop was held in Penang, Malaysia, on February 18-23, 2019, with the objective of sharing and learning more about small-scale fisheries (SSF). It was co-hosted by WorldFish and FAO.

The MuSIC Workshop involved journalists, NGO activists and fishery researchers from six countries, namely, Bangladesh, Cambodia, India, Myanmar, Malaysia and the Philippines.

There are 4,817 licensed fishermen in Penang island and most of them are small-scale fishers. Currently, the main challenge for the SSF community in Penang, apart form decreasing fish catch, is coastal development and reclamation. Starting a few years ago, a few fishing grounds in coastal areas have been reclaimed by the state government for housing, most of it for luxury housing projects that locals cannot afford to participate in.

Affected by these reclamation activities, the SSF community in Penang began losing their fishing grounds. Pollution from reclamation forced fishers to travel far away to fish, increasing their cost of operation. As the amount of catch shrinks, they find it difficult to continue as fishermen. Slowly, Penang island is losing its SSF community.

The Penang state government plans to reclaim 4,500 acres south of Penang island. The proposed Penang South Reclamation (PSR) Project involves the creation of three islands stretching from the south of the Penang International Airport. The main rationale for the PSR is to create land banks to finance the Penang Transport Master Plan (PTMP), another controversial project.

PSR will have a tremendous impact on fisheries. In all, 4,817 fishermen in Penang will be directly affected by the project. Fishing activities are conducted extensively within the proposed PSR area as well as in the surrounding sea. The proposed reclamation project will lead to the total loss of mudflats, hitting the marine food chain and the fishing industry. Loss of coastal habitat due to this proposed project is a major environmental blow.

The mining of marine sand and aggregates used for reclamation and development projects is also increasing, affecting the seabed flora and fauna. Millions of tonnes of sand must be mined, and rocks quarried to create new land.

Dredging and extraction of aggregates from the benthic (sea bottom) zone destroys organisms, habitats and ecosystems—the impact is deep on the composition of biodiversity. This leads to a net decline in faunal biomass and abundance or a shift in species composition, research shows.

The Environmental Impact Assessment report of the PSR states that the wholesale value of fish landed at the study area was an estimated RM42.09 million, which amounted to 12.4 per cent of the total wholesale value of fish landings in Penang Island in 2015. Adding on to the downstream activities, this multimillion-ringgit fisheries sector, on which thousands depend, is being traded off for development. Fish are being wiped out, as will the fishermen as they lose their fishing grounds. Is that the intention of the state government?

Hopefully, the MuSIC workshop will be a starting point for the SSF community in Penang to join together and fight for their future.

– by **Azrilnizam Omar** of Persatuan Pendidikan dan Kebajikan Jaringan Nelayan Pantai Malaysia (JARING), Malaysia

Little wonder, then, that the small-scale fishery has become a less attractive profession for youngsters. Moreover, fisher parents do not encourage their wards to pursue fishing. "I don't want my children to pursue fishing. Let them get a good government job," said Rahim.

Statistics reveal that the number of fisherpeople has been dwindling in Teluk Bahang. Of the 7,000 residents, only 10 per cent pursue fishing full time now. "There is apathy among youngsters for fishing," said Shadier Iman, a State Fisheries Department official.

However, Jamaluddin said the lives of small-scale fisherpeople have improved after they started lobbying. "Our elders didn't demand anything from the government," he said. "But things began to change starting from 2008. We began to raise our voice, and the government began to implement welfare schemes for us."

The small-scale fishers now enjoys fuel subsidy, a monthly allowance of RM 200 and personal accident insurance of RM 50,000.

Trawl ban

That is why Jamaluddin believes that the government will definitely ban trawlers entering into the territory of small-scale fishers. "Small-scale fishers contribute heavily to the gross domestic product of Malaysia. The government cannot ignore our demands. So I hope the government will enforce a ban on trawl fishing by 2020," he said.

For more

https://www.worldfishcenter.org/events/worldfish-hq-events-multi-stakeholder-information-and-communication-music-workshop
WorldFish HQ events: Multi-Stakeholder Information and Communication (MuSIC) Workshop

https://dc.icsf.net/en/component/dcnews/articledetail/13301-World-News--In-.html
World News: In Focus: Small-scale fisheries in Asia

Caged in

The aquaculture industry in Malaysia is plagued by a range of problems that need to be addressed immediately

Aquaculture has a long history in Malaysia. Initially, aquaculture started as a traditional practice, integrated with agriculture and done on a small scale. Around 1970, the aquaculture industry began to grow in the country when semi-intensive shrimp farming was introduced in Johor State. Cage culture also began to be developed at that time, followed by cockle and mussel farming.

Between 1970 and 1980, the aquaculture industry collapsed due to land degradation in ponds as a result of increased acidity in the soil, which interferes with the immune system of organisms, and affects the rate of production of livestock and aquaculture resources.

Aquaculture activities began to increase rapidly in early 1990 with the introduction of high-capacity commercial aquaculture and supplements in fish and shrimp hatcheries set up by the government and private companies.

A widespread shrimp disease hit aquaculture farms in many countries in 1999 and led to the closure of farms and hatcheries in Malaysia. Poor management practices also contributed to the collapse of aquaculture farms.

At present, the industry is growing fast and is being promoted by the government, which views it as a good source of foreign exchange, since most of the output of intensive aquaculture is exported.

The Annual Fisheries Statistics of 2010 indicate that the total area of brackishwater aquaculture ponds is 7,722.82 ha, compared to 5,623.69 ha in 2006. An analysis of changes in mangrove areas in Manjung district in the State of Perak, conducted by the Forest Research Institute of Malaysia (FRIM), showed a notable decline of 64 per cent in the extent and distribution of mangrove forests between 1989 and 2009. One of the causes of this decline is aquaculture development.

The Malaysian government has taken various initiatives to develop the aquaculture industry, such as the introduction of Aquaculture Industrial Zones (ZIAs), zoning of land and waters as areas for aquaculture development in the Ninth Malaysia Plan, a specific provision of RM119.12 mn (approx. US$38 mn) for aquaculture development in the Tenth Malaysia Plan, and a Code of Good Aquaculture Practice (GAqP).

The aquaculture industry has contributed to the destruction of mangrove forests and agriculture...

Mangrove destruction

However, Sahabat Alam Malaysia (SAM) believes the development of the aquaculture industry will have more negative effects on ecosystems and the economy. The aquaculture industry has contributed to the destruction of mangrove forests and agriculture; reduction of natural habitats; deterioration of coastal protected areas; catching of juvenile fish to feed livestock; pollution and deterioration of water quality; introduction of alien species; and deterioration of land quality.

*This article has been written by **Azrilnizam Omar** (azrilo@gmail.com) of Sahabat Alam Malaysia (SAM)—Friends of the Earth Malaysia*

SAHABAT ALAM MALAYSIA (SAM)

Malaysia's aquaculture industry has destroyed coastal areas and adversely affected the ecosystem

The development of aquaculture industries in coastal areas has indirectly affected the quality of life of coastal communities, especially of fishermen. SAM believes the preservation and conservation of natural coastal areas should be a priority. The Indian Ocean tsunami of 26 December 2004 should be a lesson on the importance of mangrove forests in the preservation of coastal areas.

The Malaysian government believes that the development of aquaculture will help meet the country's requirement for protein, which cannot be met by marine fishery resources alone. SAM, however, feels that these initiatives are only temporary and not sustainable. The government should focus on efforts to conserve natural fisheries resources and should not encourage aquaculture as a solution to the depletion of fishery resource.

SAM believes the following are some of the deficiencies and challenges facing Malaysian aquaculture:

A. Absence of comprehensive policy, legislation and enforcement in aquaculture areas

Malaysia does not have an act or special law to regulate aquaculture comprehensively. There are only guidelines for aquaculture development in the form of the GaqP, which is issued by the Department of Fisheries, Malaysia. Unfortunately, the code of practice is not mandatory.

Furthermore, environmental impact assessment (EIA) reports are only required to be provided if the aquaculture project involves a mangrove area of over 50 ha. Although aquaculture projects often involve reclamation of vast areas of paddy fields, they are exempt from EIA.

To worsen the situation, there is no legally binding requirement for social impact assessment (SIA) for aquaculture projects. The absence of laws to regulate aquaculture projects denies the community a mechanism to voice their concerns and views on aquaculture development.

There is also no law to control wastewater from aquaculture ponds. The provisions in the Environmental Quality Act of 1974 apply only to sewage and industrial waste.

The absence of policies and regulations has allowed aquaculture industries to exploit resources for their own interests and benefit.

B. Lack of co-ordination in implementing government policy

Planning for aquaculture development is not in line with several existing government policy initiatives. Any aquaculture development plan should be consistent with the planning schemes of local, State and national bodies.

Take for example the issue of Integration of Prawn Aquaculture Project (i-SHARP) under the High Impact Projects—Aquaculture Industrial Zones (HIP-ZIA). The Detailed Environmental Impact Assessment (DEIA) report for i-SHARP stated that the project is implemented in environmentally sensitive areas, where only projects for recreational purposes and that do not affect the ecosystem are permitted. The i-SHARP project is also inconsistent with the Setiu District Local Plan. However, the State Executive Council (MMKN) has gazetted the area for agricultural use, with priority for shrimp farming.

C. Impact of the Aquaculture Industrial Zone (ZIA) on the ecosystem and local communities

The ZIA, one of the High Impact Projects (HIPs) under the Ministry of Agriculture and Agro-based Industry (MOA), has several negative impacts on the ecosystem and local communities since the projects are designed on a large-scale commercial basis.

Some areas of the proposed ZIA are mangrove forests and marine or coastal waters. Large-scale aquaculture projects will contribute to environmental degradation and the destruction of ecosystems and the livelihoods of fishermen. The privatization of this aquaculture project will only benefit corporate interests and private profits.

D. Reclamation of mangrove areas for aquaculture projects

Aquaculture activities destroy mangrove forests, many of which are converted into shrimp farms. According to Forestry Department statistics, almost 9,000 ha of mangrove forests have been destroyed for aquaculture.

In coastal areas, mangrove forests act as a buffer zone against storms, erosion and tsunamis. They are also breeding grounds for marine life. About 75 per cent of commercial fish species are bred in mangrove areas. Each ha of mangrove forest destroyed is estimated to result in an annual loss of 480 kg of marine products.

E. Trash fish as food in aquaculture

Trash fish is mainly used in the aquaculture industry as food. About 90 per cent of the aquaculture industry uses trash fish as a source of food. However, the use of trash fish is not efficient, as shown in the food conversion ratio for major aquaculture species as 8 – 15:1, depending on the quality of trash fish. This implies that a total of 8 to 15 kg of trash fish is required to produce only one kg of aquacultured fish.

The Annual Fisheries Statistics for 2010 indicate that the total landings of trash fish that year were 307,439 tonnes or 21.52 per cent of the total marine fish landings (1,428,881 tonnes). Trash fish also accounted for the second-largest amount of fish landings by trawlers in 2010, totalling 718,168 tonnes or 35.37 per cent. The high demand for trash fish for the aquaculture industry will encourage the use of trawl nets, which will, in turn, destroy the marine ecosystem and deplete fish stocks. Evidently, the use of trash fish for the aquaculture industry should be banned to ensure the survival of marine species.

F. Promotion of aquaculture in government policies

The government has encouraged the expansion of the aquaculture industry in the Ninth Malaysia Plan and the National Fisheries Policy/ National Agriculture Policy. It has provided various incentives, including financing the cost of basic infrastructure, and supplying planning and technical support to attract more entrepreneurs to invest in aquaculture industries. As a result, more and more areas will be converted into aquaculture farms, leading to the destruction of natural resources.

About 90 per cent of the aquaculture industry uses trash fish as a source of food.

In view of these considerations, SAM offers the following recommendations:

1. Policy, Legislation and Enforcement

a. Enact special laws for the aquaculture industry;

b. Make the GAqP compulsory;

c. Enforce EIA and SIA for every aquaculture project, regardless of size;

d. Review the viability of aquaculture activities in mangrove swamps and coastal and agricultural areas;

e. Strengthen the enforcement and protection of coastal mangroves in the National Physical Plan, the State Structure Plan and the Local Plan;

f. Gazette mangrove areas as protected areas, and enforce the mangrove buffer zone boundaries to prevent encroachment;

SAHABAT ALAM MALAYSIA (SAM)

The shrimp aquaculture project in Sanglang, Johor, Malaysia. Since 1970, the aquaculture industry has grown due to the introduction of semi-intensive shrimp farming

g. Create legislation to control wastewater discharge and precipitation from aquaculture ponds;

h. Ban semi-intensive and intensive aquaculture as well as extensive aquaculture projects involving large areas;

i. Ban the export of marine products unless there is a surplus of production;

j. Promote traditional polyculture aquaculture projects;

k. Tighten enforcement against illegal aquaculture projects;

2. Co-ordination of government policies related to aquaculture areas

Aquaculture development plans should be consistent with policies at the national, state and local levels. Any company or individual who wishes to carry out aquaculture projects should approach the Department of Town and Country Planning (DTCP) or local authorities to ensure that there is no conflict in use of land, as stipulated in the existing National Physical Plan, Structure Plan and Local Plan.

3. Review the ZIA project

Review the role of HIP-ZIA in contributing to the enhancement of the country's fishery resources. Opening up new areas for ZIA must be stopped and existing areas restored once the project has ended.

4. Stop clearing mangrove forests area for aquaculture projects

Aquaculture projects should be banned in mangrove forests and other environmentally sensitive natural habitats. Abandoned mines can be used as an alternative.

5. Stop use of trash fish

The use of trash fish as food in the aquaculture industry should be stopped to ensure the survival of marine species. Uncontrolled capture of trash fish, mostly smaller species that have a commercial value, affects fisheries stocks.

6. Encourage fisheries resource conservation

Enhancing and restoring fisheries resources should be a priority focus. The government should consider protecting and conserving marine and coastal ecosystems, including mangrove swamps, which are natural habitats for marine life. Encouraging the development of the aquaculture industry will only lead to the destruction of ecosystems.

The government should create policies that promote coastal fisheries, which contribute substantially to fish production, compared to deep-sea fisheries and aquaculture. There should be a ban on the use of destructive fishing gears.

SAM hopes that a special law will be formulated to regulate the aquaculture industry in Malaysia and protect natural ecosystems to ensure that the country's fishery resources remain available for future generations.

For more

apps.dof.gov.my/mahazia/display.html
Information for High Impact Projects (HIP) in Aquaculture Industrial Zones in Malaysia

www.dof.gov.my/55
Department of Fisheries, Malaysia

ms.wikipedia.org/wiki/Sahabat_Alam_Malaysia
Sahabat Alam Malaysia (SAM)