

## Plundering the Sea

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***Regulating trawling companies is difficult when the navy is in business with them.***

**Brian Fegan**

It is widely known that illegal fishing by foreign-owned trawlers is a major problem for Indonesia. The Minister for Marine Affairs and Fisheries, Rokhmin Dahuri, estimated at an October 2002 press conference that the nation loses some two billion dollars (US) worth of fish every year because of illegal fishing. What is less well known is that the nation is also incurring substantial losses from the existing arrangements for legal fishing. In the Arafura Sea surrounding West Papua, hundreds of trawlers, most from Thailand, are legally looting massive quantities of fish.

**The navy**, which should be patrolling Indonesia's waters and helping Dahuri's department enforce regulations on the fishing industry, **is doing the opposite: it is profiting from the plunder. The navy's cooperative, Inkopal, is the business partner of the leading foreign fishing companies whose trawlers ply the Arafura Sea.**

### The EEZ

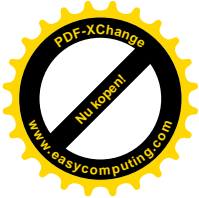
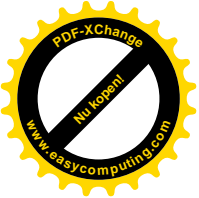
Southeast Asian maritime governments have long known that trawling represents a serious danger to the sustainability of fish stocks. The trawlers are so numerous that whole populations of fish can quickly disappear from the sea. Dragging fish-mesh nets along the sea floor, the trawlers indiscriminately scoop up all manner of marine life, not just fish. Trawlers, after spreading throughout the region in the 1970s, provoked many international and intra-national conflicts over fishing grounds. To handle the conflicts, Southeast Asian maritime nations declared 200-mile Exclusive Economic Zones (EEZs) around their shores in 1980. Each nation then struggled to either exclude foreign vessels or tax them so the host nation shared their revenue.

Indonesia was no exception to this pattern. President Suharto declared a ban on trawling in Indonesia's EEZ in 1980. Coastal fishing communities had been protesting the invasion of their fishing grounds by the trawlers. But trawler operators and their influential allies lobbied Suharto's government, which then opted for a compromise formula: trawlers (kapal pukat harimau) would simply be called fish net boats (kapal pukat ikan) and would be allowed east of longitude 130 E. That decision has concentrated legal trawling on the wide shallow shelf of the Arafura Sea running west from the southern coast of West Papua. The key ports in Maluku Tenggara and West Papua that now serve the trawling fleets since the closure of Ambon (due to the civil war there) are Tual, Benjina, Merauke, Kaimana, and Sorong, with some boats using Bitung and Makasar.

### Licensing

While researching Indonesia's fishing industry over the period 1998-2001, I discovered that the government had issued about 1500 licenses to trawling operators. However, not all of the license holders have trawlers fishing in Indonesian waters. My estimate is that there are **about 700-750 trawlers operating in the Arafura Sea.**

The trawlers carry sophisticated technical equipment: they have radar, sonar, fish-finders, and Global Positioning System instruments. Some have computerised logs that record the path of their journey and the statistics about the catch. However, these trawlers do not use gear that would lessen the environmental damage of the nets. They neither use large-mesh nets nor use equipment that would prevent the net from dragging along the seabed. The trawlers do not target any particular species or group of species but aim to collect the maximum possible biomass the catch includes everything from crabs to shrimps to sharks and turtles.



Where the fish-finder devices detect schools of fish but coral bottom could damage nets, trawlers work in pairs to smash the coral first. First the pair drag steel rollers between them to break up the coral and then come back over the same area to trawl the fish. The manager of an Indonesian fish processor company told me that Thai trawler skippers jokingly boasted to him: Indonesians think they are advanced because they have built highways over Jakarta. The Thai have done that in Bangkok. We Thai are more advanced: our trawlers have built highways under the Arafura Sea!

At least 90% of the licensed shrimp trawlers and all the fish trawlers appear to be owned by foreign Asian companies (Thailand, Taiwan, Japan, China, South Korea). The identity of the real owners is difficult to determine because almost all are registered under the name of an Indonesian company. In order to obtain a license, a foreign trawler owner has to enter into a joint venture or a charter arrangement with an Indonesian company. The central cooperative of the navy, Inkopal, appears to hold the largest batch of licenses. One source has informed me that Inkopal holds 367 licenses, most of them for boats owned by the huge Thai trawler fleet of the Sirichai company. Smaller batches are held by Inkopad, the army cooperative, and Inkopau, the coastguard cooperative.

In theory, this joint venture arrangement should provide some economic benefits to Indonesia. In practice, it provides very little. The Indonesian company is not a full-fledged partner that shares in the profits and losses but merely a shipping agent that collects a fee for its services. Such services include handling all Indonesian paper requirements, scheduling re-fuelling, arranging food and water supplies, acquiring visas for the crew, intervening with police when crew members are arrested ashore and intervening with the navy and courts if a boat is confiscated.

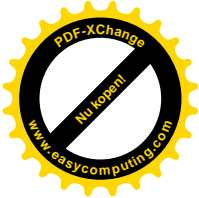
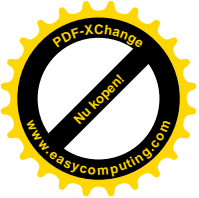
Given that Indonesian enforcement of the laws is lax and corruptible, one may wonder why the foreign vessels bother to obtain a license. There are several important incentives for them to obtain a license. One is cheaper fuel prices. If a trawler is flagged as an Indonesian vessel it is able to purchase subsidised diesel fuel at Indonesian ports at well below the world market price. It is able to pay lower domestic fees to anchor in a harbour or use a wharf. In effect, this means that Indonesia subsidises foreign vessels from richer countries to fish in its waters. Another incentive is to avoid the higher costs incurred while operating illegally. It is more difficult and costly for unlicensed vessels to clandestinely re-fuel, take on supplies, and transfer the catch.

## Reefers

Most of the Thai trawlers transfer their catches to what are called reefers, large freezer ships that collect the catches of several trawlers and then carry them to ports abroad, usually in Thailand. At the time of transfer, no representative of the Indonesian joint venture partner or Indonesian fisheries official is present. All of the information about the catch, such as the weight and the type of fish, is entered into a Thai-language form. That form is faxed back to the Thai companies that own the trawler and the reefer.

In doing my research, I obtained 143 transfer lists from Thai trawlers loading their catches into a Thai reefer in the Maluku Tenggara port of Tual. The lists were very detailed: they provided the weight of the catch for eighty-six different commercial species listed on the form. But neither the Indonesian partner nor the Indonesian government ever see these transfer lists. All that the Indonesian government fisheries office at the port receives or seeks is the Thai reefer company's report of so many tonnes of ikan beku campur frozen mixed fish exported.

The reefer company has an in-built incentive to under-report the weight of the catch since it



pays a 2.5% export tax calculated on the reported weight times the reported price per tonne of the fish. The trawler companies likewise have an interest in under-reporting the quantity and value of the catch, as true reports might be used to raise licence fees to a level reflecting the profitability of trawling in Indonesian waters. Thus, the government's statistics on the quantity of fish being extracted should be considered gross underestimates.

Its statistics on the amount of different species being taken are likewise worthless because it does not receive from the trawlers a breakdown of the catch by species. Without a breakdown by species of the trends in catch, scientists can only guess that long-lived slow breeding but valuable species like snapper and groupers are being wiped out. The total catch remains high because they are replaced by short-lived, prolific species like mackerels. This system of collecting statistics from the trawler industry does not serve Indonesia's interests either in developing a policy for scientific stock management or in collecting revenues.

In the port of Merauke, I tried to figure out the real weight of the catch being taken out by the reefers. I obtained from their skippers the hold capacity of each Thai carrier ship, looked into some of the holds to see how full they were, and learned the number of trips each vessel makes per year. My calculations gave an exported catch three times larger than that listed by the government for the same companies. This means that the companies were reporting only one-third of the weight of their catches. In addition, the value per tonne of frozen mixed fish reported to government varied arbitrarily between ports where trawlers fished the same grounds, with the same gear, and was below world market price.

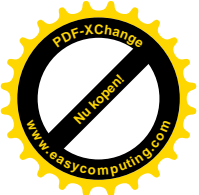
While extracting large quantities of marine life, the foreign trawlers provide little employment for Indonesians. The trawlers are built abroad and docked abroad every two years. The average crew onboard a trawler is around 30. According to the license agreement, thirty percent of the crew must be Indonesian. Usually only one crew member is an Indonesian national: the radio operator. Since the foreign-owned trawlers transfer their catches to reefers, the processing of the fish is done in other countries. Thus, no onshore employment in processing factories is generated in Indonesia.

### **Community management**

It was fashionable in the 1990s to celebrate community resource management as a solution to depletion of fishing grounds. Traditional, local institutions were thought to be the solution to what is proverbially known as the tragedy of the commons. Many meetings and conferences have been held to foster the concept of participatory coastal community fisheries management. There is, however, one large problem with this proposed solution: community institutions do not, under current law, have the authority to exclude outside fishing vessels from their waters. Indonesian law does not recognise coastal marine tenure by communities.

Local fishermen might be able to decide among themselves to limit boat numbers, mesh size of the nets, and the amount of the catch. They might be able to declare their fishing grounds to be a Marine Protected Area or designate a certain time of the year to be a closed season. They may agree that boats violating the rules are subject to community sanctions such as shaming, confrontation, withdrawal of reciprocity, and the like. A coastal community may also cooperate to build an artificial reef and replant mangroves. All these community regulations and projects, however, are inapplicable to non-locals.

Indonesian national law, as of late 2001, regulates where licensed boats are allowed to fish. Smaller boats are allowed to fish closer to shore while larger boats must stay further out. But any licensed boat, subject to this condition on the distance from the shoreline, can fish anywhere in Indonesia. The law does not give authority to local community institutions to exclude these licensed boats from their fishing grounds.



This sets up a classic freeloader problem: if outsiders can take the fish that locals refrain from catching in order to build up stocks, that can undermine locals adherence to their own rules. Any solution will require national legislation that allows community management of local fishing grounds and backs it up with the right to exclude outsiders. It will also require the government to be willing and able to cooperate with local fishermen to detect, arrest, prosecute, and impose sanctions on outsiders.

## Reforms

In the post-Suharto period, there have been a number of important political changes concerning fisheries management. Under President Habibie, the Department of Fisheries was separated out from the Ministry of Agriculture and re-established as the Ministry of Marine Affairs and Fisheries. This new ministry has had two reformist ministers in succession. The first minister, Sarwono Kusumaatmadja, brought his environmentalist background to the job. Under President Megawati Soekarnoputri, minister Rokmin Dahuri has been continuing Sarwono's push towards better management of Indonesia's fish stocks.

Both ministers and their staffs have met tough and persistent resistance to their reforms. The resistance has come from a variety of sources: Asian fishing companies, the fisheries associations and foreign ministries of their nations, influential military and civilian Indonesians working in the joint ventures with those Asian companies, and from parties in parliament supporting those lobbies.

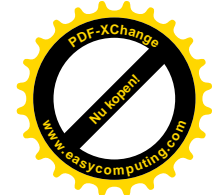
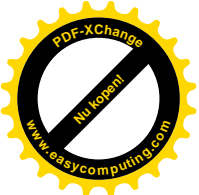
The devolution of power under the new regional autonomy laws has had an impact on fisheries management. Local politicians have felt compelled to respond to popular demands to protect the livelihoods of poor coastal fishermen from intrusion in their fishing grounds by large boats. But this devolution has not been entirely positive. Some local politicians accept illegal payments from the foreign fishing boats to use ports in their area.

## Remedies

To halt the plundering of the sea and manage its fisheries for sustained yield, Indonesian and Australian fisheries scientists calculate that Indonesia should first cancel all licences that do not have a matching boat, then reduce the number of licenced trawlers from the present 750 to 200. It could do this and maintain net licence revenue to the state by sharply raising the annual cost of a fishing vessel licence to reflect the catch capacity of each trawler according to its measured size and engine power.

The provincial governments presently have authority over a 12-mile zone off their coasts. To regulate boats operating beyond that 12 mile zone, there is no alternative but for the national government to devise, implement and enforce limits on how many boats can enter Indonesia's waters and how much fish they can catch. It is a positive sign that the Minister for Maritime Affairs and Fishing is seriously trying to beef up his department. In early 2002 he made an effort to cancel all existing licences, abolish fake joint ventures and to re-issue licences only after measuring the boats. Withdrawing some licences and raising the price of all will raise the incentive to fish without a licence. He is hoping to acquire 111 patrol boats for his inspection officials. Right now his department has only four.

However, other methods to control illegal fishing can be carried out in ports. They include allowing only licenced vessels to use and to refuel in Indonesian ports, requiring trawler and reefer to pass to a fisheries official the original tally lists of fish transferred, ensuring an official is present at the moment of weighing, reconciling those numbers with the harbourmaster's lading diagram of the reefer's holds, and getting an independent international source to determine the value of the catch transferred. But those measures too



must be backed by patrols to detect and prosecute vessels transferring catch and/or refuelling at sea.

Ultimately, Indonesia's civilian officials need help from the navy and coastguard to police the sea. There needs to be inter-agency cooperation to inspect the fishing vessels, their trawling gear, and their catches. The problem now is that the armed forces have no incentive to help enforce fishing regulations because they are in business with the large foreign fishing companies. Any progress in imposing some regulatory discipline on the fishing industry will require removing the armed forces from their present conflict of interest.

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