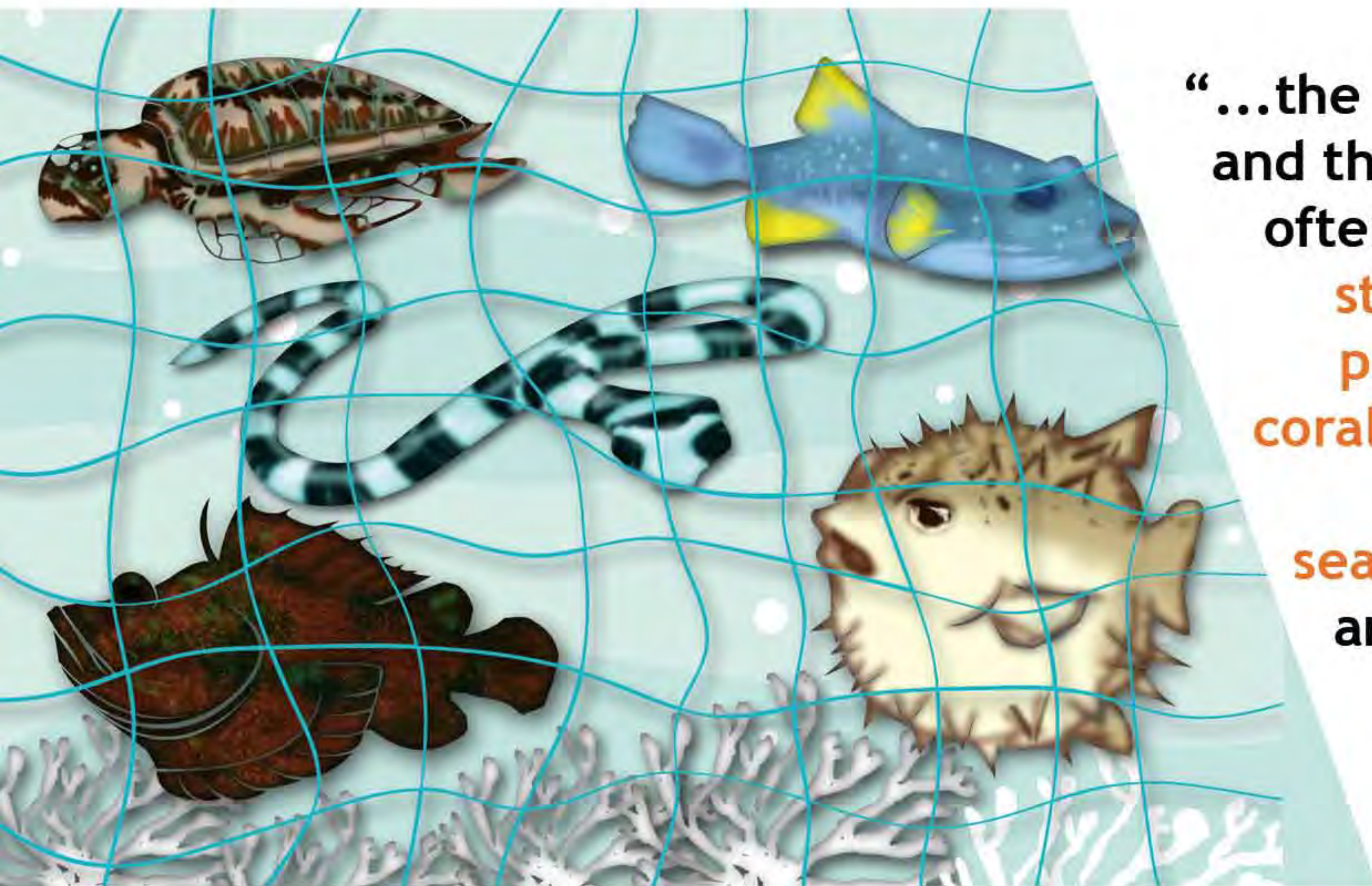


POLICY BRIEF: BOTTOM TRAWLING IN THE PHILIPPINES

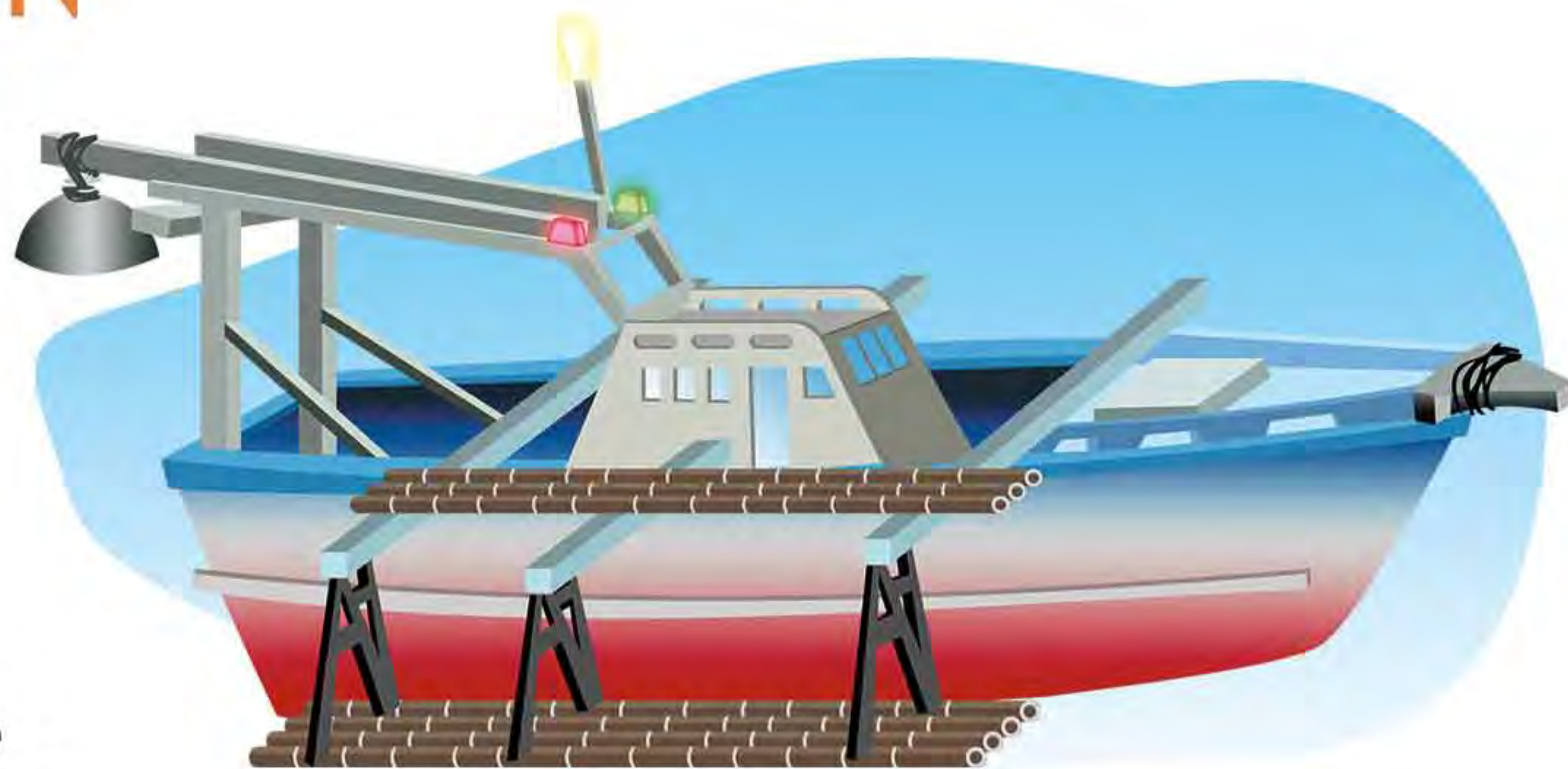
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World's Oceans



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INTRODUCTION

A bottom trawl is a cone-shaped fishing gear made of nets that are dragged on the bottom by one or more boats via long towing ropes attached to the sides of a main bag net. Otter bottom trawls are set to touch the seabed, with the opening spread maintained using otter boards. Beam bottom trawls operate in the same manner but use metal frames to open the mouth of the net. Bottom trawls in the Philippines are mostly used to target shrimp and prawn.



Trawls deployed by municipal vessels or boats of less than three gross tons are called baby trawls and are locally called *Karkar*, *Kagkag*, *Galadgad* and others.

The adverse effects of unsustainable fishing on fishery resources through the use of bottom trawl has long been recognized.

Bottom trawling causes disturbances to seabed ecosystems and habitats, and its catch often consists of juvenile fishes. Trawl operations are also detrimental to other non-commercially valuable species such as starfish, as well as endangered, threatened and protected species such as sea turtles.

Bottom trawling operations are also sources of conflict with other fisheries as it displaces or destroys other fishing gears, including the passive types such as fish traps or *bobo* along its path, especially in nearshore waters.

“Bottom trawl is considered as an active gear and is banned from operating within 15 kilometers from the coastline which, as a rule, and as a matter of equity, is reserved for municipal fishers.”

ECOSYSTEMS IMPACT



Bottom trawl is a highly efficient fishing gear. In the Philippines, bottom trawls typically operate in soft, sandy and muddy bottoms. If operated in fishing grounds of coral and seaweed ecosystems, trawls will damage corals and seaweeds.

Negative impacts of bottom trawl in marine ecosystems include the following:

- Stirring up and causing disturbances in the ecosystem as the net and otter board are being dragged by the sea bottom.
- As bottom trawl is a non-selective fishing method, the fishing gear opening catches everything it comes into contact with.
- Most bottom trawl catch are composed of juvenile fish and other marine organisms contributing to overexploitation and overfishing.
- Considerable amount of discarded bycatch include non-edible algae and non-edible marine organisms.

Bottom trawl bycatch is also alarming. For instance, in the coastal municipalities of Concepcion, Estancia and Carles in Iloilo, the catch of baby trawls and commercial trawls often include pufferfish, stonefish, sea snakes, porcupine fishes, soft corals, algae, seagrasses, coral fragments and sea urchins. Sea turtles are sometimes caught in trawling operations.

Several reports show declining catch rates per trawling hour, indicating the worsening state of sea bottom resources due to trawl.

Socioeconomic Impacts

Conflicts due to resource use over the fishing grounds persist. As catches dwindle due to overfishing, habitat degradation and other environmental factors, the race to fish often pushes resource users against one another, with bottom trawl operators competing against other fishing gear types. In areas where people rely on fishing as the only means of subsistence and livelihood, conflict arises among different groups such as fish trap (*bobo*) operators and bottom trawlers. A bottom trawling operation usually displaces or destroys other fishing gears including the passive types, pitting it in direct competition with other fisheries users.

Regulatory Framework



The conduct of research and presentation of data on the negative impacts of bottom trawl to the coastal and marine ecosystems and to the people who depend on it have triggered enactment of a significant number of policies by the Philippine government to minimize or stop their impacts. From 1954 to 1983, commercial trawls were banned in the Provinces of Bohol, Cebu, Quezon, Palawan, Batangas, Leyte, Samar, Cavite, Bulacan, Bataan and Metro Manila.

Local government units have also issued ordinances banning the use of trawls within their municipal waters. In San Miguel Bay in the Bicol Region, Municipal Ordinance (MO) No. 95-06 and MO No. 65-95 were issued by the Municipalities of Calabanga and Mercedes, respectively banning baby trawl. Sorsogon City likewise issued an ordinance banning the use of baby trawls within their municipal waters.

Table 1. Rules and Regulations on Trawls in the Philippines

Policies/Regulations	Year of Issuance	Scope of the Regulations
Fisheries Administrative Order No. 37	1954	Maqueda, Villareal, Carigara and Zumaragga Channel
Fisheries Administrative Order No. 54	1959	Manila Bay
Fisheries Administrative Order No. 99	1970	Manila Bay
Fisheries Administrative Order No. 104	1971	Prohibition for 1 year in Bohol
Letter of Instructions 480	1976	Northern Leyte, Southern Leyte, Northern Samar, Southern Samar and Sorsogon
Letter of Instructions 1165	1981	Manila Bay (Cavite, Bulacan, Bataan and Metro Manila)
Fisheries Administrative Order No. 130	1981	5-year closed season in Bohol
Fisheries Administrative Order No. 131	1981	Cebu
Fisheries Administrative Order No. 132	1981	Quezon
Fisheries Administrative Order No. 137	1981	Palawan
Letter of Instructions 1269	1982	Expanding LOI 480 to include Masbate, Catanduanes, Albay, Camarines Sur and Camarines Norte
Fisheries Administrative Order No. 142	1983	Batangas
Fisheries Administrative Order No. 175	1991	Manila Bay
Fisheries Administrative Order No. 201	2000	Ban on Active Fishing Gears in Municipal Waters

In May 1983, Letter of Instruction (LOI) No. 1328 was promulgated to close commercial trawl fishing within 7 km from the shoreline and within 7 fathoms deep on a nationwide basis. The primary considerations of the nationwide ban on commercial trawl were threefold:

- First, a need ‘to improve the standard of living in the rural fishing communities’, recognizing that the municipal fisherfolk who depend on the coastal and marine resources for livelihood and subsistence were the poorest of the poor.
- Second, a need ‘to protect municipal fishery resources against the heavy exploitation of fish and aquatic resources in the entire marine water areas of all the provinces of the Philippines’.
- Lastly, ‘to provide municipal and small-scale fishermen wider areas within which to operate their fishing boats’, in cognizance of the fact that municipal fisherfolk often do not get their fair share of fishery resources. This also showed a heightening conflict between the artisanal and commercial users of the resources.

Under Republic Act No. 8550 or the Philippine Fisheries Code of 1998, the ban on bottom trawl within municipal waters nationwide became operational through the prohibition of active gear within the 15 km municipal water zone from the coastline. This prohibition was further clarified under Fisheries Administrative Order 201 which was issued by the Department of Agriculture - Bureau of Fisheries and Aquatic Resources (DA-BFAR) in 2000, referred to as the Guidelines on the Ban on Active Gear within municipal waters.

In 2015, the Fisheries Code of 1998 was amended by Republic Act 10654 or An Act to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. Among the policies espoused by the amendatory law is the adoption of the precautionary principle and ecosystems-based approach to fisheries management. DA-BFAR issued Department Order (DO) No. 10, which provided for the implementing rules and regulations (IRR) of the law. Along with its many provisions, the ban on trawls and other active fishing gears within municipal waters was retained.

Current Legal Status

Section 95 of the amended Fisheries Code provides that ‘It shall be unlawful to engage in fishing in municipal waters and in all bays as well as other fishery management areas using active fishing gears as defined in this Code.’ On the other hand, Section 4 (44) of R.A. No. 10654, defines active gear as ‘a fishing device characterized by the pursuit of the target species by towing, pushing the gears, surrounding, covering, dredging, and scaring the target species to impoundments, such as but not limited to trawl, purse seines, Danish seines, *paaling* and drift gill net’. Furthermore, under Rule 95.2 of the Implementing Rules and Regulations of R.A. No. 10654, bottom trawl was not identified as an exception to the active gear classification.

Clearly, trawls being defined as an active gear are prohibited in the 15-kilometer municipal waters as well as in bays and any other fishery areas that are subjected to fisheries management areas even beyond or outside municipal waters.

Policy Options Towards an Effective Ban of Trawls within Municipal Waters



Interestingly, the circumstances that justified the nationwide ban on commercial trawls under LO 1328 thirty-one years ago remain true until now, and people in the rural fishing communities remain among the poorest of the poor. Although weak enforcement of fisheries laws and regulations, and the lack of political will to implement the ban on bottom trawling remain as the hurdles behind the ineffective ban on baby trawls within municipal waters, government through the Department of Agriculture - Bureau of Fisheries and Aquatic Resources (DA-BFAR) and the Department of Interior and Local Government (DILG) can address the problem by issuing joint implementing guidelines for the enforcement, decommissioning of gears, provision of livelihood assistance and establishment of science bases for management measures.

We recommend the following:

1. The Department of Agriculture-Bureau of Fisheries and Aquatic Resources and the Department of Interior and Local Government (DILG) to **issue a joint department administrative order (JAO)** enjoining LGUs and other law enforcement agencies to enforce the total ban of bottom trawl in municipal waters, bays and other fishery management areas, with corresponding measures for decommissioning and conversion to legitimate gear. The guideline should also contain alternative livelihood options for displaced municipal fishers and provide a guide on opportunities for credit and other industries.

The JAO must take into account the cost and benefit that corresponds to the effective ban of trawls to both municipal and commercial fisheries. In a study conducted in the West Visayan Sea municipalities in Iloilo, it is estimated that it would cost between Php 65 million to Php 142 million for municipal and commercial operators to leave trawl fishing. Conversely, over a five-year period, between Php745 million to Php946.23 million is needed to rehabilitate the fisheries affected by trawl fishing. In this particular locality, the cost of rehabilitation of trawled fishing grounds far outweighs the correspondent initial costs for decommissioning and conversion of gear - highlighting the need for guidelines to enforce the ban within municipal waters at the soonest time. To scale this up on a nationwide scale, a JAO is imperative to give life to the law while considering the socioeconomic impacts to municipal fishers.



Mini-trawl concentration in the Visayan Sea

2. For areas beyond municipal waters, establish a **Scientific Advisory Group** to review biological and environmental impacts of bottom trawl to resources within Fisheries Management Areas. The advisory group, armed with pertinent data from government and academe, would be in the best position to recommend management measures for each bay, gulf, or any fisheries management area. The limited personnel and capacity of the regional offices of DA-BFAR to conduct technical assessments underscore the need for scientific advisory group, whose mandate would be to assist the DA-BFAR in coming up with technical research that can be utilized in determining fisheries management measures. This also does not preclude the Department of Interior and Local Government from coordinating with the local government units which it supervises in assessing, capacitating and monitoring their mandate to protect municipal waters, enforce the ban and to look at possible sources of livelihood of the affected constituents.

3. Although there are initial studies in the Visayan Sea on the impacts of bottom trawling (See Annex 1), similar studies must also be made in other areas where municipal and commercial trawls operate. These include **San Miguel Bay, Tayabas Bay, Manila Bay**, parts of Leyte and Samar, among others. It is crucial that the National Fisheries Resources Development Institute, the research arm of the DA-BFAR, be given sufficient funds to **conduct a census for fisheries** to include a nationwide inventory of boats and gears. Upon such study, relevant data on trawl fishing as well as other fishing gears and practices can be made available, which can be utilized in designing appropriate fisheries management interventions.

In conclusion, Oceana recommends the above steps be taken to assess and minimize the damage wrought by bottom trawls, thereby maximizing fisheries productivity before more habitats are damaged. Time is of the essence.

Annex 1. Table 1 The estimated cost of damage of trawl fishery to the fishery habitats in 3 sites (Estancia, Carles, and Concepcion, Northern Iloilo).

Discount rate	Municipal	Commercial	Total in Pesos	Total in USD
3	295,952,016.80	650,341,879.02	946,293,895.83	18,925,877.92
8	250,018,807.69	566,985,276.96	825,004,084.64	16,500,081.69
12	232,949,562.84	511,896,685.33	744,846,248.17	14,896,924.96

*The damage of bottom trawl fishing to the fishery habitat is equivalent to how much it would cost to rehabilitate the resources (replacement cost method) by not allowing trawl fishing.

**The real rate of interest is the appropriate discount rate for benefit-cost analysis, all factors considered.

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