

Kampong Mee Trawl Fishery, Malaysia

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1 Static Analysis - Collective action

The Kampong Mee Trawl Fishery case was a part of the original CPR database developed in the 1980s by Edella Schlager and Shui Yan Tang at Indian University. The original coding can be found under the CPR tab under Institutional Analysis. . The common pool resource system is the Kampong Mee Trawl fishery in Malaysian district of Sungei Itek, the largest fishing settlement in the region and is home to two thousand inhabitants.

1.1 The Commons Dilemma

The commons dilemma dominating the Trawl fishery, located near Penang and other fishing ports in Malaysia, is overfishing. Total catch has remained relatively consistent, but this is due to increased fishing efforts, the catch per unit input and per unit effort has steadily declined. Trawlers are limited to 7-miles off of the but the boundaries of the entire system are difficult to establish, but it is known that overfishing has caused the extermination of a few of the local fish species. shore Without reliable data and limited methods for reducing free-riding behavior there is both an over appropriation of common-pool resources and an under-provisioning of infrastructure problem. Trawlers are some of the worst free-riding offenders through the use of catch all nets along the sea floor which capture the younger fish species. This has caused a rapid decline in fish stocks. While there is a strong central Malaysian government, this government permits freedom within the economic system and therefore no systems are in place to protect the productivity of the fishery. The government has attempted to regulate the fishery but without enforcement the regulations were ineffective and self-regulation has proven to be ineffective.

1.2 Biophysical Context (IAD)

Natural Infrastructure The natural infrastructure of the system includes the Malaysian waters outside of the Kampong Mee village, however the bounds of the system are difficult to delineate. This system is in poor health due to erosion and leaching. Warm waters cannot support large quantities of fish due to decreased oxygen availability. Additionally, pollution from sewers and fertilizers running off into the ecosystem have caused a decrease in population. Both of these factors have led to an unproductive fishery. Surrounding swamps and rivers serve as breeding grounds for fish, which can be partially attributed to the stream beds poor health.

Hard Infrastructure Private hard infrastructure includes the fishing boats used by local individuals. The amount of fishing boats operating ranges from 100-150 on a given night. Trawlers drag large fishing nets along the sea floor to optimize catch sizes, however

these take younger fish species with them. Additionally, there are row boats that use the fishery.

Public hard infrastructure includes ports for docking boats.

1.3 Attributes of the Community (IAD)

Social Infrastructure The Malaysian government worked through the Ministry of co-operatives to form six co-operatives to manage the fisheries. The co-operatives dominated much of the political-economy of the fishery and removed power from the local fishermen. Thus, individuals became devoid of power, but their voices are now heard through the co-operative which appropriately channels their complaints. The primary function of the co-operative is to collect statistics on the fishery, provide licensing services to fishermen and pay the fishermen for caught fish.

Human Infrastructure Trawlers know fish species and keep them for their own subsistence. They sell these fish and use the proceeds to purchase cheaper food for themselves. This is illegal under the co-operative rules.

1.4 Rules in Use (IAD)

The Malaysian government passed rules and formed co-operatives with the hopes of stabilizing the fishery.

- ***Position Rules***

- Six co-operatives represent the fishermen of the Trawl fishery, each has a committee head that is appointed by the Malaysian government. The committee is elected by co-operative shareholders.

- ***Boundary Rules***

- Trawlers are unable to operate within seven miles of the shore. Trawlers must join a co-operative to gain a license. Licenses are required for trawlers to operate within the fishery. Other fishermen do not need a license.

- ***Payoff Rules***

- Trawlers operating outside seven miles of the shore are fined. Co-operatives take a 5% commission from the fishermen. Fishermen caught breaking marine laws are fined \$250. Co-operatives require an initial investment ranging from \$300-\$1000.

1.5 Summary

The Kampong Mee marine policies failed due to the inability to enforce the regulations. Six co-operatives were formed with the hopes of regulating the fishery, however the government was unable to afford the required ratio of one policeman per boat to enforce rules. Due to the imbalance of policemen to operating boats, the policemen were unable to reprimand rule-breakers accordingly. Policemen were only able to harass lawbreakers. Fishermen were also able to identify policemen from afar and were able to release their catch or move locations to avoid being caught. Additionally, fishermen self-organized when the Malaysian government

passed laws to regulate the Kampong Mee Trawl fishery by refusing to observe the rules. They claimed that they were unable to operate at a profit under the governments fishing constraints. Selling through the co-operatives limits the individual income. Fishermen have resorted to selling valuable fish illegally to supplement their income due to the lower prices offered through the cooperatives. Other types of regulations have been proposed but fishermen have lobbied against proposals.

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