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Appetite for fish is stripping reefs

Experts: Overharvesting puts Asian reef ecosystems at risk

By Michael Casey
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KOTA KINABALU, Malaysia -- Diners' appetite for live reef fish -- a status symbol for many newly rich Chinese -- has caused the populations of these predators to plummet around Asia as fishermen increasingly resort to cyanide and dynamite to bring in the valuable catch.

Entire reef ecosystems, already endangered by pollution and global warming, are at risk.

A study released this past week about the trade in Malaysia found that catches of some grouper species and the endangered Napoleon wrasse fell by as much as 99 percent from 1995 to 2003, a period coinciding with soaring economic growth in countries where the exotic fish are a delicacy.

"The removal of these large, predatory fish might upset the delicate balance of the coral reef ecosystem," said Helen Scales, who co-authored the study for the Swiss-based World Conservation Union. The study appeared in the online edition of Proceedings of The Royal Societies.

"With all the threats the reefs already face, these fishing practices take us one step closer to losing these reefs," she said.

The study of daily fish catches and sales quantifies what conservationists have said for a decade: that hunger for live reef fish in Hong Kong, Taiwan and mainland China is causing populations of wrasse, grouper and coral trout on coastal reefs to plummet in Malaysia, Indonesia, the Philippines and Papua New Guinea.

There is also a growing live reef fish trade off the coast of California, according to Scot Lucas of the California Department of Fish and Game. But unlike in Asia, the trade is heavily regulated, and fishermen are not known to use the same destructive methods.

The U.N. and the World Conservation Union released a report last year warning that exploitation of the high seas was putting many of its resources on the verge of extinction.

It noted that 52 percent of global fish stocks are overharvested and that populations of the largest fish such as tuna, cod and swordfish declined as much as 90 percent in the past century.

Conservationists fear the growing demand for live fish -- an industry worth more than \$1 billion a year -- is increasing pressure on coral reefs already threatened by warming oceans, development and pollution.

Eighty-eight percent of Southeast Asia's coral reefs face destruction from overfishing and pollution, the U.S.-based World Resources Institute estimates.

Conservationists say the answer is to establish international standards for managing the import and export of reef fish. They also say consumers must be educated about the need to avoid certain endangered fish and promote captive breeding.

- 1) The focus of this story is on the over harvesting of live reef fish in Malaysia. More wealthy countries such as China, Hong Kong, and Taiwan have an increasing demand for reef fish. This demand is being filled by less wealthy countries such as Malaysia, Indonesia, the Philippines, and Papua New Guinea. These countries use environmentally unsound measures, such as cyanide and dynamite, to obtain these fish. Also, the removal of these fish upsets the reef ecosystem.
- 2) This story relates to fish ecology because it deals with the removal of certain species of fishes as well as the destruction of the fishes' habitat. Depleting species of fishes and destroying their habitat has a far reaching negative effect on all the fishes in that area.
- 3) The main non human players in this story are wrasse, grouper, and coral trout that live on the coral reefs in the areas around, Indonesia, the Philippines, and Papua New Guinea. The main human players in this story are the fishermen who exploit these fishes and also the consumers who supply the demand for these fishes in the first place.
- 4) This story depicts some of the ways how the human demand for fish is wreaking havoc on their health and even threatening their extinction. One numerical example within the article is that populations of tuna, cod, and swordfish have declined by around 90% in the past 100 years.
- 5) This article was one sided and only showed evidence against the live reef fish trade. The article was also geared toward the general population with little to no scientific data presented.
- 6) Knowledge that would be useful to this situation would be knowledge of how the certain species interact with each other as well as with the coral reef.
- 7) The main tool for helping this situation is getting knowledge to the people. If consumers realized which fishes are endangered and what the harvesting of these fishes does to the animal themselves as well as to the environment, they might cut back consumption. Also, the fishermen need to be educated in conservation techniques and should be motivated to set limits for the amount of fish harvested.