News - December 6, 2007

Fishing for Profits: Reduced Catch Means Net Gain for Fishers—And Fish
The more robust a given population of fish, the more money fishers can hook

Without fish, there can be no fishing—and such an outcome could be the future: A recent study indicates that the world's oceans appear headed toward a global collapse as overall fishing yields continue to decline dramatically, having dropped by some 10.6 million metric tons since 1994. The problem appears to be a classic "tragedy of the commons" wherein a common asset is exploited to death because no one individual has an incentive to preserve the shared resource. But, researchers report in Science that, in this case, the profit motive can be enlisted to solve this tragedy of the fisheries.

In short, economist R. Quentin Grafton at The Australian National University in Canberra and his colleagues found that, even for species that take decades to recover, reducing fishing yields in the short term boosts fishing profits in the long run. A review of four different fisheries—from fast-growing Australian northern prawn to slower growing Australian orange roughy (along with bigeye and yellowfin tuna)—showed that the highest fishing profits come from allowing these species to recover. "It's not economic to exploit fisheries to extinction," Grafton says. Rather, the more exploited the fishery, the more economic gains to be derived from allowing it to make a comeback. Simply put: as fish become more plentiful, it costs less to catch them. "The debate is no longer whether it is economically advantageous to reduce current harvests but how fast stocks should be rebuilt," the researchers wrote.

There is a catch: "The people who reduce catch to rebuild stocks need to be the same ones that benefit by the reduced costs of fishing and higher catch per day," says fisheries scientist Ray Hilborn of the University of Washington, who participated in the analysis. "This means there must be some form of exclusive access: people who are not fishing now because it is not profitable cannot have the ability to join in the fishery when it is more profitable. If that happens then the people who pay the 'pain' don't get the 'long-term gain.'"

The researchers, therefore, argue for some form of "individual transferable quotas" (ITQs) that would give fisherfolk shares in a total allowable catch from a given fishery. Whereas a given quota could be sold to someone else, the overall total catch could not change. Such a system has been tried in Alaska and New Zealand and has led to fishery recoveries.

Although harvests would have to decline in the short term, the long term can require several decades or be as short as a few years (as in the case of Australian northern prawn). "Many of the cod stocks in Europe are overfished but still highly productive," Hilborn notes. "They would grow at 50 percent per year if fishing were completely stopped and, with a significant reduction in fishing but not total, could rebuild rather rapidly."

The researchers plan to analyze other fisheries to see if the same rule applies, but profit and property rights may prove the best tool to preserve fish worldwide. "A shift to the right target—discounted economic profits to fishers—and instruments, such as ITQs and the like, would have a huge positive impact on world fisheries," Grafton argues. It is "truly a win–win: more fish in the sea, more resilient ecosystems and much, much more profitable fisheries."

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