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Cod and haddock are unloaded and sorted at Lydia's Cove in Chatham, Mass. The depletion of fisheries is clouding the future of the fishing industry in Cape Cod. (Mary Knox Merrill / The Christian Science Monitor / FILE)

Study: Privatization could avert fisheries' collapse

By Eoin O'Carroll | 09.26.08

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Replacing the fishing season with a quota system could prevent fisheries from being depleted, a new study has found.

Writing in last week's issue of the journal *Science*, a trio of researchers has found that the world's handful of fisheries with a "catch share" system, in which individual fishermen own long-term rights to a percentage of a predetermined catch limit, are half as likely to have collapsed than traditionally managed fisheries, in which fishermen try to catch as many fish as possible during a fishing season.

The study's authors – two from the University of California at Santa Barbara and one from the University of Hawaii – surveyed 121 fisheries with catch-share systems and compared them with catch statistics from 11,135 fisheries around the globe from 1950 to 2003. Their conclusion: "Implementation of catch shares halts, and even reverses, the global trend toward widespread collapse. Institutional change has the potential for greatly altering the future of global fisheries."

It can't happen soon enough. As the Monitor reported in June, [one-quarter of the world's fish stocks are overfished](#), and another half are fished to full capacity. One study found that, if current trends continue, the world will completely run out of seafood by midcentury.

So how does a catch-share system work? First, marine scientists establish a safe level of annual catch for a species or group of species. Then, each individual boat or fleet is granted the right to a percentage of that catch, and they have all year to fish for it. The allowable catch fluctuates from year to year, but the percentages are guaranteed. Fishermen can buy and sell these shares, but no new shares are allowed.



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Eoin O'Carroll

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“It's almost like cars are the sea within which we live and we're so attached to them, it's so habitual. . . We are trying to lead the way, to set an example about how to get away from cars altogether.”

Andrew Brown, founder and CEO of New Amsterdam Project, a Cambridge company that hauls cargo via industrial tricycles

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The Washington Post quotes Galen Tromble, fisheries chief at the National Oceanographic and Atmospheric Administration, who [explained how fishermen qualify](#) for the shares:

Each share system operates differently, Tromble said, but federal guidelines dictate that anyone who has "substantially participated" in a fishery deserves part of the overall quota and that no individual can have "an excessive share." In the red snapper fishery in the Gulf of Mexico, which switched to a share system on Jan. 1, 2007, managers set quotas based on the 10 best consecutive catches an individual had brought in from 1990 to 2004.

David Krebs, who owns Ariel Seafoods in Destin, Fla., and has been fishing there since 1969, owns almost 6 percent of the gulf's annual red snapper catch, just below the maximum share. Krebs noted that red snapper used to fetch \$1.50 a pound dockside and has risen to \$4.50 a pound as the fishing pressure has eased. He calls the new system "truly a success story."

"It's the most versatile tool that allows a fisherman to fish when the market needs the fish," Krebs said.

A [2007 report by the Environmental Defense Fund](#) found that the benefits of catch sharing go well beyond preventing fishery decline. In a study of US and Canadian catch-share fisheries, the EDF found that revenues per boat increased by 80 percent, as fishermen sought to maximize the value of their share by delivering fish according to market demands. Bycatch – species other than the ones fishermen were trying to catch – was reduced by 40 percent. And safety more than doubled, as fishermen were able to stay ashore during bad weather and did not have to rush to catch as many fish as possible as they do during a constricted fishing season.

A success story can also be found in the Alaska halibut fishery, which converted to a catch-share system in 1995. By that year, the stocks had become so depleted that the fishing season had dwindled to only a few days, during which time prices were low because the market was flooded. Today, the season lasts almost eight months, and a boat can remain in the water until it has caught its share. Fisherman can land bigger fish and sell them at higher prices. And [according to the Economist](#), since the system was put in place, search-and-rescue missions have dropped by more than 70 percent and deaths by 15 percent.

The system has its critics. The BBC quotes fisheries expert Daniel Pauly who calls catch sharing "an elegant solution to a big problem," but worries that they raise [insurmountable barriers to entry](#):

"[T]here is unfairness in allocating the shares initially, because you are giving something to the biggest fishers and the others are not getting access and will not get access for ever."

"So I think it's one of the tools that can be introduced in specific fisheries, but you shouldn't look at it with the degree of absolutism and even fanaticism that has characterised the discussion in some countries."

Additionally, the EDF report found that, while full-time employment rose among fisheries operating under catch-share systems, the number of available crew positions at any given time decreased by half.

The study comes just as the European Union is examining its fisheries policy. As the Worldwatch Institute's Ben Block notes this week, many European fisheries are [on the verge of collapse](#). Block's report quotes Chris Costello, the study's lead author, who says that catch-sharing systems could offer a solution, provided that they are tailored to meet the needs of local communities:

"Every fishery in the world could benefit from some form of incentive-based management system," said Costello, a resources economics professor at University of California in Santa Barbra. "The critical feature is to design those incentive-based schemes for the biology of the species, the culture of the communities, and the economies of the fisheries."

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