

Putting a price on sea fish

April 19 2011

Hakan Eggert's studies from Iceland and the Gullmar fjord on the Swedish west coast, reveal that when commercial fishermen are given fishing rights they voluntarily choose more sustainable fishing methods and earn far more. His research at the University of Gothenburg, Sweden, demonstrates that over-capacity in the fishing fleet can be reduced.

Transferrable fishing rights were introduced in Sweden as late as 2009, and then only for species such as herring and mackerel. A report from the inquiry into Sweden's new Fishery Conservation Act has recently been out for consultation and paves the way for the introduction of this system for all [commercial fishing](#). Annual vessel quotas for cod fishing in the [Baltic Sea](#) were introduced on 1 April this year.

The lack of well defined owners of fishing rights encourages a race to catch fish the world over. Increased trading in fish can also entail a threat, not least to the economies of developing countries. Of course, trade generates income, but it also increases the strain on fish stocks.

A system of catch quotas and fishing rights for groups of commercial fishermen or individuals can work well and contribute to more sustainable and productive fishing, reveals Håkan Eggert's research.

In one of his studies, Eggert compares how well labour, capital and fish stocks have been used in the Swedish, Norwegian and Icelandic fishing industries over a period of 30 years.

"Our hypothesis was that these countries share similar fishing conditions, and that if we looked at labour, capital and [fish stocks](#) the differences in the management system would perhaps become evident," says Eggert.

"The results show that Iceland, which reformed its fishing in line with economists' recommendation to introduce transferable catch quotas and thus put a price on sea fish, has fared far better in terms of productivity."

Since 1990 Iceland has completely, and Norway has largely, managed national fishing by means of individual fishing quotas, which were not introduced in Sweden until 2009. From 1990 to 2003 productivity increased sharply in Icelandic and Norwegian fisheries, while Swedish productivity growth was low. This was despite the fact that 70% of Swedish fishermen left the industry during the period, compared with half in Norway and none at all in Iceland.

"Icelandic fisheries would thus appear to be more sustainable than its Swedish counterpart," says Eggert. "By sustainable, I mean how well they use resources from a biological and economic perspective."

Eggert's second study looks at six fishermen who jointly received exclusive rights to fish for prawns in the Gullmar fjord marine nature reserve. They were awarded 100 fishing days a year, which they divided equally between themselves. From 2000 to 2007 their income rose dramatically. The price differential between Gullmar prawns and offshore prawns rose from 15% to 75%. At the same time, the Gullmar fishermen had voluntarily increased the mesh size of their nets from the minimum requirement of 35 mm to 45 mm, with the aim of leaving small prawns to grow to optimum size.

"A small informal market also developed, where the fisherman bought and sold fishing days within the group," says Eggert. "As is the case with Icelandic fishing, this example demonstrates the potential of a system of individually transferable fishing quotas to reduce over-capacity in

Swedish fishing."

Eggert's research results are also an example of what Elinor Ostrom – winner of the Nobel Prize in Economics 2009 – has shown, namely that when users themselves get to make the decisions on a shared natural resource, they will choose an approach that is long-term sustainable. This contradicts traditional economic theory, which states that people will choose individual gain over the best interests of the group, and demonstrates that people are both willing and able to work together when it comes to shared resources.

Provided by University of Gothenburg

Citation: Putting a price on sea fish (2011, April 19) retrieved 9 April 2024 from <https://phys.org/news/2011-04-price-sea-fish.html>

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