

Tide may be turning for overexploited fish stocks

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Fishery scientists are having a glass-half-full moment. A new global survey of commercial fish stocks concludes that many threatened ecosystems are on the mend, thanks to good stewardship.

And the other half of that glass? Sixty-three per cent of the fish populations they surveyed are still at unsustainable levels, with things looking grimmest in the developing world.

"When you look region by region, you can document solutions and the problems become more manageable," says [Boris Worm](#), a marine ecologist at Dalhousie University in Halifax, Nova Scotia, Canada, who led the study.

This is a considerably rosier picture than the one painted by Worm's group in a controversial 2006 study [projecting a worldwide collapse of all existing fisheries by 2048](#), based on current trends.

"I was one of those who criticised the conclusion that all fish would be gone by 2048 because my personal experience has been very different," says [Ray Hilborn](#), who as a researcher at the University of Washington in Seattle has studied well-managed fisheries in the Pacific Northwest and Alaska, such as Pacific salmon.

CSI: Fisheries

For the latest study, Hilborn teamed up with Worm and others to analyse various data from dozens of fisheries in numerous large ecosystems. The 2006 survey relied principally on gross catch reports, which may have masked nuances in individual fisheries.

In particular, the researchers focused on measuring the total biomass of a species that caught each year. They then related those figures to estimates of fishing levels that would sustain stocks in the long term.

"This was a little bit like a crime-scene investigation for overfishing: where do we see evidence of overfishing and where do we see improvement," Worm says.

Out of 10 regions in North America, northern Europe and Oceania that his team looked at closely, five showed signs of improvement, with diminishing rates of exploitation in recent years. For the most part, fish populations in Alaska and New Zealand never plummeted drastically because of good management from the start.

Fisheries in the Baltic Sea, North Sea and off the coast of the UK and Ireland, however, tend to face continued declines in stocks. And New Zealand and California were the only places where Worm's team projected that fewer than 10 per cent of species would collapse.

'No single solution'

"The big thing to me is that a number of systems were at least heading in the right direction," Worm says.

More discriminate fishing gear targeted to large individuals of specific species, government-imposed catch limits, and the creation of [marine reserves](#) all helped rebuild stocks, they say.

"In order to avoid collapse you need to do a number of things, there is not one solution that will get you there," Worm says.

His team examined limited data from Africa, however, [the outlook for sustainable fishing appears bleak](#), with the exception of improvements in the practices of small-scale fisherman in Kenya. For instance, restrictions in industrial countries are already pushing industrialised world fleets south.

Local hardship

"Most counties in Africa are selling fishing rights to industrialised nations which catch large amounts of seafood, effectively out-competing local fisherman," says team member [Tim McCleanahan](#), of the Wildlife Conservation Society Marine Program in Mombasa, Kenya.

"It's a real hardship for the local communities to have their fish taken by these big fleets," says [Peter Kareiva](#), a marine biologist at the Nature Conservancy in Seattle, Washington, who was not involved in the survey.

Still, Kareiva sees the new report as a turning point for fisheries science. "Yes, there are certainly extensively overfished stocks and the oceans are in trouble, but there are some examples of decent management and reason for hope," he says. "This doom and gloom doesn't get us anywhere."

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