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Environment

Research warns on lack of 'predator' fish

John von Radowitz, PA

Careless fishing and fussy consumers threaten to leave the oceans teeming with tiddlers but emptied of big predators, research suggests.

In the past 100 years, the number of "charismatic" species such as cod, tuna, grouper and swordfish have plummeted by two-thirds, a global study has shown.

Meanwhile, populations of sardines, anchovies, sprats and other small "grazers" have more than doubled in size.

Only a minority of these smaller fish are used for human consumption. The vast majority are turned into food products for fish farms.

If the trend continues it could mean the end of the "wild" ocean, warned Prof. Villy Christensen, who led the research.

With few predators left, its main purpose would be to serve the fish farming industry.

But even this could be undermined by upsetting the delicate balance between prey and predator.

"When the cat is out, the mouse will play," said Prof. Christensen, from the University of British Columbia in Canada.

"When you remove the predator, you get more prey.

"That has never been demonstrated in fish before. By removing the large predatory species from the ocean, small forage fish have been left to thrive. We're losing the big fish and getting the Serengeti without the lions. "Society needs to decide what we do want with the ocean. Do we want to turn it into a farm full of cows or have more of a natural ecosystem?

"The problem with turning it into a farm is that we don't control it. We depend on it working as a natural entity. We need to be able to give advice about this."

He said consumers should shoulder some of the blame because of their increasing demand for larger and farmed fish.

"Absolutely we should be encouraging people to eat sardines," said Prof. Christensen, speaking at the American Association for the Advancement of Science's annual meeting in Washington DC.

Changing consumer preferences might help prevent fishing "down the food web" which targeted bigger species.

"We can still fish some of the predator fish, but not take all of them away," said Prof. Christensen.

His research involved pooling data from around 200 "snapshot" studies of marine ecosystems around the world. From this, he was able to obtain more than 68,000 estimates of fish biomass dating back to 1880.

They showed a huge decline in predatory fish accompanied by a surge in numbers of prey fish.

Fifty-four per cent of the predator loss had occurred in just the past 40 years.

Large fish eat smaller fish, which in turn feed on the tiny animals that keep algae levels down.

Taking out the predators had a domino effect which could lead to uncontrolled algae growth, said Prof. Christensen.

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