Predatory fish in sharp decline, UBC researchers say

VANCOUVER — Researchers at the University of B.C. say they have the strongest evidence to date that humans are indeed “fishing down the food web,” citing data that show predatory fish such as cod, tuna, and groupers have declined by two-thirds during the past 100 years, while small forage fish such as sardines, anchovy and capelin have more than doubled over the same period.

Led by Prof. Villy Christensen of UBC’s Fisheries Centre, a team of scientists used more than 200 marine ecosystem models from around the world and extracted more than 68,000 estimates of fish biomass from 1880 to 2007, the university said in a press release Friday. They presented the findings today at the American Association for the Advancement of Science Annual Meeting in Washington, DC.

The UBC team found that 54 per cent of the decline in predatory fish population took place in the last 40 years.

"Overfishing has absolutely had a 'when cats are away, the mice will play' effect on our oceans," said Christensen, a professor in the UBC Fisheries Centre, in the release. "By removing the large, predatory species from the ocean, small forage fish have been left to thrive."

While the doubling of forage fish amounts to more fish production, Christensen cautioned that the smaller fish are more vulnerable to environmental fluctuations.
"Currently, forage fish are turned into fishmeal and fish oil and used as feeds for the aquaculture industry, which is in turn becoming increasingly reliant on this feed source," said Christensen in the release. "If the fishing-down-the-food-web trend continues, our oceans may one day become a 'farm' to produce feeds for the aquaculture industry. Goodbye, wild ocean!"

Christensen’s presentation was part of a panel discussing if there will be fish in the ocean in 2050. The prediction: yes, there will be fish, but they will consist mostly of the smaller variety.

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