

## Humans running out of places to fish, UBC study says

BY REBECCA LINDELL, POSTMEDIA NEWS DECEMBER 2, 2010



Coho salmon, as far as the eye can see, await hauling to a processing plant in Kamchatka, Russia. Fisheries now cover nearly all of the globe, a new study led by University of British Columbia researchers in collaboration with the National Geographic Society reports.

Photograph by: Handout, Randy Olson/NATIONAL GEOGRAPHIC

The commercial fishing industry has run out of new fishing holes and could soon face lighter nets with the consequences. When there is nothing left to grab we have to go further to get new things," says Daniel Pauly, co-author and principal investigator of the Sea Around Us Project at UBC Fisheries Centre.

"Sustainability is not built into our interaction with the sea. . . . We grab what we can and then we deal with the consequences. When there is nothing left to grab we have to go further to get new things," says Daniel Pauly, co-author and principal investigator of the Sea Around Us Project at UBC Fisheries Centre.

The search has pushed fishermen offshore since the 1900s, creating a no-fish-left-behind style of expansion, Pauly said.

Commercial fishing nets spread throughout the world's oceans at a rate of one million square kilometres every year through the end of the 1970s, according to the study.

By the 1980s and 1990s, the industry was eating up fishing areas at triple the rate — an annual growth rivaling the size of the Amazon rainforest.

The only untapped fishing frontiers are the unproductive waters of the high seas, the inaccessible waters in the Arctic and Antarctic, and the 0.1 per cent of the world's oceans designated as marine reserves, the study said.

The study is the first to measure the expansion of global fisheries since the 1950s. It was done in collaboration with the National Geographic Society and was published Thursday in the online journal PLoS ONE.

Researchers used a measurement tool dubbed SeafoodPrint to map the ecological footprint of fisheries. The team divided the ocean into small sections and found the amount of "primary production" — or plankton, the organisms that sustain the food chain — in each section annually. When the amount of primary production was higher than the typically occurring amount, the researchers counted the area as exploited, or fished.

"This method allows us to truly gauge the impact of catching all types of fish, from large predators, such as bluefin tuna, to small fish, such as sardines and anchovies," says Pauly.

"Because not all fish are created equal and neither is their impact on the sustainability of our ocean."

Catches also ballooned to a peak of 90 million tonnes in the late 1980s from 19 million tonnes in 1950. It dropped to 87 million tonnes in 2005, according to the study.

Pauly says that's a sign there are fewer fish left to catch in the world's oceans.

"It's like a huge Ponzi scheme. They have not harvested the interest of a stock of fish, but the capital. As they are running out of space, the stocks decline."

The study also documents the patterns of expansion since the 1950s, showing fisheries spreading from the North Atlantic and Northwest Pacific, reaching south at a rate of nearly one degree latitude per year.

Seafood eaters can have an impact on how the trend continues by making sure they buy sustainably caught fish, said Carl Safina, president of Blue Ocean Institute.

"Most of the fishing that is being done, is being done in a destructive way that is not at all sustainable. One of the hopes for halting that would be to turn consumers against it and at least create market incentives for people who are fishing in a sustainable way to get more market share."

Blue Ocean, along with other organizations, such as the Marine Stewardship Council, have online databases to provide consumers with sustainability information about the fish they see on supermarket shelves.

"That would be a good thing, but good luck," Pauly says about such consumer programs. He says these programs do not stop the expansion of fisheries, which is the key to stopping the depleting of fish in the ocean.

"While locally, you can say that this fishery and that fishery is well-managed, you can see globally, the fisheries are really building on expansion. There has really been no sustainability."

Instead, there needs to be global co-operation to rebuild fisheries.

Pauly also suggests that consumers cut down on the amount of fish they eat.

"It cannot be a mass food," he said. "It cannot be the staple food for all inhabitants on earth because there is not enough of it to go around."

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