

The Future of World Fisheries

As part of the *Environment Matters* lecture series, University of British Columbia researcher Daniel Pauly will speak on the crisis of global fisheries

by [ILLAHEE](#) | posted 04.02.04 |

Daniel Pauly is a man on a mission. A professor at the University of British Columbia in Vancouver, he is arguably the world's most prolific and widely cited living fisheries scientist, and he's used that status to spread the word on what he sees as a worldwide crisis in the oceans' fisheries.

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"In some places in the world," he said in a [New York Times](#) profile, "you can see people chasing the last fish. In the Java Sea in Indonesia, I have seen fishers going out in the morning, six of them going out and coming back with five pounds of fish. That is the end point, a pound of fish per person per day to sell for rice. That's where fisheries go if you let it happen. That's where it stabilizes. These people cannot feed their families."

Daniel Pauly will speak Tuesday, April 6th 7:30 p.m. at the First Congregational Church, 1126 SW Park Ave., in Portland. For ticket information, call (503) 222-2719, email lectures@illahee.org, or visit illahee.org

In paper after paper published in scientific journals, Pauly and his fellow researchers have made big news by chronicling the plummeting populations of fish stocks around the world. His outlook is decidedly global, analyzing fisheries on a broad scale in contrast to typical fisheries research that is restricted to a particular geographic area.

Two papers from the mid-1990s stand out as crucial first strikes in Pauly's mission to affect management of the world's fisheries.

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In the March 16th, 1995 issue of *Nature*, Pauly and his colleagues disputed the idea that the sea is so vast and fertile that humans haven't yet tapped its potential as a source of food. Earlier estimates, they said, suggested that humans exploited fisheries that used just 2 percent of the globe's aquatic "primary production," leaving room to enhance catches. But the real take is at least 8 percent of primary production, and up to 40 percent in key fishing grounds. Those numbers suggest that humans already claim a large share of the ocean's accessible food base.

[Daniel Pauly](#)

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In a second paper, published in October 1995, Pauly took on "shifting baseline syndrome." Young biologists, he wrote, often failed to become outraged over the collapse of once-teeming fish stocks because they couldn't quantify anecdotes about immense past catches. As a result, "each generation ... accepts as a baseline the stock size and species composition that occurred at the beginning of their careers," producing ever-shrinking expectations of what a fishery should look like.

[FishBase.org](#)

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In addition to those two influential studies, he is the author or co-author of more than 500 scientific articles, book chapters and contributions, and author or co-editor about 30 books and reports. He is also the author of "In a Perfect Ocean: fisheries and ecosystem in the North Atlantic," published by Island Press in 2003; and "[Darwin's Fishes: an encyclopedia of ichthyology, ecology and evolution](#)," published by Cambridge University Press this month.

[Going to the Edge to Protect the Sea](#)

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His research has shown that the world's most preferred commercial fisheries, such as cod, tuna, haddock, flounder and hake, have already been seriously overfished. A recent report from 2002 predicts that, at current fishing rates, these and other preferred fish will be all but extinct soon. The study also showed that the catch of these fish has declined by half in the past 50 years while efforts to harvest them has tripled.

[Everyone's in the Ocean Business](#)

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Pauly's findings and his strong stance has earned him the label of iconoclastic and controversial among his peers in the field.

"[Pauly] is an immensely charismatic, articulate, big-picture guy in a science that tends to produce little-picture guys," said veteran fisheries biologist Ray Hilborn, a friend and sometime critic at the University of Washington, in [Science](#). "For better or worse, he's probably had a greater impact on the field than any member of his generation."

Pauly, who was named director of UBC's Fisheries Centre in 2003, also backs up his strong assertions with an impressive resume in formulating innovative research methods and databases.

[FishBase](#), a global online database packed with information on more than 26,000 species of fish, boasts more than 3 million hits per month. It may end up as his most lasting contribution, said one fellow scientist. Pauly also spearheaded an ecosystem-modeling program called

[Ecopath](#), which took a little-known model for estimating biomass changes along coral reefs first developed by Jeffrey Polovina of the U.S. National Marine Fisheries Service and tweaked it to incorporate an array of information on fish habitats and life histories that allows researchers to predict how populations might respond to various pressures.

Research accolades aside, Pauly's outspokenness and willingness to criticize modern fishing practices make him stand out in a field often marked by caution. Named one of the 50 most influential scientists in the world today by Scientific American, Pauly calls for fisheries biologists the world over to take on the role of public spokesman or watch from the sidelines as global fish populations continue to dwindle to extinction.

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