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The Range Blog

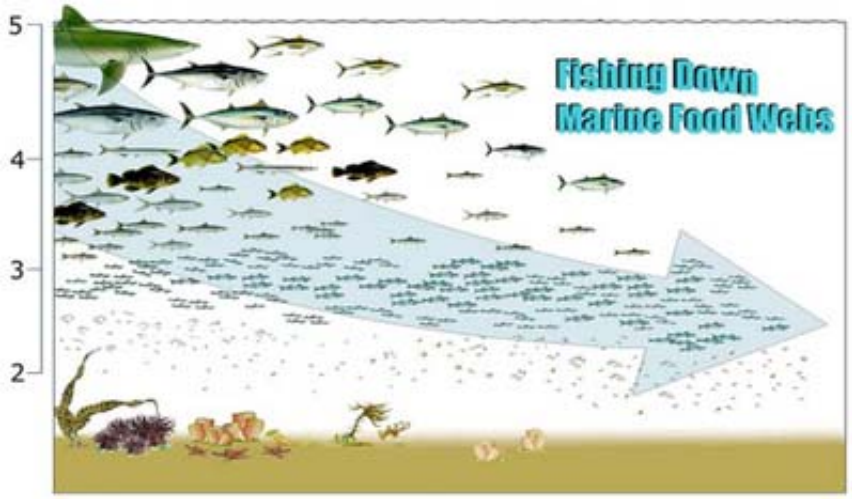
A future of jellyfish?

Joseph Taylor | May 09, 2011 09:12 AM

Consumers and scholars alike find themselves adrift in a sea of contested claims about the state of oceans, fisheries, and fish. It is a symptom of an era in which we are overwhelmed by the pace and scope of change. We are utterly reliant on complex systems to supply both the commodities that sustain our lifestyles and expert advice about the things we consume. At a basic level, we are perpetually challenged to figure out whom and what to trust.

I am as vexed as anyone, and I avidly read fisheries research as both an environmental historian and as a consumer of fish. A long time ago I set up a search bot that informs me about newly published research on oceans, fisheries, and especially salmon. Every morning I get an email chock full of citations, and over the last two decades I have witnessed dramatic shifts in how we view oceans. Beginning in the early 1990s in the wake of the collapse of the Grand Banks and Georges Banks fisheries, there was a rising chorus of warnings about "The Death of the Oceans," to borrow the title of Sir David Attenborough's recent documentary. The alarms came from respected corners including *The Economist* and national commissions to the Pew Charitable Trust and other non-governmental environmental organizations.

By the turn of the millennium these arguments had grown pointed. UBC biologist Daniel Pauly boiled the crisis down to a succinct phrase, "Fishing Down Marine Food Webs" [pdf], often shortened to "Fishing Down the Food Chain" and reinforced by an illustration from Pauly's and Jay Maclean's *In a Perfect Ocean* (2003, p. 52) suggesting a relentless destruction that will end with us having nothing to eat but jellyfish:



Then in 2006 a group led by conservation biologist Boris Worm published *an article in the respected journal Science* [pdf] projecting "the global collapse of all taxa currently fished by . . . the year 2048." An alerted media gave these arguments wide coverage, and historians folded such insights into discussions of the Newfoundland fisheries and anthropogenic evolution. As physicist Clifford Will reminded readers of the *New York Times* this week, however, scientific debates are never closed.

Fisheries researchers began to criticize both data and models. At one level it was a nerdy argument among scientists adept at statistical analysis, but underneath were real differences over how marine fisheries were managed. Pauly, Worm, and others, most of whom fell within the discipline of conservation biology, used catch data provided by the Food and Agricultural Organization to argue [pdf] that 70 percent of the world's fisheries were overexploited and perhaps 30 percent had collapsed. This generated a flurry of comments in *Science*, so many that everyone agreed to a joint reanalysis of data. When this was published [pdf] in 2009, the authors, all of whom agreed that many fisheries were a mess and that most could do better, nevertheless conceded that the FAO data was problematic for many parts of the world and that cross checks with other biometric and historical data revealed many fisheries were recovering or recovered. This view was confirmed last week in the journal *Conservation Biology* [pdf], when research on an array of data found far lower rates of collapsed fisheries in the Pacific: 4 to 17 percent as opposed to 49 percent. Both Worm's models and data seemed flawed. Pauly's claims of a future of jellyfish were also put to the test, and, again, close attention revealed more stability both in specific areas such as the Gulf of Mexico and worldwide in not one but two studies.

Although the media covered some of this debate, including the *New York Times* and a YouTube video and press releases by Ecotrust and the PEW Charitable Trust, reporting tended to feature environmentalist spins skeptical of good news and its messengers. From a consumer perspective it was also maddeningly vague in answering *which* fisheries were well managed and *which* fish to consume. A consensus is forming that the best fisheries data comes from the most industrialized nations, which are also better at management. The problem is that these countries also consume fish from elsewhere in the world, where FAO data is sketchier and management, often shaped by graft from transnational fishing corporations, is less effective and more prone to causing local poverty around the world. Although there is good news as well as bad in the give and take of scientific fisheries research in the last two decades, consumers in the American West, who really do eat a lot of fish from around the world, still face a situation of caveat emptor.

Essays in the Range blog are not written by High Country News. *The authors are solely responsible for the content.*

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