Fisheries recently captured rare world attention. In less than a month, The Economist front cover proclaimed 'The tragedy of the oceans', Time featured 'Too few fish in the sea' and Newsweek pictured many fishing nets and hooks seeking a lone fish. The focus was on the developed world industries but similar articles could have been written for much of the developing world fisheries. In the scientific literature, scientists debated the contribution of science to fisheries and natural resource management.

Ludwig et al. (1993) started the scientific debate when they argued that sustainable management is unattainable without a new approach, as demonstrated by many failures to prevent overuse. They challenged the prospects for achieving scientific consensus over sustainable levels of fisheries resource use and pointed out that even if achieved, scientific consensus advice was often not acted on, leading to overuse. They doubted that science and technology could provide answers to resource or conservation problems although adaptive management approaches were promoted.

In reply, Rosenberg et al. (1993) argued that sustainable resource use was a legitimate concept and although challenging, is achievable. They illustrated their arguments with examples of successes and failures, many of which occurred despite scientific consensus. They described new developments in which science assesses risks in the face of uncertainty.

Ehrlich and Dailey (1993) described and supported the use of science in perceiving natural resource problems, understanding their mechanisms, and strategically assessing options for their solution. They suggested, however, that lessons from the application of fisheries science to management of fisheries resources might not be relevant to other (sic) 'resources more relevant to sustaining of human civilization...soil, fresh-water, forests, atmospheric composition, and some level of biodiversity'.

Setting aside the debate on the importance of fisheries resources to humans and the environment, I contend that biophysical and social science is more important than ever to achieving better fisheries management, and that the roles of science are expanding to meet the needs of management. That fish stocks have declined and some have collapsed despite scientific warnings shows...
The Time to Save Fish Stocks Is Now

By Jessica Mathews

WASHINGTON - Next week another round of United Nations talks begins that will try to resolve a genuine global environment threat: overfishing. Major global fisheries are declining. The world is overfished or breeding. Every one, in fact, has reached or is far too economically sustainable. The catch has been done to the global commons. Individual countries have managed fishing for their own benefit. Since the United States took control of its 200-mile offshore zone, it has presided over a government-subsidized orgy of overfishing that has decimated species after species. Despite greater efforts, the world now recognizes that fisheries have severe problems and resource managers are responding. Most national objectives for fisheries are in transition to balancing resources, environment, and economic considerations, recognizing the interdependencies of achieving sustainability.

The scientific debate is a healthy sign at this critical stage. The results should be a clearer understanding of how science can best serve fisheries and natural resource management objectives. ICLARM will participate and learn from the debate as one means of better directing its research for developing world partners and stakeholders.

Further Reading


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