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RESEARCH BY UH MĀNOA SCIENTISTS REFUTES RECENT CLAIMS OF IMMINENT COLLAPSE OF OCEAN ECOSYSTEMS

HONOLULU – Research conducted by scientists at the Pelagic Fisheries Research Program (PFRP) of the UH Mānoa School of Ocean and Earth Science and Technology, and reported in a paper to be published in the December 15, 2006 issue of *Science*, refutes the claims that ocean ecosystems are on the brink of collapse. Although the new research finds significant decreases in abundance of some fish stocks resulting from increased fishing, the picture is not nearly as gloomy as has been previously reported.

The paper, “Biomass, size and trophic status of top level predators in the Pacific Ocean,” is authored by four well-known fisheries scientists: John Sibert, the PFRP’s Manager; John Hampton from the Secretariat of the Pacific Community; Pierre Kleiber of NOAA Fisheries; and Mark Maunder of the Inter-American Tropical Tuna Commission. Unlike previous studies, the paper analyzes all available data for Pacific tuna fisheries from 1950-2004 to estimate the impact on the Pacific fish population that fishing has had in the past 50 years. The analysis finds that the situation of different types of top predators such as tunas and sharks varies considerably.

“Recent claims of catastrophic reduction in the biomass of top-level predators and the collapse of oceanic food chains have attracted widespread attention and provoked alarm among the lay public,” reports the paper. As lead author Sibert notes, “Fishing impacts on an ecosystem are complex. They cannot be reduced to sound bytes. Management of ocean ecosystems in the twenty-first century will require comprehensive analysis and not the half-baked approaches used in some recent papers and so widely reported in media.”

According to the paper, fishing for two important types of tuna---yellowfin and bigeye---is currently at the maximum sustainable level. The two species are threatened, however, by future growth of international fishing fleets.

Based on this finding, scientists in two international regulatory commissions---the Western and Central Pacific Fisheries Commission and the Inter-American Tropical Tuna Commission---are recommending options to limit fishing for these species. These options include catch and fishing effort limits, time and area closures, and restrictions on the use of floating objects by the purse-seine fishery.

The new findings have been well-received by many fisheries researchers and managers “It is refreshing and encouraging to see *Science* finally publish a comprehensive stock analysis carried out by competent and experienced fisheries assessment experts,” says Dr. Carl Walters of the Fisheries Centre at the University of British Columbia in Vancouver. Dr Mark Maunder of the Inter-American Tropical Tuna Commission, a coauthor of *Biomass*, noted that “part of the reason our analysis has credibility in the fisheries scientific community is because we considered all the available data for these stocks rather than just picking and choosing the data that suits our cause, which is a stark contrast to several of the recent pessimistic fishery articles published in the journals *Science* and *Nature*.”

More information on these findings is available by calling (808) 956-4109 or visiting http://imina.soest.hawaii.edu/PFRP/large_pelagics/large_pelagic_predators.html.

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