The Record (Bergen County, NJ)

November 29, 2001

China skewing global catch? Something's mighty fishy

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Overreporting by China has masked dramatic declines in global fish catches for more than a decade, researchers say.

The amount of seafood landed each year actually decreased during the 1990s by almost 800 million pounds per year rather than increasing by 700 million pounds annually, say scientists based at the University of British Columbia at Vancouver.

The overreporting has thrown off the global fishery statistics that the Food and Agriculture Organization of the United Nations compiles for use by all nations. The FAO relies on voluntary reporting of catches from countries to estimate the amount of fish the oceans hold.

The new studies, published today in the journal Nature, call into question the veracity of the FAO's figures and reporting system. Until now, the statistics were never subjected to an exhaustive independent analysis.

"FAO must generally rely on the statistics provided by member countries, even if it is doubtful that these correspond to reality," said Reg Watson and Daniel Pauly, co-authors of the studies.

Moreover, by subtracting just one fish from the equation, the abundant Peruvian anchoveta which is used only for fish meal and whose population fluctuates because of El Nino researchers noted an even more striking decrease: 1.5 billion pounds less seafood available each year for human consumption.

This new picture of the world's oceans raises serious concerns about the supply of fish and the world food supply. Some believe that aquaculture, or fish farming, can make up the difference.

However, Watson and Pauly warn that the current trends in fish farming would have to fundamentally change for it to provide a net gain.

The present aquaculture trend is to raise carnivorous fish such as salmon and shrimp, which require large inputs of fishmeal and oils that add pressure on the seas. Already, a third of all fish landed globally go into fishmeal and oils used for agriculture and aquaculture. But raising more vegetarian fish like tilapia and shellfish and not supplementing their food with fish meal or oils would help alleviate the problem, the authors said.

Since 1988, when the world's seafood supply peaked at 34 pounds a person each year, the combined effects of overfishing and increasing human populations have reduced the amount of

fish and shellfish available to only about 25 pounds a person per year now, according to the findings.

The trend is projected to continue rapidly downward to less than 17 pounds a person each year by 2020.

In China, the government relies on local officials to provide catch figures. Wan Cheng, a spokesman for the Chinese Agricultural Ministry's Fisheries Department, said the government had offered county and provincial officials job promotions based on growth in those figures, giving them incentive to inflate numbers.

That practice ended two years ago, when the government put into effect a "zero growth" policy saying catch reports from oceans should not exceed 1998 levels of about 35 billion pounds of fish and shellfish per year.

"Local government officials have no incentive to inflate their fishing output. Therefore, we believe there is no intentional overreporting of statistics, but only some possible statistical defects," Wan said.

"The Chinese government has noted the problem of falling fish stocks and is paying more attention to the preservation of resources." Using statistics gathered by the FAO since 1950, the scientists created maps of world fishery catches and then built a computer model to predict catch size in different ocean regions.

The model showed China's reported catches were unrealistically high when compared with catches from other ocean areas that have similar characteristics such as depth, temperature, and biological productivity.

The findings came as little surprise to Lee Alverson, a global fisheries consultant in Seattle who headed research for the National Marine Fisheries Service in the Northwest and Alaska from 1970 to 1980. "It takes a lot of nerve to make the sort of accusation they did about China, but there were a lot of scientists who felt nervous about those numbers," Alverson said. "If any of the nations are putting bogus numbers into the accounting process, then our ability to assess if overfishing is going on is in jeopardy."