

Environment News Service

November 29, 2001

Chinese misreporting masks dramatic decline in ocean fish catches, scientists say

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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 has actually been decreasing during the 1990s by nearly 800 million pounds per year, rather than increasing by 700 million pounds annually, scientists based at the University of British Columbia at Vancouver found.

The overreporting has thrown off the global fisheries 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 being reported Thursday in the journal *Nature* call into question the veracity of FAO figures and its reporting system. Until now, the statistics had never been 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,” authors Reg Watson and Daniel Pauly said. Moreover, by subtracting just one fish from the equation, the abundant Peruvian anchoveta, which is used only for fish meal and whose population fluctuates due to El Niño, an even more striking decrease was apparent: 1.5 billion pounds a year less seafood was available 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 trend in aquaculture now is to raise carnivorous fish such as salmon and shrimp, which require large inputs of fish meal and oils that add pressure on the seas. Already, one-third of all fish landed globally go into fish meal 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 per 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 fisheries 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."