

January 31, 2011

# Fish Farming Overtaking Traditional Fisheries

By DAVID JOLLY

PARIS — Aquaculture is overtaking traditional fisheries in global production, the Food and Agriculture Organization said Monday, but a scientist with the organization, a [United Nations](#) body, said that the practice could not continue growing indefinitely at the current pace.

Fish farming is the fastest growing area of animal food production, increasing at a 6.6 percent annual rate from 1970 to 2008, the F.A.O. said in a report, *State of World Fisheries and Aquaculture 2010*. Over that period, the global per capita supply of farm-raised fish rose to 7.8 kilograms, or 17.2 pounds, from 0.7 kilogram.

“We’re going to run into constraints,” Kevern Cochrane, director of the F.A.O.’s resources use and conservation division and a contributor to the report, said by telephone, “in terms of space availability, water availability — particularly fresh water — and also environmental impacts and supply of feed.”

“Growth is not sustainable indefinitely at that level,” he said, “and we are currently seeing a reduction in the annual rate of increase.”

Aquaculture now makes up 46 percent of the world’s food-fish supply in volume terms, up from 43 percent in 2006, according to the report, and appeared to have overtaken wild fisheries in dollar value, at \$98.4 billion in 2008 compared with \$93.9 billion. The increasing share of aquaculture in the overall picture shows that “in terms of capture fisheries, we’ve now more or less peaked” at the current 90 million tons of annual harvest, Mr. Cochrane said. “That is probably the limit of what we can get from sustainably harvested fisheries.

“The challenge to fishing countries is to ensure that capture fisheries production is sustained at its current levels, but with healthy stocks,” he said. “If that production begins to decline, it is a sign that we’re failing in effective management.”

About 32 percent of world fish stocks are overexploited, depleted or recovering and need to be urgently rebuilt, according to the report. Nonetheless, people are eating more fish, thanks to aquaculture: The report showed that global fish consumption rose to a record of almost 17 kilograms a person.

Wally Stevens, executive director of the Global Aquaculture Alliance, a trade association, said Monday that the industry's target actually was to increase the annual output of the aquaculture industry 7 percent.

“Our attitude is that aquaculture production must double in the next 10 years to keep pace with global demand, and in particular the changes in demand coming from growth in middle-class populations in developing nations,” he said.

Fish can be raised in tanks and ponds, and — with the aid of cages or nets — in oceans, lakes or rivers. With most of the world's fisheries operating at or above their sustainable yields, aquaculture is seen as the only way to increase the supply of fish in a world hungry for protein.

China, which raises freshwater and marine species including, carp, tilapia, sea bream and sea bass, alone accounts for 62 percent of global farmed fish production.

China and some of its Asian neighbors have gone a long way toward fully developing their aquaculture potential, Mr. Cochrane said, while other regions, particularly Latin America and Africa, still have significant room to increase output.

Many scientists have been critical of the practice of harvesting wild ocean species — often small fish like anchovies — to provide fish oil and fish meal for farmed carnivorous fish like salmon and tuna, arguing that it is an inefficient way of producing protein. From an environmental standpoint, it would make more sense to eat the anchovies directly, these scientists say.

Just over 80 percent of all wild fish go for human consumption, according to the report, with the remainder used mainly for fish meal and fish oil and in pharmaceuticals.

On the question of feeding wild fish to farmed fish, Mr. Cochrane said the position of the F.A.O. was that “as long as the fisheries are conducted in a sustainable and responsible manner, it's up to the countries to decide how to use the catch in the optimal manner.”

Mr. Stevens of the Global Aquaculture Alliance said the industry had been steadily reducing the amount of wild fish it needed to produce a constant amount of farmed fish.

“People are learning how to use the fish oil and fish meal more efficiently, by providing different formulations of feed at different stages of the fish's lifecycle,” he said. “But equally important is the development of soy oil, soy meal and rendered byproducts of other animals that can be added to feed. We don't think feed will be a restriction on aquaculture in the next 10 years.”