Geography in the News™

Neal G. Lineback

GONE FISHING or WHO WILL CATCH THE LAST ONE?

Environmental degradation and commercial and recreational fishing are being blamed for assaulting the world's stocks of ocean fish. Many scientists worry that it already may be too late to save some of the earth's most valuable fishing grounds and breeding areas.

The oceans cover 71 percent of the earth's surface. Unlike the land surface, however, the oceans provide a three-dimensional life zone that extends to a maximum depth of 35,840 feet (10,924 m.) in the Mariana Trench in the Pacific Basin.

Nonetheless, just as terrestrial species tend to concentrate in most hospitable environments, so too does ocean life. For example, many fish species tend to concentrate, at least through a portion of their life cycles, along continental and island coastal margins. This is largely related to the fact that coastal zones provide protected breeding grounds, as well as sources of food and nutrients.

The world's most productive commercial fishing grounds, however, are generally found in certain cold water ocean regions. They are: the Grand Banks off Newfoundland's coast, Europe's North Sea, along South America's west coast and the North Pacific Rim from Japan to the U.S. Pacific Northwest.

Consequently, there are two fundamental commercial fishing patterns. First is open ocean fishing which mostly occurs over known rich fishing grounds. The second is the coastwise fishing in the shallow water along the shores and in bays, sounds and estuaries.

The advantage of fishing in places such as the Grand Banks is that schools and dense concentrations of fish have been numerous, living on the nutrient-rich plankton found in cold ocean waters. Salmon, tuna, cod, haddock, anchovies and halibut are among these fish.

Commercial vessels fishing open ocean locations tend to be large and sophisticated, often accompanied by floating canneries. Increasing pressure is being put on coastal waters as competition increases and catches decline.

Fishing in shallow coastal waters has long been a popular source of protein to local coastal populations. Chinese junks and sampans, Hawaiian outriggers, Arabian dahows, small Chesapeake sailboats and ubiquitous outboard boats mingle with larger diesel netters in coastal waters.

One of the principal differences between open ocean and coastwise fishing is that most coastal fish—with a few exceptions—tend to be less commercially valuable than those listed above and not found in single species concentrations. This means that many coastwise catches tend to be of mixed, rather than a single, species and more difficult to process and market.

The world's catch for 1994 totalled 109.6 million tons. China was the world's leading fishing country, catching 20.7 million metric tons, followed by Peru, Japan, Chile, the United States, India, Indonesia, Russia, Thailand and South Korea.

U.S. vessels landed a total of 10.5 million tons of fish in 1994, with more than 65 percent occurring in Alaska and the Pacific Northwest. The primary fish in this region is the salmon, but there are other species as well.

Catches throughout the North Atlantic, including the Grand Banks and the North Sea are either steady or in decline. In the Pacific and Indian oceans, relatively small increases in catches occurred through the mid-1990s, but long-term predictions are for a decline there as well.

This does not tell the entire story, however, for recent catches tend to include smaller fish and more mixed species, despite the use of more and more sophisticated equipment. According to the NOAA's National Marine Fisheries Service, the value of U.S. domestic landings between 1994 and 1995 declined by two percent.

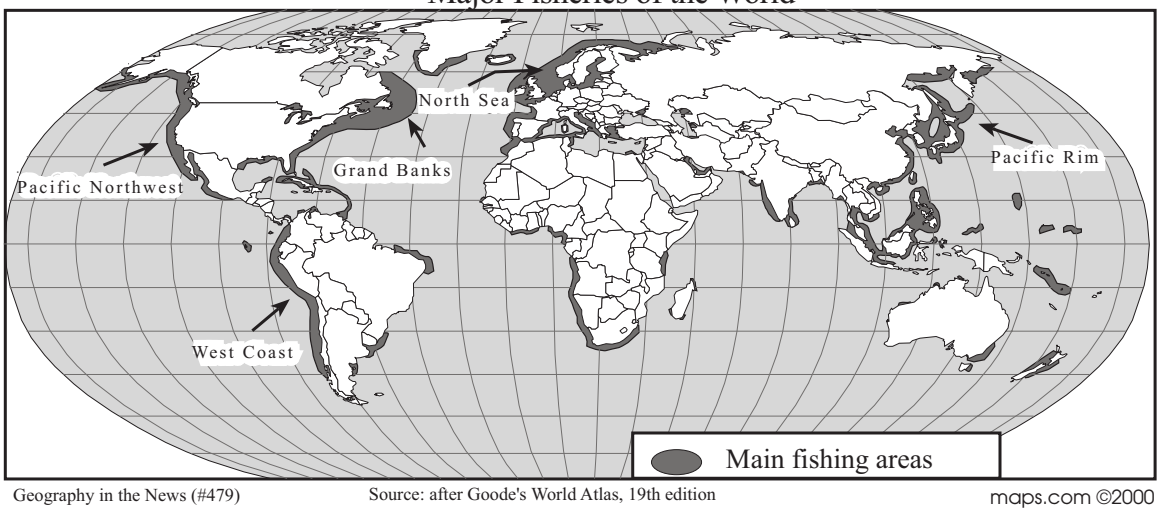
Loss of fish breeding grounds to drainage and pollution, as well as increasing fishing pressure on existing stocks are primarily responsible for the problem. Virtually every U.S. coastal state today is struggling with these issues involving their fisheries.

In North Carolina's coastal sounds, for example, nutrients from treated urban waste, agricultural fertilizers and untreated animal waste lagoon spills are seriously implicated in algae blooms, oxygen deficiencies and a debilitating lifeform called listeria. North Carolina's declining fishing stocks already have placed major economic hardships on fishing families trying to make a living from a diminishing resource.

And that is Geography in the News, April 29, 1999.

(The author is a geography professor at Appalachian State University, Boone, NC. Geography and history teacher Kelly Coffey assisted.) #479

Major Fisheries of the World



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