

**BRIEF ANALYSIS**

No. 581

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## Ocean Fisheries: Common Heritage or Tragic Commons?

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For centuries, North America's coastal fisheries ranked among the most bountiful on the planet. For instance, five hundred years ago the English explorer John Cabot reported the waters off Newfoundland were so thick with cod you could catch them by hanging baskets over the ship's side. But the boom is over. American and world fisheries have entered a period of rapid and unprecedented decline:

- In the past 50 years, populations of large fish species — including tuna, swordfish, marlin, sharks, cod, halibut and flounder — have decreased 90 percent worldwide.
- A total of 98 species are overfished, according to the National Marine Fisheries Service; as a result, half of all U.S. fisheries and a quarter of the major fish stocks worldwide are in jeopardy of an abrupt, severe decline from which they may never recover.
- Fish stocks have collapsed in nearly one-third of all ocean fisheries, and all commercially valuable world fish stocks could completely collapse by 2048. [See the figure.]

Unless something is done quickly, American waters may go from being the world's most abundant fisheries to a virtual undersea wasteland within just a few years.

**Misguided Government Policies.** The main causes of fisheries' global decline are 1) the institutional structure of the fisheries and 2) misguided government policies.

Fisheries have suffered from their status as an open commons. Unlike cattle, sheep and horses, fish in the ocean are common property to which everyone has access. But because they have no owners, they have no protectors or defenders. The result is overfishing, or a "tragedy of the commons."

Before government policies interfered, commercial fishing was guided by profit and loss. When fish were plentiful, fishing was profitable and fleets grew. But when fish became temporarily scarce, the profits sank and fishers either left the industry or cut back.

The open-commons system began to break down in the 1960s, when studies found the world's marine resources were underutilized. For instance, a 1969 report argued that the total annual world harvest could be quadrupled from 50 million to 200 million metric tons with equipment available at the time. It also concluded new technologies could boost total annual production to more than 400 million metric tons.

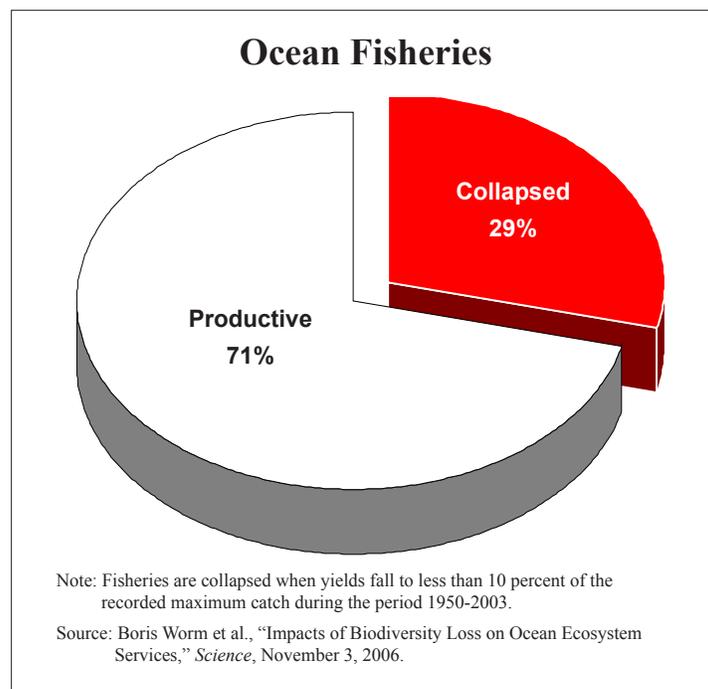
As a result of these estimates, the U.S. government began to subsidize fishing in ways that encouraged the type of overfishing that never would have occurred under an open-commons system. The subsidies included:

- Tax breaks for investments in new equipment and below-market loans to buy bigger boats and state-of-the-art equipment.
- Grants to fish warehouses to purchase the latest equipment, and to fishing harbors to improve and expand the number of mooring spaces.
- Grants and below-market loans for larger, newer fish processing plants.

The result of these programs was more fishers chasing fewer fish. In the late 1970s and early 1980s there was a spectacular expansion of the U.S. fishing fleet.

By 2003, the majority of commercially valuable fish populations were fully exploited, but the total world harvest from inland and ocean fisheries was just 133 million metric tons — far less than projected, and 40 million tons of which came from fish farms and hatcheries.

**More Misguided Policies.** America's primary response to overfishing was the 1976 Magnuson-Stevens Fisheries Conservation and Management Act, which created 200-mile coastal-water economic zones open only to Americans. It also established eight regional councils to formulate and implement fishery regulations to allow



## BRIEF ANALYSIS

No. 581

Page 2

fisheries to recover, ensuring their availability for future generations. Each council drafts management plans that restrict the size of boats; the types of nets and/or traps; the length and timing of the fishing season; the areas open to fishing; and the amount of particular species that can be kept. The problem with these regulations, however, is that they do not affect the incentives for fishers to overfish. Pursuing their economic self-interest, fishers evade them:

- Prevented from fishing on some days, they make a greater effort on days fishing is allowed.
- Forced to use smaller boats, they use more of them, and when forced to use smaller nets, they use those nets more often.
- Forced to limit the number of fish they can bring back to harbor, they throw the smallest ones overboard before their return; in U.S. waters, 2.3 billion pounds of dead fish are thrown back into the ocean every year.

Making matters worse, in order to alleviate the financial harm fishermen suffered from regulations, the government provided more subsidies, tax breaks and price supports.

### **Needed Policy: Incentives to Save the Fisheries.**

On January 12, 2007, President Bush signed a revised Magnuson-Stevens Act. Under the amended Act, once a fish stock is found to be depleted, overfishing must end within two-and-a-half years. Unfortunately, the Act does not address the key problem: the incentives for fishers to overfish. In order to use marine resources in a sustainable fashion, fishers must be given incentives to conserve.

**Needed Policy: End Subsidies and Tax Breaks.** The first step is to end subsidies and tax breaks that encourage overinvestment in commercial fisheries. Government should stop subsidizing fishermen's purchases of boats, fuel and other equipment. In addition, the government should end price supports that artificially increase the market value of fish.

Ending subsidies would eliminate the incentive for inefficient businesses to keep building boats and hiring deck hands, and give them an incentive to operate more efficiently or look for employment elsewhere. It would help already efficient fishermen by reducing the number of less efficient competitors and by allowing them to expand their operations.

**Needed Policy: Create Property Rights.** Even if subsidies are removed, the remaining fishermen will still

have incentives to "race to fish" as long as they are competing for access to a resource they cannot own. Therefore, the second step is to replace the current command-and-control regulations with a system of property rights. To the extent feasible, government should treat fish in the same way it treats livestock — as private property.

Privatization of marine resources has worked where it has been tried. Since the early 1980s, 17 countries have introduced some form of property rights, and in each case fish stocks and fishers' profits have improved significantly. One of the most popular approaches is creating tradable rights, or individual transferable quotas (ITQs), which entitle fishermen to a certain portion of the catch, often based on their past catch amounts. They can take or trade their quota, up to a government-set total allowable cap on the fish catch. For example:

- After introducing ITQs to Iceland's herring fisheries, the number of fishing vessels fell from 200 in 1980 to 30 by 1995; catches have fallen to sustainable levels, even as their value has risen dramatically.
- In 1984, Australia's blue fin tuna fisheries were near collapse; today they are the most profitable tuna fisheries in the Pacific, and property rights are used to manage 15 species.
- In 1986, New Zealand introduced ITQs to manage 30 species of fish, including blue fin tuna, abalone and lobster, each of which has recovered from near collapse.
- The United States extended property rights to Atlantic blue fin tuna, mid-Atlantic surf clams, Alaskan halibut and sablefish, and South Atlantic wreckfish; all four fisheries now have smaller fishing fleets, higher incomes for fishermen and larger, healthier fish stocks.

**Conclusion.** Before the fisheries councils fully implement the revised Magnuson-Stevens Act, Congress should revisit the issue and fundamentally change the status of fish populations. When fishermen no longer have perverse incentives to deplete fish stocks, experience shows populations should rebound. Fisheries must no longer be seen as a commons to be plundered in a "race to fish," but rather as property to be conserved, enhanced and protected.

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