REBUILDING U.S. FISHERIES

A summary of new scientific analysis:
Rosenberg, Swasey & Bowman
Rebuilding U.S. Fisheries: Progress and Problems
***Frontiers in Ecology and the Environment* (2006)**

Ten years after a legislative mandate to rebuild fisheries, most fish populations that should be rebuilt by now are still in poor shape.

In October 1996, Congress passed amendments to the Magnuson-Stevens Fishery Conservation and Management Act ("Magnuson-Stevens Act") that required fish managers to rebuild depleted populations of marine fish. Despite this strong Federal mandate, the U.S. has largely failed to rebuild fish populations, and overfishing continues to hamper progress.

Andrew Rosenberg and colleagues have examined why, 10 years later, the law has had only a limited effect on improving fishery resources. This study, initiated and supported by the Lenfest Ocean Program, resulted in a paper to be published in September in the journal *Frontiers in Ecology and the Environment*.

Have Fish Populations Been Rebuilt?

To date, rebuilding plans have been developed for 67 fish stocks identified as overfished, and plans are being developed for an additional seven stocks. But based on the last nine years of data,

- Only three stocks out of 67 have been rebuilt (less than 5%). The three successes are Atlantic sea scallops, Pacific whiting and Pacific lingcod.

- 82% of the populations that need rebuilding are either still below healthy levels or are continuing to be overexploited.

Why is Rebuilding Failing For So Many Fish Populations?

According to scientists, most fish populations can be rebuilt within the current rebuilding timeframe. So, after nine years, why are success rates so low? Because:

- Too many fish continue to be removed from the ocean (called overfishing) even after fish rebuilding plans are put in place. Nearly half (45%) of the fish stocks under rebuilding plans are still fished so heavily they cannot recover. Unfortunately, the Magnuson-Stevens Act's mandate that overfishing be immediately halted is unclear.

Figure 1a: Status Of Fish Stocks Under Rebuilding Plans

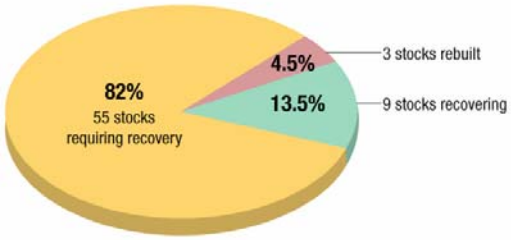


Figure 1b:
Status Of Fishing Pressure On Stocks Under Rebuilding Plans

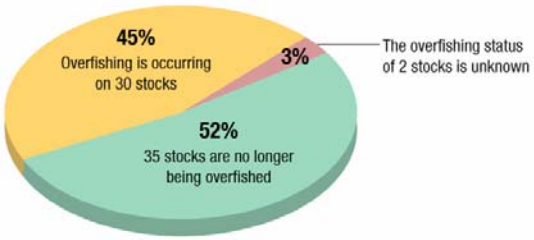
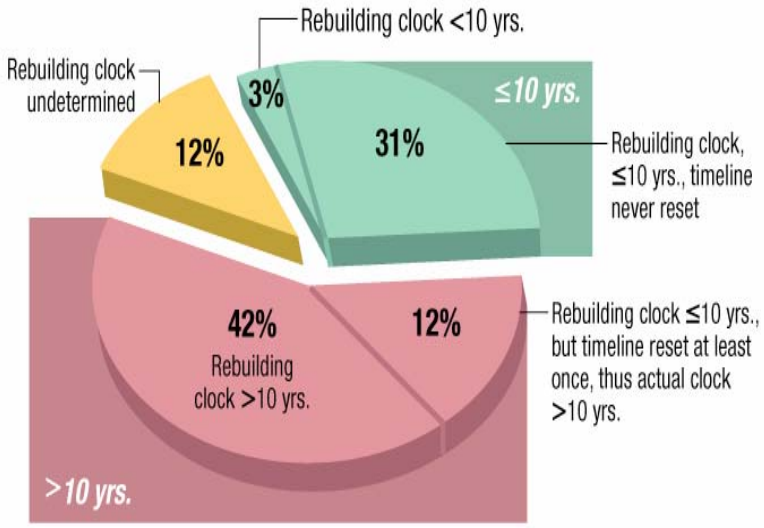


Figure 3: Timelines For Rebuilding



- Despite the law's requirement that fish populations be rebuilt in as short a time as possible, more than half of depleted fish stocks have rebuilding plans of more than 10 years (some as long as 90 yrs). Only two plans out of 67 have a timeframe of under 10 years.

- Monitoring has been inconsistent or absent, and managers have failed to revise plans that are not working. The critical information needed to assess the effectiveness of a rebuilding plan is the level of fishing pressure, and the size (biomass) of the fish population. In 52% of fish populations under rebuilding plans, managers cannot determine how much fishing pressure the population is under, and for 46% there is insufficient information to determine the biomass of the population.

But There is Good News

In spite of these shortcomings, this study found that the basic principle of the Magnuson-Stevens Act holds: when overfishing stops, fish populations begin to recover, benefiting both fish and fishermen. In 37% of populations under rebuilding plans, fishing pressure is decreasing and as a result the size of the fish population is increasing.

In a separate study released last fall, Rashid Sumaila from the University of British Columbia and colleagues analyzed the economics of 17 of the most valuable fish species undergoing rebuilding and concluded that the net present value of rebuilt fisheries (even taking into account short term catch reductions) is approximately three times as high as continuation of current fishing levels ($567 million vs. $194 million). Sumaila & Suatoni, *Fish Economics: The Benefits of Rebuilding U.S. Ocean Fish Fisheries*, Economic Research Unit, University of British Columbia (October 2005).

How Should Rebuilding Be Improved?

The study recommends several actions to make rebuilding efforts more effective. Most significantly, overfishing should be ended immediately to rebuild fishery resources. While rebuilding plans are being developed, interim measures should be established to protect further depletion of resources and begin rebuilding. Rebuilding plan timeframes should be as short as possible, and the plans should require an immediate end to overfishing. Plans should also require regular monitoring to be conducted, with performance standards in place for both fishing mortality and biomass. If a plan isn't working, adjustments should be made rapidly to prevent further depletion.

About the Lenfest Ocean Program

This study was initiated and supported by the Lenfest Ocean Program. The Program brings the best scientific research to bear on identifying the causes, consequences and solutions to problems facing the global marine environment. The Program was established in July 2004 by the Lenfest Foundation and is managed by The Pew Charitable Trusts. For more information, please visit www.lenfestocean.org.

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