

Charting a Course to Sustainable Fisheries – Summary

Using new methods to estimate thousands of unassessed fisheries, a new comprehensive study provides a new view of global fish stocks. The results show that the overall state of fisheries is worse than previously thought. Unassessed stocks, which are often left out of global analyses because of a lack of data, are declining at disturbing rates. When these fisheries are taken into account, the results indicate that over 40 percent of fisheries have crashed or are overfished, producing economic losses in excess of \$50 billion per year.

The good news is that this decline is not universal: fisheries are starting to rebound in many areas across the globe and we can learn from these examples. Recovery trends are strongest for fisheries where data on the status of the fishery exists, and in which managers and fishermen have made science-based decisions and stuck with them in the face of political pressure. While management solutions are not one-size-fits-all, success stories from across the globe demonstrate that the knowledge and resources exist to end global overfishing in our lifetimes. This recovery would improve the condition of marine ecosystems, substantially increase overall fishery yields, and improve economic returns. The amount of fish brought to shore could increase 40 percent on average – and double in some areas - compared to yields predicted if we continue current fishing trends. In many coastal areas, this increase would help feed growing populations without destroying the ocean ecosystems on which we all rely.

With better collaboration and prompt action to promote fisheries' recovery, sustainable fisheries can become the norm rather than the exception. Fishermen, conservation advocates, scientists, governments, and local communities must find pragmatic ways to overcome the social, economic, and institutional barriers that keep us from making good fisheries management decisions. *Charting a Course to Sustainable Fisheries* lays out an integrated vision for achieving this goal. This effort will require forging new partnerships across sectors in order to tackle overfishing in many different parts of the world. By combining pressure for fishery policy reform, demand for sustainable seafood from the marketplace, and adequate support from multilateral banks and other institutions to build fishery management capacity, we can reverse the trend for troubled fisheries.

A Comprehensive, Global Evaluation of Fisheries Management and Conservation Efforts

Charting a Course to Sustainable Fisheries provides a new view of thousands of unassessed fisheries around the globe – fish populations that until recently lacked data that would allow fishermen or managers to accurately evaluate or monitor the health of the population. These fisheries make up over 80 percent of the world's fish catch and are typically left out of global statistics, skewing our perception of fisheries' health at the global scale. The findings confirm suspicions that many unassessed fisheries are declining at alarming rates; in many cases, these fisheries are in worse shape than previously thought. In addition, the findings reinforce the fact that seemingly stable

trends in global fisheries mask the reality that overfishing is rapidly increasing in many lower and middle income countries, often without the kind of strong management that has proven to keep stocks from collapsing.

The report also takes a critical look at existing conservation efforts around the globe, examining what practices are working and where major gaps exist. Reviewed by over 100 marine scientists, economists and ocean experts, it recommends that future efforts to create sustainable fisheries worldwide use a coordinated set of policy advocacy, market pressure, and capacity building efforts. It calls for seafood and fishing businesses, international funding bodies, environmental advocates and others to do more to help sustain fisheries around the world, jointly prioritize their efforts and collaborate to end overfishing.

The report is organized into three major categories, each with a short summary, in depth discussion, and links to detailed graphs and charts so that readers can explore the information at a level of detail that is most useful and interesting to them. Below is a short review of each section.

Status of Global Fisheries

Overfishing is happening at a much greater degree than previously acknowledged. The amount of fish brought to shore by fishermen globally peaked in 1988 at approximately 80 million metric tons, and has been declining slowly at a rate of approximately 500,000 metric tons per year. However, this relatively stable level of global catches masks the details. During this time, we have greatly increased the amount of effort we put into fishing – measured, for example, by time on the water or number of hooks set – and we have expanded fishing into previously underexploited regions of the ocean, fishing deeper and further from shore. If fisheries were in good shape, this extra effort would result in more fish, not fewer. In many cases, this growth is happening in middle and lower income regions without strong management systems. We may be reaching the limit of this expansion and are already suffering economic losses in many fisheries as fish populations decline.

While some previous papers have said that nearly half of overfished stocks are now in recovery, these analyses are based almost entirely on assessed fisheries where we have relatively large amounts of biological and economic data. This focus represents a major bias. The analysis in *Charting a Course to Sustainable Fisheries* uses new methods to estimate and include fisheries that do not have robust amounts of data. The results show that the majority of global stocks – in both the developed and the developing world -- have been reduced to levels well below what is needed to continue to supply seafood into the future and are in rapid decline. The good news is that these fisheries can rebound: the majority of the world's fisheries have not yet collapsed. If we take action to recover these stocks, we could increase the amount of fish we bring in from these fisheries while also protecting the long term survival of the stocks, providing gains for both conservation and local seafood security.

Overfishing is not uniform across the globe. Upper income countries are largely, though somewhat unevenly, implementing measures that protect healthy stocks, move toward fishery management that considers impacts on the underlying ecosystem, and place their fisheries on the pathway to recovery. Countries including New Zealand, Iceland, the United States, Norway, and Australia, are the furthest along in managing fisheries successfully. However, across most developed countries, small coastal fisheries are often poorly managed and still subject to overfishing. In addition,

overfishing in some areas of the developed world remains surprisingly resistant to reform, most notably in southern Europe and eastern Canada, where science often takes a secondary role to the politics of avoiding painful cuts in the amount of fishing allowed.

Middle income countries, such as Chile, Peru, Argentina, South Africa and Namibia show mixed results. Large declines in the amount of fish brought to shore are likely due to heavy fishing and changing environmental conditions. Small-scale fisheries in these areas are overfished. However, because many of the fish populations in these countries are fast growing and relatively resilient to overfishing, some stocks are still reasonably healthy and are recovering to sustainable levels. This is especially true in areas where local fishermen or communities have secure rights to a proportion of the fishery, either by catch or location.

In lower-middle income countries we see dramatic increases in the amount of fishing over the last twenty years, essentially in the absence of effective fishery management. Current fishing levels are unsustainable and are destroying local ecosystems. With growing population pressure and weak management, destructive overfishing in these areas jeopardizes the potential of fisheries to continue to provide food to local communities in the future. The situation is most serious in Southeast Asia, although West Africa and Central America are not far behind.

Finally, in the open ocean, where United Nations-authorized regional fishery management organizations (RFMOs) set fishing regulations, fishing continues to increase even as valuable stocks like bluefin tuna are overfished. Once protected simply because of the cost and effort to fish so far offshore, highly migratory fish in these areas face a rapidly increasing number of hooks and nets in these waters. There is little protection for these populations. RFMOs have typically failed to set scientifically sound limits on the total catch for these species.

In addition to these geographically-specific trends, fishing impact on habitat and wildlife remain a major issue across all fisheries. Through unintentional impact on other species, fisheries are pushing threatened species like seabirds, turtles, and sharks toward collapse. Fishing practices that destroy ocean habitats also pose a threat to the long-term health of ocean ecosystems. Only 1.3 percent of the world's oceans are in protected areas, and many of the areas that do exist have little enforcement, offering more protection on paper than in reality.

Root Causes and Solutions

The management solutions to overfishing are well known, tested and proven to work. While these solutions are not "one-size-fits-all" for fisheries, there are common themes. Specifically, managers and fishermen must: 1. Reduce fishing to allow stocks to rebuild; 2. Set catches at a sustainable level that is based on the best available scientific and economic information rather than short-term political pressures; and 3. Prevent dangerous fishing activities that destroy habitat, wildlife, or breeding fish.

For industrial fisheries, these principles are typically achieved through scientifically guided programs such as harvest control rules, rebuilding requirements, and long-term management plans that set a total allowable catch or a target for the number of fish left in the water. These efforts deliver the best results when they provide individuals or communities with secure, long-term access to a share of the fishery, as this helps align fishermen's economic interests with long-term sustainability. For

multi-species coastal fisheries, especially in developing countries, this rigorous management approach is exceedingly difficult to enact. Instead, controls on fishing practices such as seasonal or geographic closures and gear restrictions, developed and enforced in conjunction with the local community, are most effective.

While the management solutions to overfishing are well known, economic and social barriers that are extremely hard to overcome make it complicated and difficult to use these solutions. Efforts to correct overfishing must address three main root causes:

- Fishery recovery usually requires a reduction in fishing for some period of time, usually leading to short-term financial losses throughout the value chain – affecting fishermen, those who buy and process fish, distributors and others whose profits rely on fishing. Those players who place a higher value on short-term profit may prefer high, short-term yields over long-term prevention of fishery collapse.
- The economic costs and benefits of fishery reform and recovery are not evenly distributed across players; there are winners and losers. In decision-making systems that require political consensus, such as that used by the RFMOs on the high seas, potential losers have an incentive to block any reforms. Similarly, in developing nations where fishing is a livelihood of last resort for many communities, governments are often reluctant to close fishing due to fear of the short-term social impact and opposition.
- Both fishery data and management efforts based on this information are needed to achieve sustainable fishing. In many areas, there are no means to organize, nor pay for these efforts. Without an indication of the health of the fish population, even fishermen with the best intentions can overfish.

A Global Agenda

Fisheries in different regions face unique economic and institutional barriers to sustainable fishing. The full report contains specific conservation recommendations for each area. The report also outlines a basic suite of tools to promote sustainable fisheries management globally. These include:

- policy reform at the local, national, and international level;
- align economic incentives with sustainability through seafood market pressure that encourages sustainable practices and rights based management;
- protected areas that limit fishing;
- major improvements in intergovernmental fishery management decisions and enforcement; and
- technical capacity building that improves local efforts to collect and analyze fishery data, translate this information to management decisions and enforce fishery regulations.

For these tools to be most effective, environmental advocates, philanthropic organizations, intergovernmental banks, national and local governments, and businesses along the seafood supply chain need to break out of issue-specific silos and work together to prioritize and coordinate their efforts. These groups must also shift to a more international approach to marine conservation, increasing financial investment and attention to conserving fisheries in middle and lower income countries.

Charting a Course to Sustainable Fishing recommends several priority areas for future conservation efforts:

1. Developed Countries: Continue responsible fishery management efforts in the developed world that have helped fisheries in these areas recover. Continue to reduce fishery impact and gradually transition fisheries toward an ecosystem-based management focus that puts a high priority on conserving ocean habitat and wildlife.
2. Middle Income Countries and Open Oceans: Institute better controls on the amount of fish we take out of the water in major fisheries in the industrializing world and on the high seas.
3. Lower Income Countries:
 - a. Initiate basic controls on the amount of fish we take out of the water in commercial-scale fisheries in the developing world.
 - b. Test and expand fishery management solutions that are effective at a local scale and reap clear benefits for local communities. Use these efforts to curb the massive pressure on coastal fisheries, particularly in the high biodiversity regions of the developing world.
4. Across the Globe: Safeguard the last pristine and precious places in the ocean from further exploitation.

We need to change the race for fish to a race for sustainability. With greater collaboration and a combination of management, policy, and market efforts, we can end global overfishing in our lifetimes. We know enough to make this change, but we have to seize this opportunity before more fisheries collapse. The time to act is now.

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