The Future of Managing Fisheries and the Global Commons through Regional Fisheries Management Organizations: Steps toward Global Stewardship

Susanna D. Fuller
Oceans North, Halifax, Nova Scotia, Canada

Kathryn E. Schleit
Ecology Action Centre, Halifax, Nova Scotia, Canada

Introduction

The high seas, to this day, are viewed by many as a hive of unlawful activity, with visions of piracy, illegal fishing, and mysterious sea creatures. Conversely, that same 70 percent of our ocean that is outside state waters, beyond 200 nautical miles, may be seen as a frontier area, with little human activity relative to nearshore and coastal ecosystems. Somewhere between those two extremes lies the truth. Our most intimate connection with the high seas comes from the fish on our plate and occasional news stories documenting the catch of a big fish by local fishers. On the other hand, public awareness about the high seas also centers on iconic species like cod and tuna that have been overfished and remain below historic levels. It is the collective decisions of individual countries that determine the ultimate fate of high seas fish populations. The past and future success of these group decisions in adhering to high-level principles and the best available science to protect the global commons will dictate if we can minimize human impacts and ensure the sustainability of the broader marine ecosystem.

The Challenges of Managing the High Seas and Migratory Stocks

Since the United Nations Convention on the Law of the Sea and the United Nations Fish Stocks Agreement (UNFSA) came into force, implementation has been slow but steady, yet new conservation challenges apart from fisheries management are emerging. UNFSA provides for implementation of global best practices for managing fisheries.¹ Regional fisheries management organizations

¹ Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of
(RFMOs), as described by UNFSA, are governed by member states and primarily responsible for managing the straddling and migratory stocks that live in or pass through designated regions of the ocean. Those responsible for straddling stocks now cover ~65 percent of the high seas and those responsible for highly migratory species, such as tunas, swordfishes and billfishes, are in place for 91 percent of the world's ocean, including inside and outside of the 200-nautical mile limit of coastal states.

Managing high seas fisheries is a delicate balance for countries that are members of RFMOs, each with different political and economic motivations as well as historic access to particular fisheries. Coastal states—countries whose waters border adjacent high seas areas and have rights over the fish in their coastal waters—vie for access with distant water fishing nations, those states fishing in other country’s exclusive economic zones or on the high seas. Furthermore, there are states that previously have not fished within specific RFMO areas, often because they are developing their fisheries or due to changing migratory patterns of fish species, but that want to build their fishing access and capacity for food security and trade purposes. Many of the latter may not have the competent national bodies to adhere to modern management principles such as precautionary decision-making and an ecosystem approach, which is now enshrined in the agreed mandates of most RFMOs.

The performance of RFMOs is measured most notably by the health of fish populations included in their mandates, and global assessments show that high seas fisheries are still in decline, despite the investments in science, research, management, and diplomatic efforts. In addition to annual meetings, stock updates, and setting quotas, RFMOs engage in performance reviews by external panels and states participate in ‘review conferences’ on the implementation of UNFSA every five years. While these processes are instituted in efforts to hold governments accountable, few high seas fisheries have been successfully rebuilt, moratoria remain in place, fishing continues to impart collateral damage on other species and marine habitats, and increasing uses

---

2 Food and Agriculture Organization of the United Nations (FAO), The State of World Fisheries and Aquaculture 2016. Contributing to Food Security and Nutrition for All (Rome: FAO, 2016).
3 M. Ceo, et al., Performance Reviews by Regional Fishery Bodies: Introduction, Summaries, Synthesis and Best Practices. Volume I: CCAMLR, CCSTT, ICCAT, IOTC, NAFO, NASCO, NEAFC, FAO Fisheries and Aquaculture Circular No. 1072 (Rome: FAO, 2012), http://www.fao.org/docrep/015/i2637e/i2637e00.pdf.
4 S. Cullis-Suzuki and D. Pauly, “Failing the High Seas: A Global Evaluation of Regional Fisheries Management Organizations,” Marine Policy 34, no. 5 (2010): 1036–1042.
5 G.O. Crespo and D.C. Dunn, “A Review of the Impacts of Fisheries on Open-ocean Ecosystems,” ICES Journal of Marine Science 74, no. 9 (2017): 2283–2297, doi.org/10.1093/icesjms/fsx084.
of the ocean, as well as climate change, are further reducing the chances that fisheries management measures can, in fact, ensure continued production of food for a growing global population.

Decision-makers and states that invest heavily in both science and advocacy for increased access to ever-diminishing stocks but too often lack the fortitude to enact fisheries closures or reductions at the right time, often succumb to industry pressure to reduce quotas gradually rather than immediately stop overfishing at the initial signs that all is not well. Despite increasing technology to track fishing activity, illegal and unregulated fishing continues. As many RFMOs were put in place following a fishing crisis or population decline, rather than in advance of overfishing and mismanagement, targets are often set to rebuild stocks to depleted levels rather than to a formerly abundant state. In addition, at the first signs of stock improvements, quotas are often increased too high, too quickly, reversing years of population rebuilding.

Facing poor or uncertain stock assessments and problems with single-species fisheries measures, scientists are developing more sophisticated scientific modeling and managers are taking preliminary steps to incorporate an ecosystem approach to manage habitat impacts, bycatch of incidental species and predator-prey interactions. Since 2006, and the commitment by states through the United Nations General Assembly resolution 61/105, increased pressure has been placed on both scientists and managers to assess the impacts of fishing on deep-sea habitats from bottom fishing and subsequently prohibit fishing activity where these vulnerable ecosystems are known or likely to occur. Progress has been made, but not to the degree that has been committed. Incidental catches of sharks and seabirds are known, but no fishing limits have been agreed to in most of the global ocean to ensure no further damage to these non-target species While most RFMOs are supposed to consider the impacts of fishing not only on target stocks, but also on other stocks that are impacted, few effective multi-species management systems have been put in place.

Increasingly, state fisheries managers are coming to the realization that even if they followed all science advice at the right time and fully protected the marine ecosystem from direct and indirect impacts of fishing, other human activities are impacting the ecosystem, including oil and gas extraction.

---

6 United Nations General Assembly, Report of the resumed Review Conference on the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 23–27 May 2016, New York, UN Doc. A/CONF.210/2016/6, http://undocs.org/A/CONF.210/2016/5.
deep seabed mining, plastic pollution, and climate change. Often times states make decisions outside of RFMOs that will fundamentally undermine future rebuilding of fisheries, whether it is through lukewarm commitments to reducing greenhouse gas emissions or enabling resource extraction on valuable fishing grounds. Increasing human activity will make this much more difficult as both the science and the governance to manage cumulative impacts of people on biodiversity is lacking. The only way that these other impacts can be managed is through global mechanisms that include most of the same states and high seas fishing nations.

**Ways Forward for RFMOs**

There are a few ways forward to improve fisheries management by RFMOs, the foremost of which is to ensure that states have the political fortitude to follow scientific advice, make decisions based on precaution, commit to transparency in all aspects of data and decision-making, and act, in a timely manner, upon recommendations of performance reviews. Fish do not follow RFMO boundaries so it is imperative that management is consistent across RFMOs if there is to be any possibility of meaningful rebuilding and ecosystem protection. The ingredients for successful fisheries management exist, with the political will of member states being the ‘keystone’ ingredient. And the time has come when just focusing on managing fisheries must be left to the bygone days of relative simplicity.

Many RFMOs came into force following UNFSA, and hence include in their mandates modern best practice in fisheries management such as maintaining or restoring stocks at levels capable of producing maximum sustainable yield and implementing the ecosystem and precautionary approaches. Some that predated UNFSA have modernized their conventions to include these principles, but several have not. Few, in any case, regularly put these policies into practice in all management decisions, but must do so as a way forward.

Some RFMOs are adopting more robust and adaptable fisheries management tools by developing science-based harvest strategies where fisheries management decisions are based on pre-agreed objectives and decision rules. In RFMOs where they have been tested, harvest strategies have been shown to reduce the time and political influence of management decisions, better plan for uncertainty, and ultimately maintain stock health over time. These new tools should be incorporated by all RFMOs to improve management.

An increasing challenge facing RFMOs, particularly in light of changing stock dynamics due to climate change, is states seeking increased access to
stocks that they previously did not fish or only fished for in the past. The political decisions around quota sharing are thwarting good fisheries management decisions and calling into question states’ abilities to equitably manage resources. RFMOs need to develop just sharing arrangements that consider changing stock dynamics and coastal and developing state rights that do not hinder precautionary, science-based management.

Beyond RFMOs, a New Evolution

While RFMOs have increasingly taken action to reduce the impacts of fishing, these actions are neither bold nor broad enough. For fish populations to recover from human impact, they will need long-term respite from our interventions. In the ocean, one option is for states to establish a mechanism allowing for high seas marine reserves, setting areas off limits to human impacts, and ensuring effective and efficient establishment of enforcement mechanisms. These reserves can build upon and enhance spatial protection measures in place for fisheries. This will require inter-sectoral co-operation where governance bodies for fishing, shipping, mining, and oil and gas extraction will need an integrated approach to ensuring that all activities are restricted within these marine reserve areas.

A second and perhaps more radical option proposed by some is to end fishing on the high seas and allow fishing only in coastal state waters. There are benefits to this; enforcement may be easier and costs for global instruments and regional management organizations would effectively end. The downside is that those organizations also provide a venue for sharing best practices and information, development of collective science, and ideally are a place where states can hold each other to account to higher level commitments and legal obligations. A further complication for states to address in this approach is the contracting and expanding ranges of fish populations as a result of climate change that will require adaptability to having more or less fish in their waters from year-to-year.

It is clear that despite global legal frameworks and subsequent incremental improvements in governance and science for fisheries management, these tools are not working as fish populations struggle to recover. While far from

---

7 U.R. Sumaila et al., “Potential Costs and Benefits of Marine Reserves in the High Seas,” *Marine Ecology Progress Series* 345 (2007): 305–310.
8 U.R. Sumaila et al., “Winners and Losers in a World Where the High Seas is Closed to Fishing,” *Scientific Reports* 5 (2015), doi.org/10.1038/srep08481.
the eyes of most people, it is only bold decisions and expedited action that can ensure the future of high seas ecosystems, which from an ecological perspective blend seamlessly into national waters. Our collective track record does not bode well, and future success will need strong leadership and a commitment to the fish and ecosystems that have served us well for so long. It is only in this way that stories of big fish being caught may be part of our ocean future.