

Regional Fisheries Management Organizations: Bringing Order to Disorder

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The purpose of this report is to evaluate the effectiveness of Regional Fisheries Management Organizations (RFMOs) as a way to supervise and manage fishing sustainably on the high seas in a manner consistent with the goals of pertinent international agreements. As called for in the 1982 United Nations Convention on the Law of the Sea (UNCLOS), the 1995 Agreement Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UNFSA) is the main agreement that addresses high seas fisheries and the role of RFMOs in managing them. More narrowly, this report evaluates the effectiveness of RFMOs in overseeing states' implementation of UNFSA.

There are significant problems in the current management regimes for high seas fisheries.

This paper recommends a practical framework for achieving the following results:

- Improving the system of Regional Fishery Bodies (RFBs, a diverse group of independent organizations of which RFMOs are one type);
- Managing and monitoring who participates in high seas fisheries, and
- Building the regulatory infrastructure to encourage market-based fisheries conservation efforts.

After this brief introduction, the first section of this paper provides a summary of the central international agreements that frame our discussion, including UNCLOS, UNFSA and the role of the Food and Agriculture Organization (FAO). The following two sections evaluate and suggest improvements to structure and operations of the Regional Fisheries Bodies originally described in UNFSA. The final section concludes that a neutral expert body such as the FAO's Fisheries Department could begin the process of improving the performance of RFBs throughout the high seas and that RFMOs could provide a propitious starting point for improvements.

While this paper analyzes the specific management regime pertaining to high seas fisheries, lessons drawn can be applied to other international environmental treaties, particularly those dealing with common property natural resources (e.g., migratory birds and other wildlife, watershed, and even air pollution).

As a classic case of the "tragedy of the commons," no discussion of fisheries management can begin without at least brief treatment of this phenomenon. The inherent threat to over-utilizing commercial fisheries that are outside the domain of any one owner is that the risk of conserving is overshadowed by the risk of losing out to others who do not conserve.

The main finding in this report is that regional management schemes can be effective in achieving conservation and resource management goals if they are developed with a profound understanding of the factors that lead to over-exploitation and effectively address the incentives driving them.

Framing the Issue of Fisheries: the UNCLOS Framework for Managing the Oceans

Considered a "constitution for the oceans," UNCLOS is one of the most comprehensive international agreements in history, with 320 articles and 157 signatories. The text of the

Convention is based upon an agreement first introduced in 1973, adopted in 1982, and which entered into force in 1994.

In addition to codifying long-standing customary law of the oceans, the main purpose of UNCLOS is to delineate jurisdictional zones within the ocean, set rules for navigation, provide guidelines to conserve and manage living marine resources and the marine environment, clarify rules for deep seabed mining, and establish mechanisms for resolving disputes among the parties. One of the major outcomes of UNCLOS was the establishment of Exclusive Economic Zones (EEZs), which extend up to 200 nautical miles from the coastline¹ and within which the corresponding coastal states have certain exclusive rights, including fishing and the enforcement of environmental laws. While UNCLOS provides a framework to deal with many ocean resources and fisheries within the 200-nautical mile limit, it falls short of specifying measures to deal with the management and protection of wildlife and living resources on the high seas, where five to 10 percent of global commercial fish stocks are found.²

In the late 1980s, there was mounting evidence that certain straddling and highly migratory fish stocks were in need of management. Coastal states were beginning to extend their EEZ boundaries arbitrarily into the high seas in order to exploit these fisheries. At the same time, distant-water-fishing nations (DWFNs), completely excluded from the newly established EEZs, were spending more time and resources fishing the high seas. Fish stock declines were estimated at 70 percent, setting off alarms throughout the world's fishing and conservation communities. As a result, a portion of Agenda 21 of the UN Conference on the Environment and Development (UNCED) determined the need for an agreement dedicated to the management and conservation of straddling and highly migratory fish stocks.

Expanding the Goals of UNCLOS to High Seas Fisheries – UNFSA

UNFSA, or the UN Fish Stocks Agreement, was adopted in August 1995 and entered into force on December 11, 2001. It presently has 59 signatories and has been ratified by 52 countries (see Annex 1 for the list of participant countries). UNFSA achieves its mission of supporting UNCLOS and “correcting the glaring weaknesses of the Convention, as it pertained to high-seas fisheries management” (Munro 2001). UNFSA articulates general principles for high seas fisheries management, including the introduction of the precautionary approach³ which states that “where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation” (Principle 15 of UNCED); defines measures to curtail illegal fishing; and proposes management mechanisms. Most relevant to this discussion, UNFSA places the responsibility for managing straddling and highly migratory fish stocks with RFBs (the broad category that includes RFMOs). The role of RFBs will be the main focus of the remainder of this report.

Negotiating UNFSA

UNFSA's active negotiation, taking place between 1993 and 1995, was comprised of six formal negotiations including over 130 states, interspersed with a series of less formal meetings. During these lengthy negotiations, two opposing sides emerged: DWFNs and coastal states (Stokke 2001 and Ocean Law 2005). The major points of contention between the two groups included:

- The form the agreement would take (binding or non-binding);
- The balance between coastal state responsibilities and DWFN responsibilities;
- Enforcement measures; and
- Whether or not regional conventions would allow DWFNs to participate.

DWFNs lobbied for nonbinding guidelines as opposed to the binding treaty favored by the coastal states. The United States (due in large part to the influence of environmental NGOs) and several other influential nations pushed for the binding treaty that was eventually signed. The second point of contention between coastal states and DWFNs centered around the scope of the agreement. DWFNs argued that some of the restrictions put forth in the agreement for the high seas should also be reflected in the management of coastal waters. They succeeded in extending the precautionary principle beyond the realm of the high seas to include coastal zones as well.⁴

The topic of enforcement was a sensitive issue during the negotiations. Because enforcement involves infringement upon sovereign rights (e.g., boarding ships and inspecting catches), DWFNs were particularly loth to agree about enforcement measures. As a result, the negotiators called upon the FAO Compliance Agreement (described below) to facilitate enforcement measures that would affect DWFNs.

The designation of RFMOs as the mechanism to carry out UNFSA's goals was highly contested during the negotiations. Coastal states were protective of membership in RFMOs, pushing to exclude DWFNs from participating. On the other hand, DWFNs were adamant that they be part of the decision-making process and that RFMOs be open to noncoastal states as well as coastal states (Stokke 2001).

Guidelines for Management – FAO Code of Conduct and Compliance Agreement

While UNCLOS and UNFSA are the underlying law and agreement that provide the framework for this discussion, the Food and Agriculture Organization of the United Nations (FAO) has been actively involved in the development, implementation and information-sharing component of high seas fisheries management. Two documents – the 1993 FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (Compliance Agreement) and the 1995 FAO Code of Conduct for Responsible Fisheries (Code of Conduct) – provided many of the management principles that were adopted in UNFSA and have been used as guides to carrying out the ideals of UNFSA.

The FAO Code of Conduct is a voluntary tool from which RFBs can borrow in drafting their own conventions. Its aim is to establish guidelines and recommendations for responsible fishing and to complement and strengthen current international fisheries law. The FAO Compliance Agreement, adopted in 1993 but not yet entered into force, was a precursor to the Code of Conduct, focusing specifically on the role of the flag state in fisheries management. Because the FAO has a history as the coordinator and overseer of the RFBs, its Fisheries Department is in a unique position to oversee the activities necessary to improve the performance of the RFBs. This point will be discussed in greater detail in later in this report.

Problems with the Current Management Regime

While in theory RFBs provide an effective mechanism to carry out the management goals of UNFSA, in practice, certain serious shortcomings have been revealed. By understanding the major flaws within the current system, we can propose ways to improve upon the organizations themselves – and therefore the sustainability of high seas fisheries in general. First, however, we shall discuss the problems created by specific characteristics of the RFB system, followed by an examination of the various participation problems that have occurred, including the incentives for fishers to cheat, opt out of the RFMO, or avoid participation altogether.

Disparate Authority and Missions of RFBs

An underlying problem with RFBs is simply their structure. There are currently 44 regional fisheries bodies world wide that can be placed into three categories: 1) RFMOs; 2) advisory bodies; and 3) scientific bodies. The most powerful and effective of this group are the 17 RFMOs, (See Figure 1.) which are responsible for establishing management measures and have recognized regulatory power in their jurisdictions (see Annex 2 for a list of RFMOs). Although each RFMO does not share a consistent mandate, the following responsibilities are common across organizations:⁵

- Collect and distribute fishery statistics;
- Provide evaluations of the state of fish stocks in their area of jurisdiction;
- Determine the total allowable catch (TAC) quotas;
- Set limits on the number of vessels allowed to exploit the fishery;
- Allocate fishing opportunities to RFMO participants, using such measures as area and seasonal closures, by-catch limits, and limitations on fleet capacity and fishing gear (Molenaar 2003);
- Regulate the types of gear used and conduct inspections to ensure compliance;
- Monitor and enforce adherence to the rules of the RFMO; and
- Oversee the scientific research conducted within the fishery.

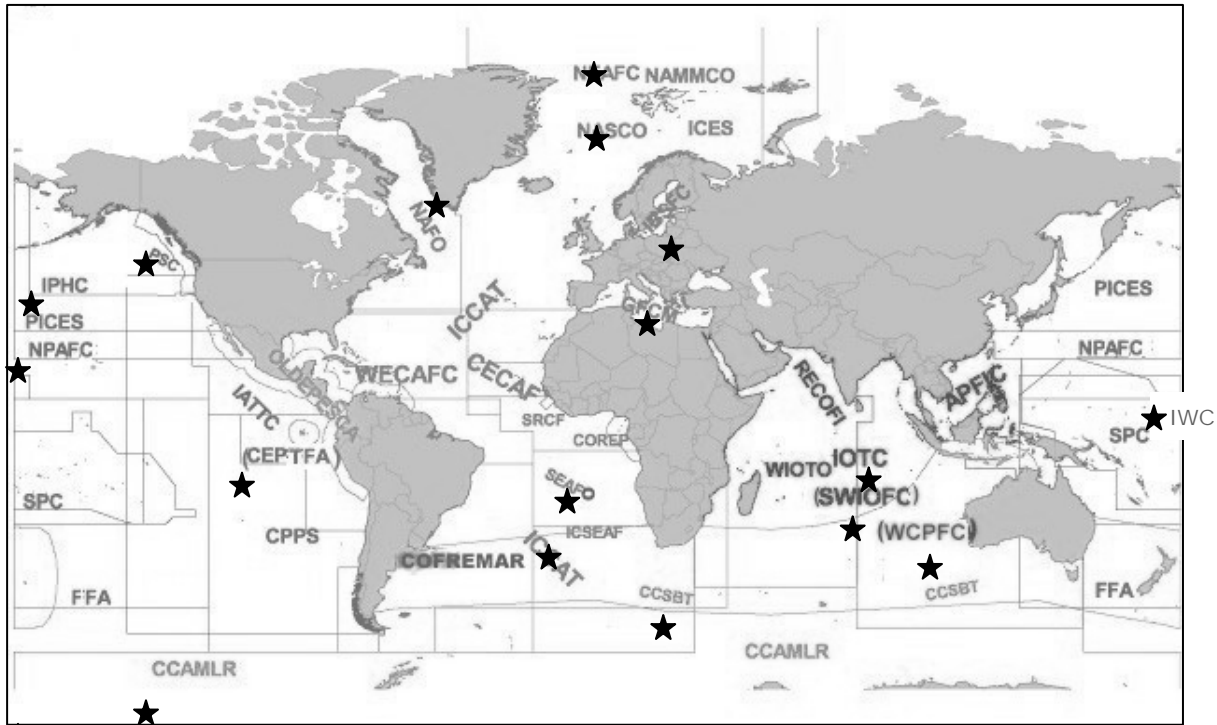
It is also important to understand the characteristics and roles of the other, less powerful types of bodies. Twenty-one such organizations act as advisors to their members, conducting research and distributing scientific research and management advice. These Advisory Bodies have no legal or regulatory power, significantly weakening their direct effect over the actual management of their respective fisheries. Finally, six scientific bodies are designed to disseminate scientific research and advice to their members. These are the most limited of all the RFBs in terms of influence over the management of their fisheries.

While we rely on this disparate set of Regional Fisheries Bodies to carry out the mandates of UNFSA through their own individual conventions, most are not based on the tenets of UNFSA. In fact, many pre-date UNFSA by 30--even 50--years. The majority of RFBs were established as a series of post-1945 fisheries conventions.⁶ These conventions were negotiated between two or more countries as a means to curtail the exploitation of particular species, usually within a particular geographic area. As international ocean treaties such as UNCLOS emerged, RFMOs were involved in their design and implementation to varying degrees. Since then, some have been retrofitted to accommodate the rules laid out in UNFSA, while they maintain their original mission and independence. As a result, today we

have “a complex and evolving web of binding and non-binding international instruments” that amounts to “a patchwork quilt of measures with differing geographical and legal reach” (Upton 2003).

Despite the inconsistencies among the 44 Regional Fishery Bodies, there are lessons to be gleaned – particularly from some of the more progressive RFMOs – that will improve the management regimes and the overall health of the fisheries they are charged with sustaining.

Figure 1. Sample of Global Fisheries Managed by RFBs



★Star indicates RFMOs. Source: FAO.

Participation Leads to Overexploitation

The second category of problems that occurs within the current fisheries management regime relates to who participates in the fishery and RFMO. Because the success or failure of a fishery is directly dependent on who is allowed to fish there, determining who can participate, and dealing effectively with those who illegally fish is of primary concern to any management regime. Here we examine four participation phenomena that occur within high seas fisheries: the new-entrants (or free-rider) problem, the opt-out problem, and two types of problems under the category of illegal, unreported, and unregulated fishing (flags of convenience and nonparticipatory states).

New Entrants and the Free-Rider Problem

The “free rider” problem for new entrants to the fishery occurs because UNFSA mandates that any fishing nation can join an RFMO at any time. As a result, DWFNs may decide not to join an organization while a waning fishery is suffering, but can wait until it has been rejuvenated so it can reap the benefits without having to sacrifice while the stocks rebound.

This creates an incentive for fishers to flock to the fishery once it begins to thrive, essentially bringing us back to the tragedy of the commons, in which some members are making sacrifices only to be inundated with free riders once the fishery is rebuilt.

The free rider problem hinges on the tension between incorporating new entrants to a fishery (because it will reduce the allocation of fish to existing participants) and leaving nonparticipants out (because they will have incentive to participate under the “unregulated” status). To resolve this issue, the RFMO must provide incentives to potential entrants that are considered fair to both existing participants and the new entrant, which will be discussed further in the recommendations section, below.

Opting Out

An underlying problem for high seas fisheries management – as for most international treaties – is that states which are not signatories or members of the RFMOs are not subject to their laws. Therefore, if unhappy with the system or wishing to engage in unsustainable fishing, parties can simply opt out and fish on their own outside the rules of the regional agreement. Doing so, of course, undermines the very point of the regional convention. It is the job of RFMOs to create incentives for signatories to ratify the relevant convention (i.e., become RFMO members) rather than opt out.

Illegal, Unreported, and Unregulated Fishing

The most persistent problem within high seas fisheries is the incidence of illegal, unreported and unregulated (IUU) fishing.⁷ IUU fishing on the high seas is generally described as any fishing that takes place within the jurisdiction of the RFMO, but does not comply with the regulations put forth by the organization. IUU fishing is broadly defined by the FAO as fishing activities:

...in the area of application of a relevant RFMO that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organization, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organization” (FAO 2001).

Here, we will focus on the most prominent types of IUU fishing, “flags of convenience” and “nonparticipatory states.” Fishers from signatory countries engage in the illegal use of flags of convenience when they register their vessels under the flag of a nonsignatory country to avoid the regulations put forth by the RFMO.

There is strong incentive for vessels from states that are not participants in a RFMO to engage in illegal fishing if the fishery is lucrative. Besides not having to follow the quotas set by the RFMO, these IUU fishers avoid the significant cost of complying with many RFMO rules. For example, while compliant vessels purchase a license, noncompliant vessels have no such costs (Upton 2003). Indeed, in the more progressive RFMOs, participants also install vehicle-monitoring systems, pay on-board observers and contribute to the costs of catch documentation schemes, further contributing to the effectiveness of the system, but also increasing the cost of compliance. Given the disincentives to join an RFMO and the ease of noncompliance or false compliance, efforts to reduce IUU fishing must focus on creating incentives for IUU fishers to join the RFMO (or at least comply with its rules) or to leave the fishery altogether.

Recommended Solutions

Based upon the problems encountered in the use of RFBs to carry out the sustainable management goals of UNFSA, as Table 1 summarizes, this section proposes solutions for those shortcomings within the context of the current RFMO system.

Table 1. Summary of Problems and Proposed Solutions in Managing High Seas Fisheries

Category	Specific Problems	Solutions
Participation Problems (IUU fishing)	(Flags of convenience; nonparticipatory states) New-entrants problem Opting out	Catch documentation schemes Vessel monitoring devices Black lists Licenses Eco-labeling
RFB structure	Disparate authority and inconsistencies	Shifting authority to port state; Instituting an ecosystems approach; Changing RFB structure (checklist and report card)

The system improvements proposed here will clarify goals and responsibilities of the various players in each fishery and will increase transparency by providing better information to RFMOs, port states, fishing vessels, and importantly, consumers of fish and fish products.

Turning IUUs into LRRs (Legal, Reported, and Regulated) Participants

Because of an inherent limitation in international treaties--the fact that they are voluntary--their effectiveness is often limited. Although RFMOs do have regulatory authority, there is ample incentive for a country to opt out of an agreement if its sovereignty is compromised or if it is threatened with penalties with which it disagrees (Susskind 1994).

Therefore, to achieve the goals set out in UNCLOS and UNFSA, several innovative strategies have been developed and are in the process of being implemented that create incentives for states and individual fishers to comply with the standards. The policy makers who have shaped these incentives understand that the sheer size of the ocean and the strong economic incentives to participate in IUU fishing will almost inevitably result in an overexploited fishery if other incentives are not created. An effective monitoring and enforcement regime should focus on strengthening port enforcement while placing due attention on the persuasive power of the vast market of fish consumers. Many of the following practices are being pursued by the most effective RFMOs and should be considered by others wishing to combat the destruction caused by IUU fishing and other unsustainable fishing. In addition to the solutions outlined below, RFMOs should draft a formal agreement stating their willingness to honor one another's rules, in order to strengthen their effectiveness both within and outside their jurisdictions.

Documentation Schemes

Catch documentation schemes (CDSs) are among the most promising programs put forth by RFMOs to encourage legal fishing. By identifying the origin and documenting the legality of fish at the point they are landed, port state authorities provide the market with a certification that the fish they are purchasing was caught in a manner consistent with the conservation

practices of the RFMO. Undocumented fish are blocked from entering the market through any RFMO member state. Data gathered can also be used for scientific reporting of stock depletion and to help the RFMOs set appropriate quotas. The CDS framework is based upon Trade Documentation Schemes, which were first implemented at several RFMOs focusing on tuna management⁸ CDSs are an improvement over trade documentation Schemes because they begin tracking the fish from the moment they are landed: Trade documentation schemes do not start tracking a fish until it actually enters the market, and are concerned only with internationally traded fish. A CDS will provide a more complete picture of the activities of individual vessels and the overall catch of a given fishery (Upton 2003).

Catch documentation schemes are most successful in RFMOs whose members also constitute the market for the given fish. If states that import fish subject to a CDS are not members of the RFMO that oversees the scheme, they may not demand proof that the fish were caught under the regulations of the RFMO, which will greatly reduce the effectiveness of the CDS. Of course, IUU fishers who dump their illegal catch into non-member port states will undermine the conservation measures of the entire program.

The Commission for the Conservation of Antarctic Living Marine Resources (CCAMLR), the first RFMO to implement a CDS, made the scheme mandatory for all of its members in 2000. CCAMLR and ICCAT (a tuna-focused RFMO) have reported a significant reduction in IUU fishing since implementing their documentation schemes (Upton 2003).

A major concern in the implementation of any conservation scheme that affects trade and access to markets is that it may interfere with World Trade Organization (WTO) rules on free trade, which insist that trade measures be:

- Nondiscriminatory,
- Transparent, and
- Directly linked to a policy of conserving an exhaustible natural resource.

In each of these categories, catch documentation schemes have been found to be acceptable. In fact, such schemes have been lauded by the Secretariat of the WTO as “examples of appropriate and WTO-consistent (i.e., nondiscriminatory) use of trade measures in multilateral environmental agreements” (Upton 2003). However, a documentation scheme is only useful if it is verifiable. This leads us to the next measure that RFMOs should undertake: the use of technology to track and report the activities of vessels.

Vessel Monitoring Systems

New technology is creating opportunities for RFMOs to better monitor the catches landed by member vessels. By requiring that all fishing ships install vessel-monitoring systems (VMSs), RFMO authorities receive up-to-the-minute data on the catches, as well as location of vessels operating in a given jurisdiction. RFMOs can use this verifiable information to monitor the activities of each vessel utilizing the fishery.

VMSs were first used by CCAMLR to track information on the Patagonian toothfish, which was commonly fished by IUU vessels.⁹ By collecting data transmitted by the VMS devices, port states can compare actual landings with accurate data on the location of the catches, thereby verifying (or negating) claims that fish were legally caught within the confines of the

fishing area. Furthermore, VMS enables RFMO staff to have constant information on the total amount of fish caught, providing real-time information on when a fishing quota is reached. Typically, such information takes several days to be compiled and acted upon. VMSs are currently mandatory for certain RFMOs; all management organizations should try to mandate them within the next decade.

Black Lists

Several RFMOs have instituted a system of black listing IUU fishers as an enforcement tool. By gathering information on illegal vessels into a database and disseminating that information to port states and other interested parties, these RFMOs have found a low-cost way to restrict IUUs from landing their catches. As black lists are distributed, no state party allows such vessels to enter their port. This system relies upon a comprehensive database (which could be managed by either the RFMOs or by nongovernmental fisheries watchdog organizations) to effectively distribute the reports in a timely manner (Kimball 2004; Molenaar 2003).

New Member Licenses

As a response to the free-rider problem described in above, RFMOs should sell (as opposed to grant) licenses to belong to the RFMO and access its fishery to noncharter members (Munro 2001). By purchasing quotas, new entrants would effectively bear some of the cost of conservation that the original members endured while building up the fishery. However, as Molenaar (2003) points out, “if the allocations offered to new entrants are perceived as inequitable, they are tempted to stay outside the RFMOs and thereby maintain or increase their catch.” This leads to the problem of more IUU fishing. It is therefore key that RFMOs set the cost of licenses high enough to defray the conservation costs and low enough to attract would-be IUU fishers to participate.

Eco-labeling

Because of increasingly reliable information, we know the state of fisheries better than we have at any time in the past. Furthermore, port states can use catch documentation schemes and vessel-monitoring systems to determine the compliance level of any individual vessel. By combining this monitoring technology with a simple labeling program, we can educate consumers and increase demand for legally and sustainably caught fish while wiping out demand for fish caught illegally and unsustainably by IUUs.

Once a catch is documented to have been sustainably harvested, eco-labeling can provide information to the market, thus influencing demand for certain fish based upon the manner in which it was caught. Labels such as “dolphin-safe tuna” have served to educate consumers of the incidence of by-catch in tuna fisheries and have created a market-wide aversion to tuna caught without measures to protect dolphins. By partnering with seafood corporations and NGOs, RFMOs could play a central role in the expansion of such initiatives (Duchene 2004).

Improve the Structure and Expand the Scope of RFMOs

This section takes a closer look at the current infrastructure and underlying principles governing the way RFMOs are run. First, we will dissect the role of the port state in carrying out the conservation measures of the RFMOs. Next, we will discuss the importance of taking an ecosystems approach to fisheries management. Finally, we will examine the RFBs

themselves and how they might be improved to better reach their economic and conservation goals.

Increase the Authority of the Port State

As much of the fisheries literature elaborates, enforcement is especially tricky when it comes to sovereign states' incentives to comply with a fisheries management authority. The following excerpt presents the two major arguments concisely:

...if a vessel is flying the flag of a State that is not party to the relevant regional fisheries management agreement, then it could be argued that to take action against it for activities that have taken place outside the jurisdiction of the port State *and* in respect of treaties which the vessel's flag State has not bound itself to observe, amounts to an attempt to make the provisions of a treaty binding on a non-signatory. The counter argument, of course, is that port States can insist that it is their right to pass domestic legislation making it illegal for any boat that is in breach of relevant international or regional measures as they relate to the high seas to be in their internal waters and, since fishing boats have (virtually) no rights to enter ports and generally do so of their own election, they must accept the domestic provisions that apply (Hedley 2003).

UNCLOS and the 1993 FAO Compliance Agreement place much of the burden on the flag state to monitor and enforce the fishing behavior of vessels flying its flag. However, given the ineffectiveness and/or unwillingness of certain flag states to follow the conservation measures put forth by international laws and regulations, it is prudent to shift the bulk of the enforcement authority to the port state. It is, after all, the port states that directly deal with fish catches and are therefore in a good position to monitor and enforce conservation measures set out in the regional conventions.

To address exactly this, a draft Memorandum of Understanding (MOU) has been developed under the auspices of the FAO to provide a framework for regional adoption of legislation and policies to strengthen the role of port states in deterring IUU fishing (FAO 2001). The MOU specifies the general rights alluded to in UNCLOS and UNFSA, elaborating on the specific monitoring and enforcement actions to be taken by the port state; the guidelines for inspections; the deterrence action that can be taken by port states against violators; and the role of the flag state and the pertinent RFMO in resolving disputes (Hedley 2003). It is worth noting specifically that the MOU calls for port states to commit to a documentation scheme and places the majority of monitoring and enforcement power in the hands of the port state.

The effectiveness of the proposed MOU will be directly linked to the number of states that subscribe to it. That is, this measure can be undermined by nearby nonsignatory states that will accept IUU vessels into their port and the catch into their markets (Upton 2003).

Ecosystems Approach

While fisheries have historically been managed to accommodate the needs of the states most directly participating in their exploitation, UNFSA has changed the focus to a more cooperative approach based on RFMOs. More recently, there has been a movement to manage high seas fisheries based upon the ecosystems approach. In doing so, RFMOs focus on protecting the high seas area itself, as opposed to one particular commercial species

within the area. By making ecosystems-centric decisions, RFMOs acknowledge that “the impact of an activity on one element in the ecosystem may have consequences on other components of the same system, and these need to be taken into account” (Kaye 2001). Like the Convention on Biological Diversity, which takes the ecosystems approach to natural resources management, treaty negotiations of RFMOs should focus on the fishery as a whole, including the commercial and noncommercial species, as well as the habitat and quality of the water itself.¹⁰

Thus far, the ecosystems approach has received little attention in most fisheries treaties and conventions.¹¹ The approach is mentioned, albeit briefly and without much detail, in UNCLOS. It is elaborated upon slightly more in UNFSA, which calls upon states to “assess the impacts of fishing, other human activities and environmental factors on target stocks and species belonging to the same ecosystem or associated with or dependent upon the target stocks” (UNFSA 1995). More recently, the ecosystems approach received the following treatment in the FAO Code of Conduct:

States and users of living aquatic resources should conserve aquatic ecosystems. The right to fish carries with it the obligation to do so in a responsible manner so as to ensure the effective conservation and management of the living aquatic resources. (FAO 1995)

Despite the allusion to or direct mention of the ecosystems approach in the international agreements, CCAMLR¹² and Southeast Atlantic Fisheries Organization (SEAFO) are the only RFMO conventions that call for its fisheries to be managed through this lens. By negotiating conventions with the ecosystems approach in mind, RFMOs would afford themselves the opportunity to have a broader impact on the fisheries they are charged with managing.

Negotiating New or Improving Current RFBs and Regional Conventions

The major shortcomings of the current RFB system in dealing with the modern-day problems of high seas fisheries can be attributed to the fact that it was not created in the modern day. As previously discussed, the original missions of most regional organizations were negotiated at a time when over-fishing was not at crisis proportions and the number of participants combined with less efficient technology physically limited the amount of fish that could be taken. Additionally, the demand for fish and fish products were smaller than they are today. Given the substantial changes in the industry and consumer market, there is a legitimate need--and opportunity--to re-evaluate the current RFBs and update them to comply with the sustainable fishing objectives put forth in UNFSA.

Checklist and Report Card

An appropriate format to begin the evaluation process would be through a checklist and report card scheme.¹³ An interested party – perhaps the FAO – could develop a checklist of characteristics and principles based on those put forth in UNFSA. Experts could then be sent to each RFB and rate their capacity and performance. A sample of questions might include:

- Does the RFB have managerial and enforcement authority?
- Does the RFB follow the precautionary approach?
- Does the RFB follow an ecosystems management regime?

- What is the role of the port state in monitoring fish catches?
- What technology is used to monitor vessels?
- Is a catch documentation scheme in place?

Additionally, performance indicators could be included, such as measuring the level of IUU fishing in the RFB's jurisdiction, the overall quantity of the fish stocks (increasing or declining over time), and by-catch levels. After performing this evaluation, each regional body would receive a publicly-available performance report card. Those that perform poorly would receive technical assistance through the FAO to restructure their RFB into an effective RFMO.

Using this practice, regional bodies could maintain their independence and unique focus and strategy while bringing their activities more closely in line with the best practices of the RFMO system and the overall goals of UNFSA and the FAO Code of Conduct. The final result would be better managed fisheries that will conserve valuable fish stocks and provide economic prosperity for future generations of fishing nations. Given the FAO's central function in convening and elaborating upon UNFSA, it is in a unique position to play this organizing role to coordinate the proposed RFB evaluation process and information-sharing efforts.

Conclusion

The wide range of existing Regional Fisheries Bodies provide a solid platform for the regional fisheries management regimes put forth in UNFSA. However, the goals and principles for fisheries management under UNFSA are not always compatible with the goals and principles of the various management bodies. As a result, the system currently in place does not sufficiently address many of the complex challenges to managing these fisheries, including *inter alia*, IUU participants, incorporating the ecosystems approach, monitoring and enforcing compliance, and encouraging market-based incentives for sustainable fishing. While some RFMOs such as CCAMLR, ICCAT, WCPFC and SEAFO have taken measures to develop innovative and effective management schemes, at least 30 other RFBs possess only limited authority, rendering them ineffective in addressing the challenges they face in monitoring and improving the status of high seas fisheries.

By performing audits on existing RFBs, a neutral expert body such as the FAO's Fisheries Department could begin the process of improving the performance of RFBs throughout the high seas. RFMOs provide a propitious starting point for improvements. Recently developed monitoring technology and innovations in market-based incentives will facilitate this complex undertaking. Therefore, while the mechanisms for successful management of the high seas fisheries are largely in place, it is up to the various state and non-state participants to take the next step to bring order to disorder.

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Notes

1. UNCLOS also sets forth guidelines for establishing EEZ boundaries in cases where geographical crowding precludes one or more coastal states from claiming the full 200-nautical mile limit, as in international bays and semi-enclosed seas.
2. This shortfall of UNCLOS reflects two hard-fought compromises made during the negotiation process. The first and most notable compromise was to preserve and codify centuries-old fishing freedoms, including the right of anyone to fish the high seas. The second compromise centered around the establishment of EEZs: the exclusive rights of coastal states to exploit and manage fisheries adjacent to the coast.
3. For a general description of the precautionary approach to environmental treaty-making, see Susskind 1994.
4. The use of the precautionary principle under UNFSA, while widely accepted, has been criticized because there has been a reluctance to invoke it to curtail or prohibit fishing if there is any scientific uncertainty as to the status of the fish stocks or the effects of fishing as distinct from other potentially relevant factors.
5. For more information, see www.oceansatlas.com and www.savethehighseas.org.
6. Two RFMOs – the South East Atlantic Fisheries Organization (SEAFO) and the Western and Central Pacific Fisheries Convention (WCPFC) – were established as a result of UNFSA.
7. CCAMLR, for example, estimates that IUU fishing was responsible for 39 percent of its total fishing in 2000-2001.
8. ICCAT, CCSBT and IOTC have all implemented a Trade Documentation Scheme for tuna.
9. CCAMLR estimated that 39 percent of its toothfish catch was landed by IUU fishers in the late 1990s.
10. NGOs are calling on RFMOs with increasing frequency to take an ecosystems approach to high seas fisheries management to protect fragile marine environments. For one such discussion, see Stone et al. 2004, which focuses on seamounts of the high seas.
11. CCAMLR takes the ecosystems approach, possibly due to the perspective gained from being part of the overall Antarctic Treaty System.
12. While SEAFO calls for such a provision, the agreement has not yet entered into force.
13. Lee Kimball, personal interview, 2004.

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Annex 1. UNFSA Participants

Participant	Signature	Ratification, Accession (a)
Argentina	4 Dec 1995	
Australia	4 Dec 1995	23 Dec 1999
Austria	27 Jun 1996	19 Dec 2003
Bahamas		16 Jan 1997 a
Bangladesh	4 Dec 1995	
Barbados		22 Sep 2000 a
Belgium	3 Oct 1996	19 Dec 2003
Belize	4 Dec 1995	
Brazil	4 Dec 1995	8 Mar 2000
Burkina Faso	15 Oct 1996	
Canada	4 Dec 1995	3 Aug 1999
China	6 Nov 1996	
Cook Islands		1 Apr 1999 a
Costa Rica		18 Jun 2001 a
Côte d'Ivoire	24 Jan 1996	
Cyprus		25 Sep 2002 a
Denmark	27 Jun 1996	19 Dec 2003
Egypt	5 Dec 1995	
European Community	27 Jun 1996	19 Dec 2003
Fiji	4 Dec 1995	12 Dec 1996
Finland	27 Jun 1996	19 Dec 2003
France	4 Dec 1996	19 Dec 2003
Gabon	7 Oct 1996	
Germany	28 Aug 1996	19 Dec 2003
Greece	27 Jun 1996	19 Dec 2003
Guinea-Bissau	4 Dec 1995	
Iceland	4 Dec 1995	14 Feb 1997
India		19 Aug 2003 a
Indonesia	4 Dec 1995	
Iran (Islamic Republic of)		17 Apr 1998 a
Ireland	27 Jun 1996	19 Dec 2003
Israel	4 Dec 1995	
Italy ¹	27 Jun 1996	19 Dec 2003
Jamaica	4 Dec 1995	
Japan	19 Nov 1996	
Kenya		13 Jul 2004 a
Luxembourg ²	27 Jun 1996	19 Dec 2003
Maldives	8 Oct 1996	30 Dec 1998
Malta		11 Nov 2001 a
Marshall Islands	4 Dec 1995	19 Mar 2003
Mauritania	21 Dec 1995	
Mauritius		25 Mar 1997 a
Micronesia (Federated States of)	4 Dec 1995	23 May 1997

Monaco		9 Jun 1999 a
Morocco	4 Dec 1995	
Namibia	19 Apr 1996	8 Apr 1998
Nauru		10 Jan 1997 a
Netherlands ³	28 Jun 1996	19 Dec 2003
New Zealand ⁴	4 Dec 1995	18 Apr 2001
Niue	4 Dec 1995	
Norway	4 Dec 1995	30 Dec 1996
Pakistan	15 Feb 1996	
Papua New Guinea	4 Dec 1995	4 Jun 1999
Philippines	30 Aug 1996	
Portugal	27 Jun 1996	19 Dec 2003
Republic of Korea	26 Nov 1996	
Russian Federation	4 Dec 1995	4 Aug 1997
Saint Lucia	12 Dec 1995	9 Aug 1996
Samoa	4 Dec 1995	25 Oct 1996
Senegal	4 Dec 1995	30 Jan 1997
Seychelles	4 Dec 1996	20 Mar 1998
Solomon Islands		13 Feb 1997 a
South Africa		14 Aug 2003 a
Spain	3 Dec 1996	19 Dec 2003
Sri Lanka	9 Oct 1996	24 Oct 1996
Sweden	27 Jun 1996	19 Dec 2003
Tonga	4 Dec 1995	31 Jul 1996
Uganda	10 Oct 1996	
Ukraine	4 Dec 1995	27 Feb 2003
United Kingdom of Great Britain and Northern Ireland ⁵	4 Dec 1995	10 Dec 2001
United States of America	4 Dec 1995	21 Aug 1996
Uruguay	16 Jan 1996	10 Sep 1999
Vanuatu	23 Jul 1996	

Source: United Nations 1995

Annex 2. Regional Fisheries Management Organizations (RFMOs)

CCAMLR	Commission for the Conservation of Antarctic Living Marine Resources
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
GFCM	General Fisheries Commission for the Mediterranean
IATTC	Inter-American Tropical Tuna Commission
IBSFC	International Baltic Sea Fishery Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
IOTC	Indian Ocean Tuna Commission
IPHC	International Pacific Halibut Commission
IWC	International Whaling Commission
NAFO	Northwest Atlantic Salmon Conservation Organization
NASCO	North Atlantic Salmon Conservation Organization
NEAFC	North-East Atlantic Fisheries Commission
NPAFC	North Pacific Anadromous Fish Commission
PSC	Pacific Salmon Commission
SEAFO	Southeast Atlantic Fisheries Organization
SWIOFC	Southwest Indian Ocean Fisheries Commission
WCPFC	Western and Central Pacific Fisheries Convention

