CHAPTER 9

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MANAGING FISHERIES AT THE INTERNATIONAL LEVEL

Since the first regional fishing treaties were forged in the eighteenth century, nations have understood that managing ocean fish stocks often requires international cooperation. That realization has strengthened over the years as commercial fishing has grown in scale and national fishing fleets have extended their reach far from their native coastlines. The widespread decline in the status of fish stocks in the last 30 years has also served to underscore the importance of cooperative action and has prompted the negotiation of a number of international agreements to help manage marine resources more intelligently and sustainably.

WHAT IS THE UN CONVENTION ON THE LAW OF THE SEA?

The United Nations Convention on the Law of the Sea (UNCLOS) was adopted in 1982 with the goal of balancing the right to exploit marine resources with the duty to manage and protect the marine environment (Stokke and Thommessen 2002). The effect of UNCLOS on fisheries management has been revolutionary, since it fundamentally changed the international norm on how much authority nations have to control the exploitation of resources off their coasts. Under UNCLOS, coastal countries can claim complete sovereignty over the marine resources within 200 nautical miles of their coast—the area now known as an Exclusive Economic Zone, or EEZ.

Formerly, international custom recognized national sovereignty only within a territorial zone extending 12 nautical miles from the coast. Waters beyond 12 miles—and the fish and other resources they contained—were considered international waters and thus free for exploitation by other nations. Now the rich resources of coastal waters—where some 90 percent of commercial fish are harvested—are controlled by national governments, who may restrict or sell off fishing rights within these waters as they choose. This puts the responsibility to sustainably manage

coastal fisheries squarely in the hands of coastal nations. National governments are not only responsible for controlling fishing within their EEZs, but also for the operations of fishing fleets that carry their national flag regardless of where they fish, including in the open oceans or the EEZs of other countries.

The net effect of establishing sovereign rights over coastal resources has been to reduce the area of productive fishing grounds that are treated as "open access" resources—areas where there is no restriction on who can fish or how they can fish. Unfortunately, not all countries have adequate fisheries management plans and laws in place. Even when they do, implementation and enforcement often fall short, and overfishing is still a problem.

Although UNCLOS did not become international law until 1994 (it took 12 years for enough nations to ratify the agreement to bring it into effect), discussions and negotiations over the provisions of such a law, including the establishment of sovereign rights over coastal resources, began 20 years earlier, in the mid-1970s. In the late 1970s and 1980s, some countries, such as the United States and the United Kingdom adopted national laws establishing rights over their coastal resources based on provisions outlined under UNCLOS, changing the dynamics of global fisheries production and trade significantly.

Many countries used to depend heavily on their distant water fleets (DWFs)—fleets from one nation fishing within the coastal waters of another country or in the high seas—for a significant proportion of their fish catch. The establishment of sovereign rights over fishing grounds meant that these nations had to negotiate access to the foreign EEZ and abide by the laws and regulations of the coastal state. Consequently, production from DWFs around the world declined (partly due to reasons other than UNCLOS, such as the collapse of the Soviet Union), and some formerly self-sufficient nations have had to turn to international trade to meet their demand for fishery products. From 1972-1991, DFW catches fluctuated at around 8 million metric tons annually, but dropped to about 4.5 million metric tons per year through the late 1990s. As a proportion of the global total, DWF catch peaked at 15.5 percent in 1972 and has declined to about 5 percent per year since 1993. Over half of the DWF catch is now from open ocean fisheries—those fishing areas beyond the EEZs (Galibardi and Limongelli 2003).

The net effect of national and international laws (i.e., UNCLOS) on establishing sovereign rights over coastal resources has been to reduce the area of productive fishing grounds that are treated as "open access" resources—areas where there is no restriction on who can fish or how they can fish. Open access resources such as high seas fisheries are vulnerable to overexploitation because there is no incentive for individual fishers to limit their harvest. Since no one has responsibility for the long-term care of the common property resource, the incentive is to fish until the stocks are depleted—a phenomenon called the "tragedy of the commons." (See *Chapter 3* for further discussion.)

While the intent of UNCLOS is clearly to help nations avoid the tragedy of the commons, realizing this goal depends heavily on the ability of coastal states to manage their coastal resources competently. Unfortunately, not all countries have adequate fisheries management plans and laws in place. Even when they do, implementation and enforcement often fall short, and overfishing is still a problem. Thus, acceptance of the basic UNCLOS treaty is only one of many necessary steps on the path to effective fisheries management over the long term. In fact, the treaty is considered only a basic framework that should be augmented by other legal agreements on specific aspects of marine management, such as ways to manage high-seas fisheries or fish stocks that migrate across the waters of more than one coastal nation.

WHAT IS THE UN FISH STOCKS AGREEMENT?

One fundamental problem with the concept of the EEZ is that many fish stocks, such as cod, do not confine themselves to a single EEZ, but migrate between political jurisdictions along the coast, and sometimes venture beyond the EEZs into the high seas. Such fish stocks are referred to as "straddling stocks" because they straddle one or more jurisdictional boundaries. Obviously, managing straddling stocks and safeguarding them from overfishing requires the collaboration of all the nations whose waters they pass through. Unfortunately, collaborative management is challenging and often contentious. Effective bilateral and multilateral agreements on how to manage shared fish stocks are still the exception rather than the rule (Hannesson 2002). Negotiations among neighboring countries over the use of shared stocks can be complicated if there are territorial and EEZ disputes, as is the case with Russia, Japan, and South Korea (Kim 2002; JMAFF 2001).

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Sorting and recording the catch is key to monitoring fisheries.

In addition to straddling stocks, there are many other highly migratory fish species that travel well beyond national EEZs into international waters where they are subject to open exploitation. Tuna and swordfish, for instance, may swim thousands of kilometers in the open ocean, and a single stock may be harvested by fleets from many nations. In order to manage and exploit these shared fisheries, the international community has negotiated numerous international agreements and conventions. One key example is the UN Fish Stocks Agreement, which was negotiated as a separate treaty under the framework of UNCLOS. The Agreement is formally known as the Agreement for the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks. By establishing criteria for good management and specific obligations for fishing nations to achieve them, and primarily by encouraging countries to collaborate through the establishment of Regional Fisheries Bodies (RFBs), the Agreement is an attempt to prevent the unbridled exploitation of the marine commons. (For discussion on the role of RFBs in fisheries management see the section on *Regional Fisheries Bodies* in this chapter.)

Nations ratifying the UN Fish Stocks Agreement consent to manage migratory and straddling stocks using the best scientific information available, and to monitor these stocks methodically through the RFBs. These countries also agree to apply the "precautionary principle" in their management, using a conservative approach to setting fishing quotas when there is uncertainty about the condition of a fish stock. In an important nod to the impact of fishing on marine biodiversity, the agreement calls for preserving the health of the marine ecosystem as a whole—rather than just the target fish stocks—by minimizing pollution and bycatch, and monitoring the effects of fishing on nontarget species (United Nations 1995).

The Agreement was adopted by the international community in 1995 but it was not until 2001 that enough countries ratified the agreement so that it could enter into force. As of August 2003, 36 of 59 signatories had ratified it. Unfortunately, a number of important fishing nations have not yet accepted the treaty. Of the world's top 10 fishing countries, India, Norway, Russia, and the United States have ratified it, while China, Indonesia, and Japan have signed but not ratified the treaty (UNCLOS 2002). Chile, Peru, and Thailand—also top 10 fishing nations—have not signed the treaty at all.

WHAT IS THE FAO CODE OF CONDUCT FOR RESPONSIBLE FISHERIES?

One of the main roles of the Food and Agriculture Organization of the United Nations (FAO) is to promote the key principles of sustainable fisheries management and to help nations implement these principles within their EEZs and in international waters (see *Box 9-1*). FAO's Code of Conduct for Responsible Fisheries is an important tool in this task. It contains recommendations and guidelines

aimed at national policy-makers and fisheries managers on a wide range of topics, from how nations should register and monitor their fleets, to how they should conduct fishing operations and develop aquaculture sectors. Although the guidelines are voluntary in nature, more than 150 countries have formally embraced the Code since its introduction in 1995 (FAO 1995b).

The Code's principles are consistent with those of the UN Fish Stocks Agreement and are meant to add specificity to them and guide their practical implementation. Key principles include:

- Manage stocks using the best available science;
- Apply the "precautionary principle," using conservative management approaches when the effects of fishing practices are uncertain;
- Avoid overfishing; prevent or eliminate excess fishing capacity;
- Minimize waste (discards) and bycatch;
- Prohibit destructive fishing methods;
- Restore depleted fish stocks;
- Implement appropriate national laws, management plans, and means of enforcement;
- Monitor the effects of fishing on all species in the ecosystem, not just the target fish stock;
- Work cooperatively with other states to coordinate management policies and enforcement actions;
- Recognize the importance of artisanal and small-scale fisheries, and the value of traditional management practices.

To augment the general provisions of the Code, FAO has issued a number of "technical guidelines for responsible fisheries" that look at certain important subjects in depth and interpret the Code with greater specificity. For example, FAO has issued guidelines on applying the precautionary principle, integrating fisheries management into coastal area management, developing aquaculture responsibly, and applying an "ecosystem approach" to fisheries, among other topics (FAO 2001a).

In addition, FAO has overseen the development of four International Plans of Action (IPOAs) on selected areas of concern to the international community. These consist of a set of recommendations on how nations should cooperate to track a given problem, assess its magnitude, and develop individual national plans of action to address the problem. So far, IPOAs on reducing seabird bycatch; conserving shark fisheries; reducing fishing capacity; and reducing illegal, unreported, and unregulated fishing (IUU fishing) have been approved by FAO member nations.

Beyond these efforts, nations often need further elaboration and refinement of the Code's principles to reflect national or regional fisheries structures, ecosystems, and socioeconomic factors. The Southeast Asian Fisheries Development Center (SEAFDEC), for example, has been developing regional guidelines for implementing certain aspects of the Code in Southeast Asia that

Fishing harbor at Madras, India.

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incorporate the needs of the Association of Southeast Asian Nations (SEAFDEC 2003; Chokesanguan 2001b). In Europe, a reform of the European Common Fisheries Policy has also taken place in an effort to shift the focus of the policy so that its principles are fully compatible with the Code, and it becomes an instrument for conservation and management of fisheries and aquaculture, rather than simply a policy of exploitation (European Commission 2003).

The elaboration of the principles in the Code and their general acceptance as norms by nations represents an important step toward more sustainable fishing. But it does not imply that fishing operations worldwide are now based on the Code. One reason is that, unlike a treaty, the Code of Conduct and the IPOAs are all voluntary agreements, free of legal mandates or enforcement mechanisms. This means that member countries are solely responsible for incorporating the Code's principles into their national fishery policies, or following the Plans of Action as they see fit. Another reason is that many developing countries simply lack resources or capacity to do so, or have other pressing needs they consider higher priority such as basic infrastructure development. For nations with the will and capacity to apply them, voluntary agreements (often called "soft law") such as the Code and the IPOAs can be important tools, but they can also be easily undermined by nations that fail to fully implement or enforce them.

One urgently needed step is to create incentives and support mechanisms for countries to truly implement and enforce the recommendations and principles set forth in the Code of Conduct and associated IPOAs. This is particularly necessary in the developing world, where resources are limited. In these countries, a step forward would be to help them integrate the principles of sustainable fisheries into their economic development and poverty reduction strategies given that many nations will continue to rely on fishery resources as a source of food, employment, and income.

Independent oversight to monitor progress in implementing and enforcing the Code and IPOAs, which does not depend on, and is not influenced by the member countries would increase transparency and accountability in international fisheries management and would go a long way in helping to achieve the 2002 World Summit on Sustainable Development (WSSD) targets of maintaining or restoring depleted fish stocks by 2015.

HAS THE FAO CODE OF CONDUCT BEEN EFFECTIVE?

Since the adoption of the Code, there are indications that it is beginning to have an effect on fisheries management in some countries. In surveys conducted by FAO in 2000 and 2002, most member countries and regional fisheries bodies indicated that their policies and legislation conform at least in part to the norms and principles set forth in the Code. Member countries also reported the development of some 700 fishery management plans tailored to different stocks or geographic areas, with over 70 percent of these plans being implemented to date. However, not all the plans have specific targets or reference points, such as fleet capacity reduction. Even when they do, many governments noted that fishers in their waters often fail to meet these targets (FAO 2002e). In addition, the performance of these management plans in protecting fish stocks has not been comprehensively evaluated. Relying on countries to report on their own progress can result in biased conclusions. More objective, independent oversight mechanisms to track progress—whether by NGOs, civil societies, or international bodies—would help to improve transparency in reporting and the associated government accountability.

In terms of implementing the IPOAs, several countries report that they have developed their own national plans of action for sharks or seabirds, while many others have formulated plans

Box 9-1: FAO's Role in Global Fisheries Management

The Food and Agriculture Organization (FAO) is a specialized agency of the United Nations with a crucial role in promoting sustainable fishing at the international level. No other organization has such a breadth of responsibility for assessing global fisheries, developing sound management policies, and providing the 180 member countries with technical advice on sustainable fishing in both national and international waters. Its program areas cover virtually every aspect of fishery management:

Global fisheries assessment and analysis. FAO compiles and analyzes fisheries information reported annually from member governments to give a global-scale view of the fisheries resource base, discern trends in catches, track trade in fisheries products, monitor the condition of marine ecosystems, track illegal fishing activities, and identify emerging management issues. FAO makes its fisheries data available through its FISHSTAT database, and puts these data and trends in context in its biennial report *State of the World's Fisheries and Aquaculture.*

Policy development and treaty monitoring. FAO coordinates the drafting and implementation, and monitors the progress of many international agreements on fisheries policy and management practices, such as the Code of Conduct for Responsible Fisheries. The agency does not have a formal enforcement role, and cannot hold member countries accountable for their performance in implementing or complying with these agreements. For the most part FAO focuses on providing recommendations and assistance to its members upon request, including help in formulating national fisheries policies.

Coordination and technical assistance. FAO provides a number of services to help member countries adapt the principles and practices it recommends to their national circumstances. The agency offers technical assistance in all aspects of fisheries and aquaculture management, particularly to developing countries, where it runs a large number of field projects. It also facilitates international meetings (for example, the periodic meetings of the Committee on Fisheries—FAO's formal body for negotiating policy among member countries), and organizes working groups on topics of particular concern.

to reduce the fishing capacity of their national fleets. Since one of the fundamental purposes of the IPOAs is to stimulate nations to craft action plans tailored to their particular national needs, this represents initial progress. Of the four existing IPOAs put forward by FAO, the one concerning Illegal, Unreported, and Unregulated (IUU) fishing seems to be of highest priority in most countries. Surveys show that 70 countries have developed or are in the process of developing a national plan to address IUU (FAO 2002e). Of course, preparing a national plan does not guarantee implementation. Developing countries, in particular, tend to have limited resources and capacity to implement such plans. Incentives and support to integrate them into national development and poverty reduction strategies are urgently needed.

WHAT ROLE DO REGIONAL FISHERIES BODIES PLAY IN MANAGING FISH STOCKS?

One of the principal goals of the Code of Conduct, the UN Fish Stocks Agreement, and the Compliance Agreement (see section below on Illegal, unreported and unregulated fishing for discussion on the Compliance Agreement) is to enhance the work currently being done by the regional fisheries bodies (RFBs), which have historically dealt with management of shared stocks. RFBs, such as the Northeast Atlantic Fisheries Commission and the International Pacific Halibut Commission, are typically given the job of monitoring and managing specific fish species, stocks, or geographic regions. Some RFBs are key players in the decision-making process that determines overall catch quotas and the allocation of these quotas among member countries, while others play more of a scientific and advisory role. Currently, there are 33 active marine and inland RFBs, including five focusing on management of various tunas stocks, and two on marine mammals (Lugten 1999; Swan 2000). Of the 33 bodies, 9 were established under FAO's Constitution, while the remaining 24 were set up by international agreements among 3 or more parties (Swan 2000). FAO RFBs are open to all member countries, including non-coastal nations, whereas some non-FAO RFBs restrict the involvement of non-coastal states (Lugten 1999). A list of these RFBs, together with their main roles is presented in Annex C: Regional Fisheries Bodies.

In developing countries, where resources and capacity are limited, incentives and support to integrate the principles of sustainable fisheries into national development and poverty alleviation strategies are needed.

Because international arrangements for fisheries management change over time, the mandate, regulations, and defined roles of RFBs should keep pace with these changes in order to meet the needs of new legal frameworks and address emerging issues. In reality, this has not been the case for all RFBs. FAO's 1999 review of the current mandates and roles of RFBs concluded that, "very few bodies have started to implement the conservation and management measures" put forward in the contemporary fishing agreements named earlier (FAO 1999e based on Lugten 1999). However, FAO also noted that most RFBs are limited by "inadequate mandates or terms of reference, incongruent fishery interests of members, funding and staffing difficulties, and lack of political commitment" (FAO 1999 based on Lugten 1999). Since the 1999 review, the RFBs that are under the auspices of FAO have undergone reviews and evaluations to update their

(IATTC) have been in existence for decades and are quite advanced in achieving some of their mandates such as compiling tuna production data, assessing stocks, making regulatory recommendations, or setting catch quotas. In addition, IATTC and ICCAT, along with the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), are making progress in monitoring unregulated fishing activities by fleets that are registered in non-member countries but exploit the same fisheries resources that the organization is mandated to manage and protect. (See section on *Tackling Illegal, Unreported, and Unregulated Fishing.*) On the other hand, other newer RFBs such as the Indian Ocean Tuna Commission (IOTC) and the Commission for the Conservation of Southern

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Daily arrival of fishing boats at Lake Victoria, near Entebbe, Uganda.

roles and mandates. Annex C provides an overview on implementation of contemporary fishing agreements by RFBs.

RFBs vary widely in their levels of institutional development and accomplishment. Some of these bodies, such as the International Commission for the Conservation of Atlantic Tunas (ICCAT) and the Inter-American Tropical Tuna Commission (IATTC) have been in existence for decades and are quite advanced in achieving some of their mandates such as compiling tuna production data, assessing stocks, making regulatory recommendations, or setting catch quotas. In addition, IATTC and ICCAT, along with the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), are making progress in monitoring unregulated fishing activities by fleets that are registered in non-member countries but exploit the same fisheries resources that the organization is mandated to manage and protect. (See section on *Tackling Illegal, Unreported, and Unregulated Fishing.*) On the other hand, other newer RFBs such as the Indian Ocean Tuna Commission (IOTC) and the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) have yet to establish regular stock assessment programs for the species they aim to manage, or to gain the full participation of key countries that exploit the same resources (IOTC 2003; CCSBT 2003; Swan 2003).

TACKLING ILLEGAL, UNREPORTED, AND UNREGULATED FISHING

Measures to control overfishing and curb destructive fishing practices are hampered by the widespread incidence of illegal, unreported, and unregulated (IUU) fishing. The term "IUU fishing" encompasses a wide range of practices that do not respect applicable laws and regulations, or the standards set forth by international agreements such as UNCLOS. Examples include fishing in a nation's EEZ without government authorization, misreporting or failing to report catches, fishing in 'no-fishing' areas, fishing stocks during closed seasons when fishing is forbidden, and reflagging fishing vessels to evade laws or regulations (FAO 2002b).

IUU fishing occurs to some degree in virtually all capture fisheries, whether they are located within national EEZs or on the high seas. However, it is most prevalent in fisheries of high commercial value, such as sashimi-grade tunas (bluefin and bigeye) and other restaurant-quality species such as cod, redfish, and Patagonian toothfish (i.e., Chilean Sea bass).

Information on the dimensions of IUU fishing is limited. A number of national fishery agencies and regional fisheries management bodies have documented the incidence or estimated the quantity of fish caught by IUU fishing in their respective jurisdictions. However, information from developing country EEZs is mostly anecdotal. These include reports of Japanese, South Korean, and Taiwanese fleets fishing tuna illegally, and Spanish vessels taking hake in Namibian waters while bearing flags of neighboring countries—an example of the "flags of convenience" practice (Bray 2000a). (See below for more on this practice).

Northern and Southern bluefin tuna, and Patagonian and Antarctic toothfish are the best documented examples of fisheries with high IUU incidence. Each of these species is managed by a regional fisheries body, such as the IOTC, ICCAT, CCSBT, and CCAMLR. Unfortunately, not all countries whose tuna and toothfish operations fall under the jurisdiction of these bodies are members of the respective RFBs; they are therefore not subject to quota management (see *Table 9-1*). One urgent and key measure is to get these non-member countries to join the respective RFBs and to enforce the management rules on their own vessels.

Table 9-1: Member and Non-Member States of Selected Tuna Commissions

Tuna Commission	Parties Harvesting Tuna Species in Areas under the Jurisdiction of Tuna Commissions		Managed Species
	Member Parties	Non-Member Parties	
Commission for the Conservation of Southern Bluefin Tuna (CCSBT)	Australia, Japan, New Zealand, South Korea, Taiwan[1]	Indonesia[2], Philippines[2], South Africa[2], Belize, Honduras, Equatorial Guinea, Cambodia, Seychelles	Southern bluefin tuna
Inter-American Tropical Tuna Commission (IATTC)	Costa Rica, Ecuador, El Salvador, France, Guatemala, Japan, Mexico, Nicaragua, Panama, Peru, Spain, U.S.A., Vanuatu, Venezuela	China, South Korea, Honduras, Indonesia, Taiwan, French Polynesia	Yellowfin, albacore, skipjack, bigeye, and bluefin tuna; swordfish, striped marlin
International Commission for the Conservation of Atlantic Tunas (ICCAT)	Algeria, Angola, Barbados, Brazil, Canada, Cape Verde, China, Côte d'Ivoire, Cyprus, Croatia, Equatorial Guinea, EU, Gabon, Ghana, Guinea, Conakry, Honduras, Iceland, Japan, South Korea, Libya, Marta, Mexico, Morocco, Namibia, Panama, Philippines, Russia, Sao Tomé & Principe, South Africa, Trinidad & Tobago, Tunisia, Turkey, UK., U.S.A, Uruguay, Vanuatu, Venezuela	Taiwan[3], Costa Rica, Senegal, Singapore, Togo, Thailand, Georgia, Indonesia, Seychelles, Belize, St. Vincent, Grenadines, Cambodia, Bolivia, Sierra Leone	Atlantic bluefin, yellowfin, bigeye, skipjack and albacore tuna; Atlantic bonito; swordfish, white and blue marlin; etc.
Indian Ocean Tuna Commission (IOTC)	Australia, China, EU, Eritrea, India, Japan, Rep. of Korea, Madagascar, Mauritius, Malaysia, Oman, Pakistan, Seychelles, Sudan, Sri Lanka, Thailand, UK., Vanuatu, Philippines	Indonesia, Iran, Maldives, Taiwan, Belize, Equatorial Guinea, Honduras, Panama, Vanuatu, Cayman Islands, Cote d'Ivoire, Liberia, Malta, Netherlands Antilles	Yellowfin, albacore, skipjack, bullet, and bigeye tuna; kawakawa, Indo-pacific blue marlin, swordfish.

[1] The Fishing Entity of Taiwan is a member of the Extended Commission.
[2] Parties indicated their desire to become cooperating non-members and were invited to apply for admission in 2004.
[3] Cooperating Party

Source : ICCAT 2002; IOTC 2002; CCSBT 2003; IATTC 2003.

According to estimates by CCAMLR (1998), over 50 percent of the global harvest of toothfish on the international market in 1997-1998 was caught by IUU fishing. Vessels with flags from Seychelles, the Faroe Islands, and Belize were sighted taking part in this illegal activity, while landings of illegal catch are known to have taken place at ports in Namibia and Mauritius (Bray 2000a). None of these countries was entitled to fish for toothfish under the CCAMLR legal catch quota allocation. By 2000-2001, the unreported catch of toothfish within CCAMLR's jurisdiction had declined significantly, but was still estimated at 39 percent of the total catch (CCAMLR 2001).

IUU fishing of tuna is also widespread. In 2000, the IOTC and ICCAT estimated that at least 10 percent of all landings of tuna and tuna-like species in their respective jurisdictions came from IUU fishing (Bray 2000a). The CCSBT also estimated that at least 5,000 metric tons of southern bluefin tuna—nearly 30 percent of the estimated total catch—was caught by countries that are not members of the Commission, mainly South Korea, Taiwan, and Indonesia (CCSBT 2002). Reporting of catch statistics, and therefore monitoring of stocks, is expected to improve now that South Korea and Taiwan have become members of CCSBT (in 2001 and 2002, respectively).

FLAGS OF CONVENIENCE AND IUU FISHING

Illegal, Unreported, and Unregulated fishing (IUU) is often conducted by fleets that carry a "flag of convenience" (FOC). This term describes vessels that are officially registered in one nation, but whose owners and operators reside in another nation. This may be done to take advantage of low registration fees, or favorable taxation and labor laws in a given country. It may also be done to avoid trade embargoes that apply to certain nations (FAO Fisheries Glossary 2003). Some countries intentionally allow the practice of FOC registration—a practice known as keeping an "open register." Countries with large open registers include the Bahamas, Belize, Cyprus, Honduras, Liberia, Marshall Islands, Panama, Saint Vincent and the Grenadines, and Vanuatu. These countries are characterized by having the majority of their registered ships owned abroad.

FOC vessel owners are often persistent in their effort to evade controls on their fishing practices. For example, when South Korea and Taiwan recently joined the CCSBT—requiring that the vessels registered in these countries comply with international standards—many vessel owners re-registered their

Table 9-2: FOC Countries and Countries Reportedly Engaged in IUU

Country	Fish Targeted[1]	Problems and Status of Sanction by RFBs and Japan
Belize	tunas	Sanction imposed by ICCAT as of 2000. Implemented Japanese port ban on tuna longline vessels as of 2003.
Bolivia	tunas, toothfish	ICCAT identified IUU vessels registered, export substantially increased, as of 2001. In July 2003 Japan implemented a port ban on tuna longline vessels from the country.
Cambodia	tunas	Sanction imposed by ICCAT as of 2000. Implemented Japanese port ban on tuna longline vessels as of 2003.
Cote d'Ivoire	tunas	IOTC reported catches of non-reporting purse seiners by 2000.
Equatorial Guinea	tunas	Sanction imposed by ICCAT as of 2000. Implemented Japanese port ban on tuna longline vessels as of 2003.
Ghana	toothfish	IUU activities reported by CCAMLR, 2002.
Grenadines	tunas	Not cooperating with IATTC.
Guinea	tunas	ICCAT identified IUU vessels registered, 1999.
Honduras	tunas	Imposition of sanction decided by ICCAT, 2001. Removal of some IUU vessels. In July 2003 Japan lifted the port ban on tuna longline vessels.
Indonesia	tunas	ICCAT Identified IUU vessels registered and export substantially increased, as of 2001.
Kenya	tunas	ICCAT Identified IUU vessels registered, 1999.
Liberia	tunas	IOTC reported catches of non-reporting purse seiners by 2000.
Malta	tunas	IOTC reported catches of non-reporting purse seiners by 2000.
Mauritania	toothfish	IUU activities reported by CCAMLR, 2002.
Netherlands Antilles	toothfish, tunas	IUU activities reported by CCAMLR, 2002.
Panama		ICCAT identified export substantially increased, catch and landing reported, IUU vessels registered and returned, as of 2001.
Philippines	tunas	ICCAT identified IUU vessels registered, 1999.
Russian Federation	toothfish	IUU activities reported by CCAMLR, 2002.
Seychelles	tunas	CCSBT agreed to suspend further action on the basis of undertaking cooperating framework, 2003.
Sierra Leone	tunas	ICCAT identified IUU vessels registered, export reported as of 2001. In July 2003 Japan implemented the port ban on tuna longline vessels.
Singapore	tunas	ICCAT identified IUU vessels registered, 1999.
St. Vincent	tunas	Sanction imposed by ICCAT as of 2000, lifted in 2003.
Taiwan	tunas	IOTC reported catches of IUU tuna longliners by 2000.
Trinidad & Tobago	tunas	ICCAT identified IUU vessels registered, 1999.
Uruguay	toothfish	IUU activities reported by CCAMLR, 2002.
Vanuatu	tunas	ICCAT identified IUU vessels registered, export substantially increased, as of 2001. IOTC reported catches of IUU longliners by 2000.

[1] "Tunas" include: yellowfin, bigeye, bluefin, albacore, and other tuna species, billfish (swordfish, marlin), and other small tunas and tuna-like species.

Source: Transport International 2000; CCAMLR 2002; IOTC 2002; IATTC 2003; ICCAT 2003b; JFA 2003.

E. BOS, IUCN 2003

The high value of sashimi-grade tuna makes it a target for IUU fishing. This photo shows legal tuna being auctioned at Tsukiji market, Tokyo.

ships in another FOC country, in a practice called "reflagging," in order to continue to side-step international laws and restrictions. Of 240 tuna vessels blacklisted by ICCAT as FOC vessels in November 2000, almost all are owned by Taiwanese companies. Of these, 96 are registered in Belize, 83 in Honduras, 50 in Equatorial Guinea, and 17 in Saint Vincent. Tuna vessels are also increasingly being registered in China, raising concerns that China may become the next popular open register country (Japan Tuna 2002). Table 9-2 shows the FOC nations engaged in IUU fishing.

IUU REGULATIONS AND MONITORING: FAO'S COMPLIANCE AGREEMENT

In order to deal with IUU fishing, FAO initiated the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (also referred to as the Compliance Agreement) in 1993. The agreement entered into force in April 2003 when the 25th nation accepted the treaty. FAO's Compliance Agreement and other international agreements primarily address the IUU fishing issue on the high seas, rather than in national Exclusive Economic Zones. These treaties specify that a flag state—the nation in which a ship is registered—holds legal jurisdiction over the operation of the ship whether the ship is operating in that nation's waters or abroad. These agreements also make it clear that the flag state is responsible for monitoring the activities of ships carrying its flag, and can be held accountable for any IUU fishing practices they undertake. Since the Compliance Agreement so recently entered into force, its effectiveness in terms of reducing IUU fishing is still unknown.

New technologies such as satellite-linked vessel monitoring systems (VMS) are gradually being adopted to reduce IUU fishing activities. VMS provides monitoring agencies with accurate locations of participating fishing vessels, so that the vessels cannot operate in illegal waters (FAO1998). Regional fisheries bodies are also trying to counter IUU fishing by compiling more accurate information on the extent of the IUU catch and trade, blacklisting known IUU vessels, and encouraging more fishing nations to join these regional and international bodies. In some cases, regional fisheries bodies have started granting Taiwan and other non-member countries an official status that allows increased cooperation by these "fishing entities" without having to become an official Party to the various international fishing treaties. Until now, Taiwan, which is not officially recognized by the UN system as a "country," has been unable to join UN-related international bodies, and therefore was not legally bound by the rules set by these institutions.

Another new strategy by regional fisheries bodies to address IUU fishing is to establish "white lists" (or positive lists) of approved vessels—a complement to the current practice of "blacklisting" certain vessels known to engage in IUU fishing. Ports in nations that agree to use the white- listing strategy only allow vessels that are on an approved list of registered vessels to land or export their catches. The intent is to prevent IUU vessel owners from avoiding blacklisting by simply changing their names or reflagging their vessels. Both the ICCAT and IOTC began to implement the white-listing approach in July 2003 (ICCAT 2004; IOTC 2004).