Strengthening International Fisheries Regimes: Regulating Flags of Non-compliance

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Executive Summary

Flags of convenience (FOC) have hamstrung numerous international efforts to manage fisheries through their use as a legal haven for illegal, unregulated, and unreported (IUU) fishing activities. While there has been a progression towards demanding accountability from FOCs, and broader authority to enforce international fisheries regimes, the problem of FOC IUU remains largely unaddressed and is growing more serious.

This memo proposes the creation of a Flag of Convenience Capacity Building and Regulation Protocol (FCBR) to the UN Law of the Sea in order to reduce abuses of FOC states that are undermining efforts to manage fisheries globally. The protocol uses punitive sanctions against signatories and non-signatories to enforce compliance with goals outlined in the FAO Compliance Agreement. Punitive measures include denying non-compliant states access to national fisheries and banning port access and transshipment by signatory states. The protocol attempts to create a positive network externality associated with accession and compliance – as more states sign the treaty, non-compliant states will face steadily rising costs due to limited resource, market, and port access, creating an increased incentive to comply.

The memo first presents background information on FOC and previous attempts to address international fisheries management. Readers already familiar with these topics should skip ahead to part three, which outlines the proposed FCBR Protocol, and part four, which presents an analysis of the protocol relative to issues of sovereignty, barriers to implementation, existing international law, international trade, and strategies to drive compliance. Several appendices are also included, which offer data on regional fishery management organizations, fishing fleet capacity by country, and fish consumption by country.

Introduction

International efforts to manage high seas and national fisheries have yielded lackluster results, despite decades of continued negotiation, the creation of dozens of regional fishery organizations, and a number of international treaties. The barriers to effective international fisheries management are numerous: lack of effective monitoring makes most treaties difficult to enforce; overcapacity pressures the fishing industry to continue increasing catches; insufficient data often complicates stock management; fishery management organizations routinely favor political considerations over sound science; and illegal, unreported, and unregulated fishing undermines the best of efforts. The use of flags of convenience is another widespread problem plaguing global fisheries, but it differs from the others in two fundamental ways: 1) Through loopholes in international law, FOC allow vessels to avoid international fisheries obligations,

thus destroying incentives to participate in global fisheries management; and 2) Unlike the other issues listed above, the use of FOC is not a systematic failure of international fisheries management and can be addressed relatively easily.

I. Flags of Convenience: An Overview

According to the United Nations Third Convention on the Law of the Sea (UNCLOS), the flag state, or the state in which a vessel is registered, has the ultimate authority to prosecute a vessel for violating international law.[1] While this situation changed somewhat when UN Fish Stocks Agreement and the FAO Compliance Agreement[2] entered into force, flag states largely retain the exclusive right to prosecute their vessels. Article 91 of UNCLOS also grants states the right to register vessels by the terms of their choice.[3] Many ship owners register in states with lenient regulatory environments order to save money on labor, avoid safety regulations, or evade requirements under international treaties. The term "flag of convenience," refers to nations that offer favorable labor markets and regulatory environments (or a lack thereof) and allow foreign vessels to fly under their flag in exchange for payment.[4] Also notable is the association between flag of convenience states and corruption, again implying poor regulatory oversight. Among some of the most prominent FOC states are Georgia, Equatorial Guinea, and Panama – hardly examples of good government (see Fig. 1).

In the absence of regulatory oversight, and without the threat of prosecution, vessels under FOC are free to spurn international law. While exact figures on IUU are hard to come by for understandable reasons, indicators suggest that vessels under FOC widely practice IUU. A rather extreme example of this is the Honduran fishing fleet in 2003. Of 507 large-scale fishing vessels registered, only six were licensed to fish for tuna by regional fishery management organizations (RFMO) or sovereign states. Yet the majority of these ships were longline vessels built primarily to catch tuna, suggesting an extremely high level of illegal fishing. Similar patterns can be found within other flag of convenience fleets.[5]

By "flag-hopping" or reregistering under a new flag whenever expedient, fishing vessel operators essentially create a race to the bottom in fisheries enforcement. Nations with weak institutions and a high incidence of corruption typically attract large numbers of vessels because of their inability or unwillingness to enforce international law. Registering a fishing vessel with some of the states providing flags of convenience is exceedingly simple. Vessels can change flags by fax while at sea for a few hundred dollars at a moment's notice.[6] Interestingly, European Union member states and Taiwan are the main financial beneficiaries of vessels registered with FOC.[7]

According to the Lloyd's Register of Ships there were more than 1,200 large-scale fishing vessels registered with FOC or "flag unknown" status (likely to be FOC) in 2005, representing 15% of the world's large-scale fishing fleet.[8] Traditionally it was thought that only old vessels were used in IUU under FOC, however recently a worrying trend has emerged as large numbers of new vessels are being registered to FOC as well, implying that they have been constructed to engage in IUU.[9]

Fig 1. Top Flag of Convenience Nations and Corruption Perceptions Index (2003)

State	Transparency International Corruption Perceptions Index (out of 10)	Registered Vessels (fishing vessels over 24 meters in length)	Total Gross Tonnage	Average Tonnage per Vessel	Average Age of Vessels
Belize	3.7	241	259,119	1075.2	22
Bolivia	2.5	16	16,824	1041.5	26
Cambodia	2.3	47	27,773	590.9	27
Cyprus	5.7	27	66,483	2462.3	22
Equatorial Guinea	1.9	39	21,636	554.8	22
Georgia	2.3	60	45,756	762.6	22
Honduras	2.6	416	158,824	381.8	24
Marshall islands	NA	7	11,434	1633.4	17
Mauritius	4.2	24	9,632	401.3	30
Netherlands Antilles	NA	20	8,294	414.7	24
Panama	3.5	222	134,286	604.9	30
St. Vincent and the Grenadines	NA	74	97,893	1322.9	26
Sierra Leone	2.4	27	8,679	321.4	29
Vanuatu	NA	47	118,298	2517	11

Source: Transparency International, Lloyd's Register of Ships, and OECD

The volume of IUU associated with flags of convenience undermines the effectiveness of fisheries management, and, in turn, the incentives to participate in international fisheries management efforts. It is hardly constructive to discuss lower quotas in regional fishery management organizations (RFMOs) such as the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) and the Commission for the Conservation of the Southern Bluefin Tuna (CCSBT) when nearly 40% of Chilean sea bass and 30% of southern bluefin tuna are caught illegally.[10] While these examples may be extreme, the lack of a credible threat of prosecution for IUU fishing is a problem that plagues enforcement of fishery regimes the world over.

II. Current Structure of International Fisheries Management

UN Third Convention on the Law of the Sea

UNCLOS, published in 1982 and effective in 1994, was a landmark treaty that forms the basis for much of international environmental law relating to the oceans today. UNCLOS dramatically expanded national jurisdiction by establishing the Exclusive Economic Zone (EEZ), which extends 200 nautical miles from the shoreline of each coastal state that claims it. This sole reform has had an enormous impact on the ability to manage fisheries; EEZs contain roughly 90% of the world's commercial fisheries.[11] More broadly, UNCLOS's greatest accomplishment lies "in its treatment of jurisdictional authority, the establishment of obligations to protect and preserve the marine environment, and comprehensive coverage of specific environmental threats posed by pollution and overfishing."[12] The treaty embodies a basic realignment from law of the sea based on maritime power to one of international cooperation.[13]

In the area of marine resource management, UNCLOS mandates that states cooperate in RFMOs or otherwise sustainably manage shared fish stocks. However, UNCLOS does not give states or

RFMOs the authority to detain ships found in violation of fishery agreements on the high seas or the right to prosecute ships sailing under foreign flags for such violations. [14] Coastal states are granted the right to detain foreign ships found in violation of fisheries agreements in their EEZs, but the punishments are limited and the vessel must be released immediately as soon as a reasonable bond has been posted.[15]

Regional Fishery Management Organizations

Regional fishery management organizations (RFMOs) play an integral role in the management of fisheries located in international waters. RFMOs typically manage a specific species or population of fish in a particular geographic region. These organizations often work cooperatively with regional states and other countries which fish the waters in order to monitor fish stocks, and at times allocate and enforce quotas for the given territory. RFMOs vary widely in age and sophistication; some organizations are only beginning to build consensus among regional states and gather data, while others actively set quotas and monitor compliance. It should be noted that while these organizations are broadly viewed as essential in successful management of global fisheries, at present many are underfunded or crippled by lack of consensus between member states.[16]

UN Fish Stocks Agreement

Under the UN Agreement for the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, or the UN Fish Stocks Agreement, parties to the treaty commit to "manage migratory and straddling stocks using the best scientific information available, and to monitor these stocks methodically through [RFMOs]."[17] Likewise, the treaty requires the application of the "precautionary principle" in setting quotas and ecosystem management as a guiding tenet in fisheries management.[18] This agreement is unique in that it claims to regulate not only signatories, but also non-parties to the treaty, committing them to cooperate with RFMOs active on the open seas.[19] Going a step beyond UNCLOS, the Treaty also authorizes RFMOs to take action to deter illegal actions by vessels of another flag state, sequester vessels, and carry out investigations of suspected violations until the flag state takes appropriate action.[20] The UN Fish Stocks Agreement was first published in 1995, and came into force in 2001.[21]

FAO Compliance Agreement

The FAO Compliance Agreement attempts to close the legal loophole that allows vessels to operate under flags of convenience without accountability to the international community for violations. The Compliance Agreement specifies the duties that flag states must undertake in order to meet their responsibility to not undermine international fisheries conservation measures. These requirements include: 1) Not allowing vessels to fly under the state flag without appropriate authorization; 2) Not registering vessels which a history of IUU fishing; 3) Applying sanctions to fishing vessels that have undermined international fisheries conservation measures, including refusing vessels the right to fish on the high seas under the state flag. The Compliance Agreement also mandates information sharing between signatories about their own activities and those of non-parties that are non-compliant with international fisheries law.[22] This data is fed into a High Seas Vessel Authorization Record, which includes information on vessel registration,

fishing authorization, and history of infringements. [23] Notably, the Compliance Agreement does not contain any sanctions for signatories or non-signatories that do not comply with the terms of the treaty.[24] The agreement was first published in 1995 and became effective in 2003.[25]

FAO Code of Conduct for Responsible Fisheries

The FAO Code of Conduct for Responsible Fisheries consists of comprehensive voluntary guidelines on a range of topics related to fishery management. Materials covered include fleet registration and management, the development of aquaculture, and the proper ways to carry out fishing operations. The content of the Code of Conduct is largely consistent with that of the UN Fish Stocks Agreement, including basic principles such as the minimization of bycatch (species caught, which are not targeted by a vessel), application of the "precautionary principle" in determining fisheries policy, international cooperation in fishery management and enforcement efforts, elimination of overcapacity or an excess of fishing vessels, and ecosystem management. Having been formally adopted by 150 nations since its introduction in 1995, the FAO Code of Conduct represents broad consensus on the practices needed to attain sustainable fisheries management.[26]

2001 FAO Illegal, Unreported, and Unregulated Fishing International Plan of Action

In addition to the Code of Conduct for Responsible Fisheries, the FAO has prepared four International Plans of Action (IPOA), including one on IUU fishing. Similar to the Code of Conduct, the IUU IPAO is a voluntary document, containing guidelines on how to best control IUU fishing.[27] This document is valuable and notable as a representation of the international consensus on IUU fishing and as potential material for binding international treaties dealing with this topic.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora

Since it became effective in 1975, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) has been used to prevent threats to the survival of plants and animals by international trade. The convention currently protects over 30,000 species of plant and animals to varying degrees.[28] CITES also has potential as a tool to protect various species of fish threatened by commercial fishing. Most notably, all species of sturgeon currently enjoy some degree of protection under CITES.[29] Efforts were also made to list the bluefin tuna in the early 90s, but without success.[30] At present CITES is limited in its capacity to regulate overfished species for a number of reasons: 1) It is not technically capable of listing certain populations of a species (this is highly relevant to geographically diverse fisheries); 2) It has little experience with species used primarily for food; and 3) The treaty is ill equipped to deal with overfishing, which rarely threatens actual extinction.[31]

Figure 2. Status of Existing International Law Affecting Fisheries Management

Title of Agreement	Year of Publication	Effectiveness Date	Number of parties which ratified	% of large-scale fishing capacity
UNCLOS	1982	1994	150	78%
UN Fish Stocks Agreement	1996	2001	61	62%
FAO Fisheries Code of Conduct	1995	NA	>150	-
FAO Compliance Agreement	1993	2003	34	52%
Agenda 21	1992	1992	>178	-
CITES	1973	1975	169	90%

FAO, United Nations Division for Ocean Affairs and Law of the Sea, CITES Secretariat, UNCED.

III. Moving Towards a Solution:

The Protocol on FOC Capacity Building and Regulation

It is imperative that the issue of FOC be addressed in order to maintain political will in international fisheries management and guarantee the effectiveness of management efforts. If allowed to continue unchecked, the activities of FOC fleets will not only undermine efforts to sustainably fish international stocks, but also deprive nations participating in these efforts of the expected benefits: larger, more sustainable catches and decreased costs. A protocol to the United National Convention on the Law of the Sea on FOC State Capacity Building and Regulation should be used to support FOC states in their efforts to improve enforcement and penalize them for systematically failing to do so.

Objective

The Protocol on FOC State Capacity Building and Regulation (hereon referred to as the FCBR Protocol), is intended to encourage flag states to take responsibility for the vessels flying under their flag as mandated by articles II, III, IV, and V of the FAO Compliance Agreement. Broadly speaking, states that take responsibility for fishing vessels sailing under their flag will 1) prosecute vessels for known violations of international fisheries treaties, and 2) screen vessels for indications of IUU activity before allowing them to register and deny them registration if they have a history of infringement during the past three years.

Major Proposed Measures

Signatories to the treaty will be required to file annual reports with the Law of the Sea Secretariat describing the status of compliance with the basic requirements outlined above. A Compliance and Leadership Committee (CLC) will review the reports annually. If the CLC determines that the signatory state is not complying with the FCBR Protocol requirements, technical and or financial assistance will be offered to the noncompliant state to help it achieve compliance within a deadline set for compliance targets. If the noncompliant state fails to meet this deadline, the Compliance Committee will have the option of extending the deadline and offering further financial and technical assistance, or it can mandate punitive action against the noncompliant state by all the treaty signatories. Most notably, the CLC will have the authority to mandate punitive actions against non-signatory states who are seen as blatantly violating FCBR Protocol

requirements. CLC decisions on the status of a given state (compliant or non-compliant) and mandated punitive actions against non-compliant states will be reviewed annually.

Secondary Proposed Measures

In addition to filing annual reports on compliance with the Secretariat, signatory states are required to contribute to an international blacklist of known IUU vessels and a whitelist of vessels innocent of IUU activities, both of which will be publicly accessible and housed at the Secretariat. The remaining vessels will be left on a greylist, and are subject to all measures applied to the flag state by the CLC. Vessels entered on the whitelists and blacklists will require approval of 80% of the CLC members. This list will build on the HSVAR database currently maintained by the FAO under the Compliance Agreement.

Treaty signatories are also requested to annually donate a minimum of 1% of government receipts generated from fisheries. According to the FAO, in 2004 the value of the global fishing catch (excluding aquaculture) was roughly 84 billion dollars.[32] While no data was available on total government receipts from fishing, if a mere 5% of this sum were collected in taxes, 1% of this total would equal nearly 42 million dollars. These funds will be used to support Secretariat activities, finance capacity building functions for noncompliant signatory states, and provide financial assistance to noncompliant signatory states. Funds collected for FCBR activities can be used in joint activities with other funds under the FAO and UNCLOS secretariat as long as these projects are judged by the CLC to be in line with the priorities of the FCBR Conference of Parties at the time of implementation.

In order to lighten administrative burdens on environmental ministries, the CLC will also have authority to waive the requirement to submit annual reports if the state in question has an established track record of compliance. This waiver should be revoked if there is any evidence that the state is not fully complying with the FCBR.

Punitive Measures

The CLC will have a number of punitive measures to select from (it may chose one, none, or all) to encourage noncompliant states to meet the FOC Protocol requirements.

The CLC can mandate that all signatory states: 1) Close their ports to fishing vessels from the noncompliant FOC state; 2) revoke fishing licenses issued to vessels sailing under the flag of the noncompliant FOC state; or 3) enact a ban among signatory states to ban transshipment with fishing vessels from the noncompliant FOC state. Any vessel that has been placed on the Secretariat whitelist from the noncompliant FOC state will not be subject to these restrictions.

Arbitration

Both signatory and non-signatory states are permitted to appeal CLC decisions that categorize them as non-compliant. Appeals will be permitted within two weeks and again within six months of the original decision. In order to overturn a previous decision 80% of the CLC members must approve the reversal. Likewise, individual vessels may challenge their status on blacklists and

greylists; however, the CLC is not required to hear these appeals. If the appellant is not satisfied by the CLC's decision, they are encouraged to take the case to the Tribunal of the Law of the Sea.

Administrative Bodies

The FCBR Protocol Secretariat will be housed at the UNCLOS Secretariat in New York and will maintain the staff and resources necessary to review signatory state compliance reports, gather information about violations of international fisheries treaties that pertain to compliance status of signatories and non-signatories, and oversee funding allocations for capacity building and fisheries related development aid.

In addition to the Secretariat, the Protocol creates two additional bodies: the Compliance and Leadership Committee (CLC) and the Conference of Parties (COP). The COP consists of a representative from each party to sign and ratify the treaty. It will meet once every three years to review the treaty and negotiate amendments if needed, or at the request of a 51% majority of the CLC to discuss amendments or other matters of urgent importance. The COP has the authority to overturn any CLC decision with a two thirds supermajority.

Non-Governmental Actors (NGAs; both NGOs and private sector entities) will be permitted non-voting participant status at COP meetings. The total number of NGAs is limited to 10% of the membership of the COP. NGOs interested in participating must have ECOSOC accreditation, and private sector entities must have the sponsorship of the state where they are incorporated, which, in turn, must be a signatory to the protocol. NGAs will hold membership for two-year terms. Membership of NGAs is subject to the approval of at least 50% of the COP and voted on at annual meetings. NGAs will also be invited to contribute to information gathering efforts regarding treaty compliance. A number of international non-profits, which work to increase transparency in the fishing industry and encourage enforcement of international marine law may find their current programs to be excellent complements to Secretariat investigative efforts.

The CLC consists of a representative from at least seven signatory states or a number of signatory states equal to 20% of the membership of the COP. The CLC will meet continually as needed to review compliance reports (at least once per year), hear appeals (twice per year), review and pass the budget (once per year), and to make other funding decisions or discuss other matters of importance. Country representatives will serve two-year terms on the CLC, with 50% of the membership turning over annually. Country representatives will rotate into CLC seats in the order in which they acceded to the treaty. The CLC is intentionally small. As deliberative bodies grow larger, the likelihood that they will effectively come to meaningful decisions diminishes.[33] For this reason, the size of the CLC will be constrained, and veto power granted to the COP in order to ensure CLC accountability.

Depending on their ability to do so in a cost effective manner, capacity building activities for non-compliant signatory states are to be carried out by the FAO Fisheries Program, UNEP, Regional Fishery Management Organizations, qualified non-governmental organizations, and other organizations. The Secretariat will determine which organization will carry out capacity

building exercises depending on the competencies of the interested organizations, the needs of the non-compliant signatory state, and the budget requests of each interested organization.

Budget planning will be executed by the Secretariat and the final budget will be subject to the approval of the CLC. Fifty percent of CLC members must approve the annual budget; the CLC also has the right to overrule project or aid-based funding decisions made by the Secretariat. A 50% majority is necessary to overrule a Secretariat funding decision.

Requirements for Effectiveness

Further study will be required before establishing the minimum level of participation before the FCBR protocol becomes effective. Provisionally, this paper proposes the treaty must be ratified by at least 15 parties representing a minimum of 50% of global fishing capacity or 50% of the global fish market before entering into force. The treaty will become effective six months after the last country needed to meet these minima ratifies the treaty.

Amendments

The FCBR Protocol can be amended as seen fit by the COP. All amendments require the two-thirds supermajority approval of the COP.

Further Protocols

Ample opportunity exists to create increasingly strict standards using the mechanisms established in the FOC Protocol. Elements from the UN Fish Stocks Protocol, FAO Fisheries Code of Conduct, FAO International Plans of Action to Deter and Eliminate IUU Fishing, Reduce Seabird Bycatch, Reduce Fishing Capacity, and Conserve Shark Fisheries. These and other internationally recognized fisheries standards could become the basis of future protocols or amendments to the FCBR as seen fit by the COP. A similar formula was used with great success in the Montreal Protocol, which was strengthened on repeated occasions as international political will consolidated and scientific consensus dictated the need to do so.[34]

IV. Analysis of the FCBR Protocol Proposal

"Carrots" in the FCBR Protocol

Different incentives encourage FOC states, developed countries with large fishing fleets, and states with extensive fisheries to become parties to the FCBR Protocol. States in all three of these categories are brought to the table by promises of higher revenues from the fishing industry. Developed nations with large fishing fleets will benefit from stricter standards in FOC states, perhaps mitigating the overwhelming trend of overseas registration for their domestically owned vessels. Countries with extensive fishery resources will benefit from decreased IUU fishing, allowing them to better manage the fisheries in their EEZs for long term benefit and to economically benefit from a greater portion of the fishing taking place in their waters. It is also possible that legitimate fishing companies may pressure their governments to join the protocol in order to pressure the IUU operators competing for the same fish stocks.

FOC states stand to lose the most as fleets will be pressured to abandon them for other nations with more reputable ship registries. However, even in the most questionable FOC states, capacity building and development aid offered to non-compliant parties to the protocol could arguably make up for this anticipated shortfall. By increasing the ability of FOC states to regulate their fleets, capacity building activities can maximize available revenues in the form of registration fees, wages, and taxes. This may sound optimistic, but one must keep in mind that even in the most notorious FOC states, registration fees, which are most likely to suffer under increased scrutiny, do not account for significant portions of government revenue. In 2003, it was estimated that registration of more than 1,000 fishing vessels by the top four FOC states yielded only a few million dollars in revenue.[35]

Finally, the global community stands to benefit from increased compliance with international fisheries management regimes. However, this carrot is too vulnerable to free-riding to weigh heavily in the rationale of a potential signatory state.

"Sticks" in the FCBR Protocol

The FCBR also creates several "sticks" that raise the cost of not joining the protocol and of non-compliance with international fisheries management regimes. On the most basic level, the FCBR raises the cost of IUU fishing by limiting port access, withholding fishing licenses, and restricting transshipment. At present the cost of tolerating and practicing IUU is extremely low for states and vessels, respectively, due to the lack of accountability under the international legal system.[36] As the low number of prosecutions for IUU can attest, the chance of an individual vessel getting caught are very low, making IUU fishing quite profitable in the aggregate. [37] Similarly, the annual review of each state's compliance with the FCBR objectives helps make transparent the exceedingly opaque fishing industry, expanding the opportunity to "shame" countries that tolerate IUU fishing.

The FCBR Bandwagon: A Strategy for Compliance

The "tipping point" effect of limiting port access and withholding fishing licenses is also extremely important to the effectiveness of the FCBR Protocol. These punitive measures will not only encourage FOC states to comply with the FCBR Protocol, but also reward them for doing so. When the most lucrative fishing grounds and ports are off-limits to non-compliant states, they will have strong incentive to comply as soon as possible. The conditions for effectiveness of the treaty are to be set in a manner that facilitates this phenomenon. Provisional requirements for effectiveness are 15 nations accounting for 50% of global fishing capacity or 50% of the global fish market; however, the actual threshold should be determined by comparing payoffs to costs of compliance and identifying the tipping point at which it will become financially advantageous to join the treaty. The positive network externalities created by limiting access to markets, resources, and ports, will ensure that the treaty becomes self-enforcing once the tipping point is reached.[38]

A similar technique was used with great success in the International Convention for the Prevention of Pollution from Ships (MARPOL) to ensure adequate participation and provide positive incentives for potential signatory states. Under MARPOL, certain equipment standards

(e.g. segregated ballast tanks) were required and non-compliant vessels could be banned from ports. By requiring that states representing at least 50% of the gross tonnage of the world's merchant shipping fleet ratify before the treaty become effective, MARPOL ensured that a there would be a positive incentive for compliance once the treaty came into force.[39]

Potential Conflict with International Trade Regimes

As with many international environmental regimes, there is substantial potential for the FCBR Protocol to conflict with norms of international trade. While numerous bilateral and multilateral trade agreements may present conflicts with FCBR Protocol, rather than examine each individually, this section will only consider potential disagreement with the World Trade Organization, since a fundamental conflict with this treaty organization would raise doubts about the protocol's long term feasibility.
Only the punitive measures envisioned by FCBR present potential conflicts with free trade, and among them, not all are contentious. Voluntary measures to withhold fishing licenses from flag states judged non-compliant with FCBR in no way violates the principles of free trade because member states are regulating sovereign resources. Since the EEZ is considered the exclusive economic domain of the state,[40] the decision to award fishing rights to a certain country or company is analogous to the rights of any other natural resource, a purely domestic matter.

Limitations on port access, however, may prove to be more controversial. Free transit of goods across the territory of WTO member states is in theory guaranteed by Article V of GATT. In 2000, the European Union challenged a Chilean decision to close their ports to EU fishing vessels that disregarded basic conservation standards.[41] This was done by means of domestic Chilean legislation, which also banned transshipment from these same vessels to Chilean ports. While this arbitration process was suspended by both parties in 2001 and has remained inactive since, it clearly demonstrates the potential for conflict regarding port access. Regardless, regulation of ports is widely viewed as a matter of sovereignty.[42] In practice, restricting port access has been used effectively on a number of occasions to modify the behavior of states on the high seas. The MARPOL convention allows signatories to detain non-compliant ships in port until they are made compliant with standards established in the treaty, in effect restricting port access for some vessels.[43] In 2002, in response to similar policies by the United States, the European Union restricted port access of single-hull oil tankers, effectively banning the ships from participating in domestic trade and successfully accelerating the phase-out of single-hull ships.[44]

By contrast, banning transshipment at sea with vessels registered in non-compliant states is almost certain to elicit a challenge on the grounds of free trade. Restricting transshipment in conjunction with port access could easily be construed as a non-tariff barrier to trade as fishing nations would be deprived of two major routes for bringing fish to market in the nations imposing the restrictions. This measure can in no way fall back on the principle of sovereignty; on a basic level it violates the "like product" rule established in GATT article III. This same criteria has plagued other environmental standards such as turtle exclusion devices and "dolphin-free" tuna, both of which discriminated on grounds of process and production methods.[45] Due to this expected controversy, the CLC would likely only mandate a ban on transshipment as a last resort, if it became clear that withholding fishing licenses and eliminating port access were not

effective. Such a ban would also present monitoring and enforcement challenges, raising doubts about the credibility of the threat.

The WTO does contain a number of clauses that would weigh in favor of environmental restrictions on free trade and could support a ban on transshipment if it were challenged in the WTO dispute settlement body. Article XX(b) and (g) of GATT allow exception to the core principles of free trade if the measures taken are "necessary to protect human, animal or plant life or health," or "relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption." Evoking these articles is relatively difficult as states must demonstrate either the necessity of a specific measure, or show that the measure is aimed primarily at the conservation of natural resources and is accompanied by appropriate domestic measures.[46] Given the highly qualified nature of these exceptions, it is far from certain that the provisions of article XX could be evoked to support a ban on transshipment with non-compliant states.

This said there are historical examples of even more dramatic interference with free trade in the name of fishery management. ICCAT used embargoes against Panama and Honduras to coerce these nations into joining the RFMO in 1998 and 2001,[47] respectively. Notably both Panama and Honduras were members of the WTO at the time, and neither challenged the embargoes on grounds of free trade. On a number of occasions the U.S. has tried to use import bans to achieve environmental aims. Most recently the U.S. banned imports of beluga caviar citing the precarious condition of fish stocks in the Caspian Sea.[48] Similarly, CITES has limited or banned trade in numerous plants and animals; to date none of these decisions have been challenged on grounds of free trade.[49]

Interface with Existing International Law

The FCBR Protocol builds on currently recognized international law regulating international fisheries, tightening the existing regimes. Much as the UN Fish Stock built on the recognition of the need for RFMOs[50] established in UNCLOS by finally giving RFMOs the right to detain ships clearly violating the fisheries regime in their waters, the FCBR Protocol coordinates efforts by signatory states to pressure FOCs, previously recognized as problematic in the FAO Compliance Agreement.

As a protocol to UNCLOS, the FCBR Protocol utilizes preexisting arbitration structures and as a continuation of the FAO Compliance Agreement, FCBR incorporates norms of behavior already codified in international law. In effect the only new elements found in FCBR are the enforcement of norms already recognized as desirable, and the coordination of ongoing efforts to achieve those norms.

Sovereignty

The FCBR Protocol does not compromise sovereignty of nations subject to punitive measures in any meaningful way. Withholding fishing licenses from non-compliant states is completely within the right of signatory states as these fishery resources are by definition located within the EEZ.[51] Once declared, the EEZ falls under national jurisdiction, placing the right of foreigners to

exploit marine resources in the same legal space as mining, logging, and other terrestrial industries. The United States successfully withheld fishing licenses in its territorial waters during the '80s in order to pressure some nations to comply with the International Whale Conservation programs.[52] As discussed above, ports are also traditionally considered sovereign territory, indicating that restricting port access does not impose on the sovereignty of other states.

The obligations that signatory states assume, however, are more problematic with regards to sovereignty. Binding punitive measures impinge upon the right of states to regulate their own trade and control the use of their natural resources. If the binding nature of punitive mandates becomes problematic in the negotiation of the FCBR Protocol, the option exists of allowing signatories to declare themselves exempt from specific rulings, protecting aspects of the fishing industry that are particularly vital to their economies or the welfare of their people. This mechanism would not be applicable for states that have been classified as non-compliant, thus relieving all other signatory states of the duty to impose punitive measures. Rather, it could only be applied if a signatory state judged that compliance with punitive measures was too costly in economic or human terms. A similar exemption option was used in the CITES treaty, and while it doubtless weakened the treaty substantially, it was an essential element in generating the consensus needed to create regulation of trade in endangered species.[53]

Barriers to Implementation

In addition to concerns over sovereignty and free trade, the FCBR Protocol faces a number of hurdles to implementation. Significant mobilization of the international community will be required to generate the political will needed to overcome initial resistance to the upfront costs of the protocol. FOC states may be hesitant to sign because of the heightened possibility that they will lose their large "resident" fleets to other nations with more transparent regulatory environments. Developed nations that boast ownership of significant fishing capacity may also express reservations, as the successful implementation of the FCBR Protocol would crack down on IUU fishing, reducing the illicit revenue flows. While these moneys should be of no concern to the national governments involved, it would not be surprising if the fishing industry influences state positions, given the historical failure of most countries to properly regulate their fisheries. Nations with substantial fishery resources will also be concerned by potential revenue loss from revoking the licenses of non-compliant states. However, if these nations are actually pressed to exclude vessels under a certain flag from their EEZ, the ships in question won't take long to reregister under an acceptable alternative. Industry stands to lose a lot of money by staying in the wrong place.

Consumers in target markets may be resistant to higher prices due to diminished supply, particularly in poorer nations where people are heavily dependent on seafood for protein.[54] A sustained international media campaign surrounding the treaty negotiation and implementation would be the most effective way to pressure national governments into overcoming this initial reluctance.

There is also the risk that stronger regulation will increase pressure to sell fish on the black market, pushing the industry even further from effective governance. This can best be addressed at a local level, through capacity building programs at ports, domestic political reforms, and

increased financial oversight of fishing companies registered in off-shore tax havens. Solutions to an increase in black market activity are best arrived at in response to the appearance of individual problem spots. Funding from the FCBR capacity building programs could be allocated for this purpose.

Steps toward Implementation

Despite these barriers, by engaging the right stakeholders, it should be possible to implement the FCBR in the near future. As discussed above, the best strategy for overcoming the major impediments to implementation such as the black market, consumer resistance, and domestic political resistance, is a sustained media campaign to raise public awareness of the issue. An international campaign by WWF and Unilever, which are jointly responsible for the successful Marine Stewardship Council sustainable fisheries initiative, could serve as an excellent starting point to bring consumers, private companies, and non-profits into an international coalition (incorporated as a non-profit) to support the FCBR. Such a campaign would be consistent with the mission and image of WWF and the previous corporate social responsibility programs of Unilever. On a national level, the campaign would focus on prominent political figures in major fishing nations such as the U.S., Spain, France, Japan, and Canada, as well as the European Commission (an EU directive could do wonders), while local coalition members engage in more direct lobbying efforts. This combined effort should be timed to precede a UNCLOS COP meeting by 6 to 12 months so international political awareness is peaked when the actual time for FCBR Protocol approval arrives. It would be useful if the COP meeting also coincided with national elections in a few key countries. By making food security and money politics into an election issue, the coalition would have greater chances of persuading otherwise indifferent politicians. Finally, it is vitally important that the FCBR be structured in a way that allows non-parties to UNCLOS to participate in the agreement. For decades the United States has resisted ratifying UNLOS due to sovereignty; by making FCBR participation independent of UNCLOS participation, the United States would be able to participate while maintaining its current position towards UNCLOS.

V. Future Challenges

While the FCBR Protocol should have a major impact on the use of FOCs as a vehicle for IUU, it is not a panacea for the world's fishery crisis. The "race to the bottom" among FOC states to provide the least oversight and loosest regulations will be stopped, but not necessarily reversed. The actions proposed in this memo will help bring FOC states up to a minimum level of compliance, but as long as vessels are permitted to "flag-hop" with impunity, global fishery management will only be as strong as its weakest link.

Moreover, even if FCBR Protocol succeeds in reigning in runaway FOC states, it does not address the overfishing endemic in fisheries management policy the world over. Yet meeting this challenge will be made far easier if IUU fishing is reduced. By making the system more responsive to fishery policy reforms, incentives will be increased to manage fish stocks sustainably. The current state of affairs presents a dramatic contrast: if a fishery exercises discretion to encourage stock recovery, IUU fishing can easily gobble up any gains.

Finally, as IUU fishing is pressured by tightened standards in FOC states, there is little guarantee that these activities will not simply continue in other ways. Granted, building factory ships to engage in illegal fishing will no longer be tolerated, but some very creative methods of enforcement will be required to counter less obvious IUU practices such as up-sizing, the use of illegal gear, and underreporting catches.

Cracking down on FOC states is only the first step in a long series of policy reforms that will be necessary to achieve sustainable global fishery management. Regardless, by increasing transparency and accountability in the global fishing industry, further efforts towards sustainable management will be more effective and reap greater rewards for their participants.

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[1] "United Nations Convention on the Law of the Sea." Article 21, 12 and 13. [A/CONF.164/37]. Accessed October 19th 2006 at http://daccessdds.un.org/doc/UNDOC/GEN/N95/274/67/PDF/N9527467.pdf?OpenElement

[2] For a full discussion of these treaties, see section III.

[3] "United Nations Convention on the Law of the Sea." Article 91. [A/CONF.164/37]. Accessed October 19th 2006 at http://daccessdds.un.org/doc/UNDOC/GEN/N95/274/67/PDF/N9527467.pdf?OpenElement

[4] Kura, Yumiko et al. "Fishing for Answers: making sense of the global fish crisis." Washington, D.C.: World Resources Institute, 2004. pp. 83-84.

[5] Gianna, Matthew and Simpson, Walt. "Flags of Convenience, transshipment, re-supply and at-sea infrastructure in relation to IUU fishing." P 83.

[6] Clover, Charles. "The End of the Line." London. 2004. Page 129.

[7] Lloyd's Register of Ships as cited in "The Changing Nature of High Seas Fishing." Prepared for the Australian Government Department of Agriculture, Forestry, and Fisheries, the International Transport Workers' Federation, and WWF International. October 2005. Page 4. Accessed October 20 2006 at http://www.itfglobal.org/files/seealsodocs/ENG/1658/iiulowres.pdf

[8] Lloyd's Register of Ships as cited in "The Changing Nature of High Seas Fishing." Prepared for the Australian Government Department of Agriculture, Forestry, and Fisheries, the International Transport Workers' Federation, and WWF International. October 2005. Page 3. Accessed October 20 2006 at http://www.itfglobal.org/files/seealsodocs/ENG/1658/iiulowres.pdf

[9] Idem. Page 4.

[10] CCAMLR and CCSBT as cited in Kura, Yumiko et al. "Fishing for Answers: making sense of the global fish crisis." Washington, D.C.: World Resources Institute, 2004. p. 82.

[11] Hunter, David; Salzman, James; and Durwood Zaelke. "International Environmental Law and Policy" Foundation Press: New York. 2002. Page 659.

[12] Hunter, David; Salzman, James; and Durwood Zaelke. "International Environmental Law and Policy" Foundation Press: New York. 2002. Page 659.

[13] Hunter, David; Salzman, James; and Durwood Zaelke. "International Environmental Law and Policy" Foundation Press: New York. 2002. Page 665.

[14] "United Nations Convention on the Law of the Sea." Articles 101, 110, 118. [A/CONF.164/37]. Accessed October 19th 2006 at http://daccessdds.un.org/doc/UNDOC/GEN/N95/274/67/PDF/N9527467.pdf?OpenElement

[15] "United Nations Convention on the Law of the Sea." Article 73. [A/CONF.164/37]. Accessed

October 19th 2006 at http://daccessdds.un.org/doc/UNDOC/GEN/N95/274/67/PDF/N9527467.pdf?OpenElement

[16] Kura, Yumiko et al. "Fishing for Answers: making sense of the global fish crisis." Washington, D.C.: World Resources Institute, 2004. pp. 80-81.

[17] Kura, Yumiko et al. "Fishing for Answers: making sense of the global fish crisis." Washington, D.C.: World Resources Institute, 2004. pp. 76-77.

[18] Ibid.

[19] "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." Part IV, Article 17. [A/CONF.164/37]. Accessed online November 2, 2006 at http://daccessdds.un.org/doc/UNDOC/GEN/N95/274/67/PDF/N9527467.pdf?OpenElement

[20] "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." Part VI, Articles 20 and 21. [A/CONF.164/37]. Accessed online November 2, 2006 at http://daccessdds.un.org/doc/UNDOC/GEN/N95/274/67/PDF/N9527467.pdf?OpenElement

[21] "The United Nations 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 (in force as from 11 December 2001) Overview." Accessed on November 2, 2006 at http://www.un.org/Depts/los/convention_agreements/convention_overview_fish_stocks.htm.

[22] "Agreement to Promote Compliance with International Conservation and Management Measures By Fishing Vessels in the High Seas." FAO: Rome. 1995. Accessed November 2, 2006 online at http://www.fao.org/DOCREP/MEETING/003/X3130m/X3130E00.HTM#Top%20Of%20Page

[23] "Implementation of the 1995 FAO Code of Conduct for Responsible Fisheries." Accessed November 3 2006 at http://www.fao.org/figis/servlet/static?xml=CCRF_prog.xml&dom=org&xp_nav=2,2.

[24] "Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas." Accessed November 3, 2006 at http://www.ecolex.org/en/treaties/treaties_fulltext.php?docnr=3105&language=en

[25] "Implementation of the 1995 FAO Code of Conduct for Responsible Fisheries." Accessed November 3 2006 at http://www.fao.org/figis/servlet/static?xml=CCRF_prog.xml&dom=org&xp_nav=2,2.

[26] Kura, Yumiko et al. "Fishing for Answers: making sense of the global fish crisis." Washington, D.C.: World Resources Institute, 2004. pp 77-79.

[27] Kura, Yumiko et al. "Fishing for Answers: making sense of the global fish crisis." Washington, D.C.: World Resources Institute, 2004. p.79.

[28] "What is CITES." Accessed on November 2, 2006 at http://www.cites.org/eng/disc/what.shtml

[29] "Sturgeons and CITES." Accessed on November 2, 2006 at http://www.cites.org/eng/prog/sturgeon.shtml

[30] Clover, Charles. "The End of the Line." London. 2004. Page 26.

[31] LeBlanc, Justin. "The Global Fish Market and the Need for Multilateral Fishing Disciplines."

Economic Perspectives. January 2003. Accessed on November 2, 2006 at http://usinfo.state.gov/journals/ites/0103/ijee/leblanc.htm

[32] "United Nations Convention on the Law of the Sea." Articles 101, 110, 118. [A/CONF.164/37]. Accessed October 19th 2006 at http://daccessdds.un.org/doc/UNDOC/GEN/N95/274/67/PDF/N9527467.pdf?OpenElement

[33] Susskind, Lawrence E. "Environmental Diplomacy." Oxford Press: New York (1994). Page 105.

[34] Chase, Pamela et al. "Global Environmental Politics." Westview Press: Boulder, CO. 2006. Pp. 111-114.

[35] "IUU Fishing and the Cost to Flag of Convenience Countries" by Matthew Gianni et al in *Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing* (OECD, 2004)

[36] "IUU Fishing and the Cost to Flag of Convenience Countries" by Matthew Gianni et al in *Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing* (OECD, 2004)

[37] "The Costs of Being Apprehended for Fishing Illegally: Empirical Evidence and Policy Implications" by Somalia, Alder and Keith in *Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing* (OECD, 2004)

[38] In chapter nine of his book "Environment and Statecraft" Scott Barrett describes the application of game theory to solve tipping treaty and network externality problems.

[39] Chase, Pamela et al. "Global Environmental Politics." Westview Press: Boulder, CO. 2006. Pp. 262-266.

[40] Hunter, David; Salzman, James; and Durwood Zaelke. "International Environmental Law and Policy" Foundation Press: New York. 2002. Page 661.

[41] Orellana Cruz, Marcos. "The Swordfish in Peril: the EU Challenges Chilean Port Access Restrictions at the WTO." *Bridges* (August, 2000). Accessed at www.trade-environment.org/page/ictsd/Bridges_Monthly/swordfish_dispute_08_00.pdf on November 2, 2006.

[42] This position was confirmed by a 1986 ICJ ruling on military and paramilitary activities in Nicaragua (Orellana Cruz, Marcos. "The Swordfish in Peril: the EU Challenges Chilean Port Access Restrictions at the WTO." *Bridges* (August, 2000). Accessed at www.trade-environment.org/page/ictsd/Bridges_Monthly/swordfish_dispute_08_00.pdf on November 2, 2006.)

[43] Hunter, David; Salzman, James; and Durwood Zaelke. "International Environmental Law and Policy" Foundation Press: New York. 2002. pp 720-721

[44] "Maritime Safety: accelerated phasing-in of double-hull tankers." Accessed at http://europa.eu/scadplus/leg/en/lvb/l24231.htm;

[45] "Environment and Trade: A Handbook." International Institute for Sustainable Development and UNEP. IISD: Winnipeg, Canada. 2000. Pp. 27-28, 41-44.

[46] "Environment and Trade: A Handbook." International Institute for Sustainable Development and UNEP. IISD: Winnipeg, Canada. 2000. Pp. 29-30.

[47] OECD. "Why Fish Piracy Persists." Page 29.

[48] "In Conservation Efforts, U.S. Bans Caspian Beluga Caviar." *New York Times* (September 30, 2005). Accessed on October 20 at http://www.nytimes.com/2005/09/30/politics/30caviar.html?ex=1285732800&en=87924b6325822368&ei=5090&partner=rssuserland&emc=rss

[49] "Environment and Trade: A Handbook." International Institute for Sustainable Development

and UNEP. IISD: Winnipeg, Canada. 2000. p. 29.
[50] Hunter, David; Salzman, James; and Durwood Zaelke. "International Environmental Law and Policy" Foundation Press: New York. 2002. p 683.
[51] Hunter, David; Salzman, James; and Durwood Zaelke. "International Environmental Law and Policy" Foundation Press: New York. 2002. p 661.
[52] Chase, Pamela et al. "Global Environmental Politics." Westview Press: Boulder, CO. 2006. Page 145.
[53] Chase, Pamela et al. "Global Environmental Politics." Westview Press: Boulder, CO. 2006. Pp. 152-153.
[54] It should be noted that the FAO Compliance Protocol, and by extension, the FCBR Protocol do not cover small scale fishing, which is more likely to contribute to the local food supply than larger operations.

Appendix I: Fishing Capacity by Country of Registration (vessels over 100 tons)

Country	Fleet Tonnage	Country	Fleet Tonnage
Albania	262	El Salvador	6,338
Algeria	2,831	Equatorial Guinea	22,377
Angola	34,837	Estonia	19,565
Antigua & Barbados	392	Fiji	2,535
Argentina	205,418	Finland	6,561
Australia	62,850	France	110,886
Azerbaijan	8,696	French Ant.	8394
Bahamas	883	Gabon	5,138
Bahrain	1,380	Gambia	540
Bangladesh	10,224	Georgia	65,086
Barbados	508	Germany	56,444
Belgium,	20,728	Ghana	94,398
Belize	186,754	Greece	16,073
Benin	308	Grenada	122
Bolivia	10,928	Guatemala	4,767
Brazil	12,995	Guinea	12,429
Brunei	223	Guinea-Bissau	4,724
Bulgaria	10,407	Guyana	7,943
Cambodia	36,454	Haiti	280
Cameroon	9,163	Honduras	132,675
Canada	138,524	Iceland	172,126
Cape Verde	6,087	India	40,717
Chile	193,018	Indonesia	93,574
China	154,177	Iran	27,999
Hong Kong	1598	Iraq	2,237
Macao	314	Irish Rep.	72,125
Taiwan	100,361	Italy	50,656
Colombia	20,456	Jamaica	989
Comoros	13,075	Japan	428,663
Congo	2,696	Kazakhstan	6,871
Dem. Rep. of Congo	3,133	Kenya	3,637
Costa Rica	1,100	Kiribati	1,136
Cote D'voire	6,487	North Korea	42,003
Croatia	8,129	South Korea	410,667
Cuba	25,729	Kuwait	9,830
Cyprus	31,893	Latvia	35,607
Denmark	126,616	Lebanon	131
Denmark (DIS)	359	Liberia	198
Faeroe Island	95379	Libya	14,787
Djibouti	240	Lithuania	72,495
Dominica	17,066	Madagascar	10,937
Ecuador	76,765	Malaysia	5,792
Egypt	3,201	Maldives	6,555
Malta	12,359	Sri Lanka	3,983
Marshall Islands	16,108	St. Helena	1,818
Mauritania	49,196	Solomon Islands	3,938

Mauritius	9,657	Somalia	3,153
Mexico	98,724	South Africa	91,787
Micronesia	2,482	Spain	409,330
Morocco	139,434	Spain (CSR)	1806
Mongolia	1,631	St. Kitts and Nevis	744
Mozambique	23,741	St Vincent and the Grenadines	79,025
Myanmar	6,177	Sweden	30,590
Namibia	95,779	Tanzania	2,607
Netherlands	179,255	Thailand	26,943
Netherlands Antilles	10708	Togo	14,579
New Zealand	55,412	Tonga	4,040
Cook Islands	16628	Trinidad and Tobago	1,983
Nicaragua	3,921	Tunisia	4,193
Nigeria	27,461	Turkey	8,586
Norway	361,794	Turkmenistan	10,771
Norway nis	678	Tuvalu	
Oman	350	Ukraine	127,353
Pakistan	1,376	United Arab Emirates	1,352
Panama	161,091	UK	161,778
Papua New Guinea	2,574	Anguilla	109
Peru	179,157	Bermuda	573
Philippines	140,638	Channel Islands	713
Poland	72,461	Falkland Islands	37,091
Portugal	75,713	Gibraltar	189
Qatar	322	Isle of Man	520
Romania	47,142	Turks and Caicos Islands	124
Russia	1,821,630	Virgin Islands, UK	292
Samoa	213	USA	710,840
Sao Tome and Principe	1,690	Unknowns	786,433
Saudi Arabia	4,858	Uruguay	38,051
Senegal	37,133	Vanuatu	142,311
Seychelles	30,592	Venezuela	44,409
Sierra Leon	15,490	Vietnam	14,909
Singapore	820	Yemen	5,585
Slovenia	312	**WORLD TOTAL**	**10,206,866**

Source: Lloyd's World Fleet Statistics

Appendix II: Marine Fish Food Consumption (2001)

Country	Tonnes of Fish	Country	Tonnes of Fish
Albania	2,856.00	Croatia	4,783.00
Algeria	90,217.00	Cuba	22,892.00
American Samoa	262	Cyprus	5,023.00
Angola	164,342.00	Czech Republic	169
Anguilla	180	Denmark	1,960.00
Antigua and Barbuda	859	Djibouti	285
Argentina	125,938.00	Dominica	1,157.00
Aruba	3,173.00	Dominican Republic	9,210.00
Australia	65,320.00	Ecuador	41,781.00
Austria	2,554.00	Egypt	223,372.00
Azerbaijan, Republic of	56	El Salvador	12,423.00
Bahamas	1,659.00	Equatorial Guinea	1,327.00
Bahrain	6,002.00	Eritrea	7,648.00
Bangladesh	61,292.00	Estonia	512
Barbados	2,435.00	Ethiopia	50
Belarus	1,149.00	Falkland Is. (Malvinas)	4
Belgium-Luxembourg	3,218.00	Faeroe Islands	811
Belize	519	Fiji Islands	7,597.00
Benin	11,221.00	Finland	29,581.00
Bermuda	328	France	37,688.00
Bolivia	1,714.00	French Guiana	2,500.00
Bosnia and Herzegovina	113	French Polynesia	7,206.00
Botswana	7	French Southern Territories	80
Brazil	168,323.00	Gabon	19,367.00
British Virgin Islands	41	Gambia	29,675.00
Brunei Darussalam	1,360.00	Gaza Strip (Palestine)	2,650.00
Bulgaria	846	Georgia	1,537.00
Burkina Faso	14	Germany	5,787.00
Cambodia	592	Ghana	220,663.00
Cameroon	58,337.00	Greece	80,533.00
Canada	198,831.00	Greenland	2,853.00
Cape Verde	8,307.00	Grenada	1,276.00
Cayman Islands	37	Guadeloupe	9,400.00
Chad	0	Guam	282
Chile	80,761.00	Guatemala	194
Colombia	13,656.00	Guinea	64,839.00
Comoros	12,160.00	Guinea-Bissau	935
Democratic Republic of Congo	3,984.00	Guyana	21,769.00
Congo, Republic of	21,345.00	Haiti	4,153.00
Cook Islands	525	Honduras	764
Costa Rica	2,856.00	Hungary	41
Côte d'Ivoire	96,282.00	Iceland	5,506.00
India	1,331,100.00	Myanmar	47,649.00
Indonesia	1,729,196.00	Namibia	10,561.00
Iran, Islamic Rep of	77,646.00	Nauru	400
Iraq	12,402.00	Netherlands	74,726.00
Ireland	29,799.00	Netherlands Antilles	785

Israel	7,984.00
Italy	25,006.00
Jamaica	4,262.00
Japan	153,351.00
Jordan	1,406.00
Kazakhstan	662
Kenya	2,291.00
Kiribati	5,600.00
North Korea	73,915.00
South Korea	591,884.00
Kuwait	5,346.00
Kyrgyzstan	123
Laos	0
Latvia	7,897.00
Lebanon	8,472.00
Lesotho	0
Liberia	796
Libyan Arab Jamahiriya	27,359.00
Lithuania	88,167.00
Macedonia	112
Madagascar	51,245.00
Malawi	0
Malaysia	872,250.00
Maldives	54,842.00
Mali	1,878.00
Malta	620
Marshall Islands	348
Martinique	5,324.00
Mauritania	27,509.00
Mauritius	5,334.00
Mayotte	5,500.00
Mexico	491,392.00
Micronesia	2,212.00
Moldova, Republic of	0
Monaco	3
Mongolia	0
Montserrat	50
Morocco	200,283.00
Mozambique	5,204.00
Slovakia	52
Slovenia	622
Solomon Islands	16,863.00
Somalia	14,259.00
South Africa	254,737.00
Spain	258,109.00
Sri Lanka	209,963.00
Sudan	4,896.00
Suriname	4,121.00
Swaziland	348
Sweden	1,864.00

New Caledonia	1,678.00
New Zealand	44,022.00
Nicaragua	4,323.00
Niger	361
Nigeria	269,377.00
Niue	200
Northern Mariana Is	195
Norway	16,739.00
Oman	50,569.00
Pacific Islands Trust	0
Pakistan	91,244.00
Palau	1,652.00
Panama	22,151.00
Papua New Guinea	38,259.00
Paraguay	0
Peru	276,371.00
Philippines	1,461,826.00
Pitcairn Islands	8
Poland	10,346.00
Portugal	55,898.00
Puerto Rico	1,923.00
Qatar	7,745.00
Réunion	3,638.00
Romania	906
Russian Federation	584,169.00
Rwanda	23
Saint Helena	79
Saint Kitts and Nevis	481
Saint Lucia	1,911.00
Saint Pierre & Miquelon	68
Saint Vincent/Grenadines	1,153.00
Samoa	971
Sao Tome and Principe	2,151.00
Saudi Arabia	48,418.00
Senegal	143,396.00
Serbia and Montenegro	428
Seychelles	3,731.00
Sierra Leone	13,356.00
Singapore	3,560.00
Tunisia	58,198.00
Turkey	425,101.00
Turkmenistan	1
Turks and Caicos Is.	301
Tuvalu	290
Uganda	0
Ukraine	268,454.00
United Arab Emirates	50,679.00
United Kingdom	4,717.00
United States of America	749,214.00
Uruguay	7,688.00

Switzerland	4,568.00	U.S. Virgin Islands	264
Syrian Arab Republic	2,266.00	Vanuatu	4,314.00
Tajikistan	4	Venezuela	208,906.00
Tanzania	32,172.00	Viet Nam	397,436.00
Thailand	304,862.00	Wallis and Futuna Islands	294
Timor-L'Este	0	Yemen	104,255.00
Togo	3,807.00	Zambia	0
Tokelau	200	Zimbabwe	589
Tonga	3,635.00		
Trinidad and Tobago	6,033.00	**WORLD**	**17,738,156.00**

Source: FAO FISHSTAT