Unclassified **AGR/FI/IUU(2004)8**

Organisation de Coopération et de Développement Economiques
Organisation for Economic Co-operation and Development

30-Mar-2004

English text only

DIRECTORATE FOR FOOD, AGRICULTURE AND FISHERIES
FISHERIES COMMITTEE

AGR/FI/IUU(2004)8
Unclassified

Regulating IUU Fishing or Combating IUU Operations?

19-20 April 2004

This paper has been prepared by Mssra Olav Schram Stokke and Davor Vidas of the Fridtjof Nansen Institute, Norway.

This paper has been submitted to the IUU Workshop, 19-20 April 2004.

For further information, please contact:
Carl-Christian SCHMIDT (carl-christian.schmidt@oecd.org)

JT00161153

English text only

TABLE OF CONTENTS

Figures

REGULATING IUU FISHING OR COMBATING IUU OPERATIONS?[1]

1. Introduction

1. *Why is this study needed?* On the one hand, the past decade has produced a large number of measures aimed at combating the phenomenon now commonly referred to as 'illegal, unregulated and unreported' (IUU) fishing. Most of these measures are contained in legal instruments falling within the sphere of the law of the sea, including fisheries management and conservation. Among the global instruments, major milestones following on the 1982 UN Law of the Sea Convention were: the 1993 FAO Compliance Agreement, the 1995 Implementing Agreement for the UN Law of the Sea Convention on Straddling and Highly Migratory Fish Stocks, as well as the 2001 International Plan of Action against IUU Fishing. Regional fisheries bodies have at the same time adopted a large number of more specific measures. There were also various national measures adopted.

2. On the other hand, the IUU fishing activity, against which those numerous measures are targeted, does not seem to be significantly reduced. On the contrary, in some regions it is on the rise. Where sharp decreases of IUU fishing are documented, this seems to occur in areas where the fish stocks have been exposed to over-fishing, and thus where incentives for (IUU) fishing have ceased to exist.

3. What is the reason for this rather weak correspondence between the measures adopted and the impact on the activity that they are intended to reduce? Should we start by studying the measures? Or should we rather return to 'square one' and ask: Do we have the right 'diagnosis' of the problem we wish to solve or, at least, considerably diminish?

4. The first section of this study is therefore oriented on re-examining the diagnosis: Is our current understanding of the problem comprehensive enough? Does it focus on all the segments we need to address in order to more effectively deal with it? This discussion is followed by three sections that review a number of existing measures to combat IUU fishing and examine the extent to which they respond to the diagnosis. Could it even be said that the main thrust of present measures is focused on curing symptoms rather than causes? In each of those sections we seek to identify potentials for improvement. How can the effect of current measures be enhanced, and what are the areas that merit more attention? Our ambition here is not to enter into detailed proposals for new measures, but rather to pinpoint areas where we see potential for improvements, and some of the actors who could be engaged.

2. The problem: Do we have the right diagnosis?

5. *What is our current understanding of the problem?* While no mandatory definition of the problem is available, a commonly accepted one is found in the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU). Here, the 'nature and scope' of the problem is stated as illegal, unreported and unregulated fishing, with 'illegal' fishing referring to 'activities conducted by vessels' operating in contravention to national laws or international measures; whereas 'unregulated' are, again, 'fishing activities conducted by vessels' that, while not in a

[1] Paper prepared by Mssra Olav Schram Stokke and Davor Vidas of The Fridtjof Nansen Institute, Norway.

formal conflict with laws and regulations, are nevertheless inconsistent with either conservation measures or broader state responsibilities to this effect. This diagnosis therefore describes 'fishing activity' and 'vessel operations' – which are either illegal, unregulated or unreported (or all at the same time) – as the constituent elements of the problem. Accordingly, the recommended measures to 'prevent, deter and eliminate' this problem are, first and foremost, those in respect of vessels and their (IUU) fishing activity.

6. The operation of vessels involved in IUU fishing is indeed an important *manifestation* of the problem we face, and with visible impacts on the status of fish stocks. In this study, however, we start by defining several hypotheses about the diagnosis of the problem. First, fishing vessel activities engaged in IUU fishing are not the origin of the problem. Second, IUU fishing is not resilient to regulatory efforts only due to jurisdictional obstacles in regulating fishing vessels' activities at sea. Third, vessel operations and their fishing activity are not the ultimate purpose of IUU operators' engagement.

7. If those hypotheses prove correct – and this is what we will argue in this section – they would suggest that the main effort so far has been to cure the 'illness' by actually treating symptoms rather than causes; manifestations of the problem rather than the purposes of those who create it. Moreover, this has been done by often relying on means that are relatively costly, such as enforcement at sea; or on concepts that have proven controversial, such as attempting to define what a 'genuine link' between the vessel and the flag state is.

8. The scope of the problem is, in our view, far broader than the commonly accepted diagnosis of the problem as 'IUU fishing' may suggest. Accordingly, the prevailing focus of the currently available measures should be re-examined. While one ought to combat IUU fishing, it is not necessarily that this can be done exclusively and directly in the area where this activity occurs – its main drivers, just as its facilitators, are largely not found in that area.

9. Fishing *per se*, in our understanding, constitutes only a segment of the problem we face. In Figure 1 below, the sphere of IUU fishing is indicated by red dotted line, which is obviously only a part of a wider chain. We understand the problem as an inter-related *chain* of various links – 'at sea'[2] operations being only some among those links. What we thus need to do is to expose the problem by defining and analysing various links in the chain of an 'IUU operation' – as we prefer to term it. As illustrated in Figure 1 below, we understand an IUU operation for the purpose of international trade as a chain composed of several main links:[3]

1. Purchase of a fishing vessel and its transfer from the real (beneficial) to the declared (registered) owner;

2. Vessel registration in a certain national registry, thus acquiring a flag state;

3. Vessel involved in IUU fishing at sea (including also refuelling at sea, and transhipment of catch at sea);

4. IUU catch landed at a certain port;

5. Catch/product imported, then often reprocessed and reexported, as a rule through an intermediary state;

[2] 'At sea' we understand here in the law of the sea sphere, thus from vessel registration to the landing of catch in a port.

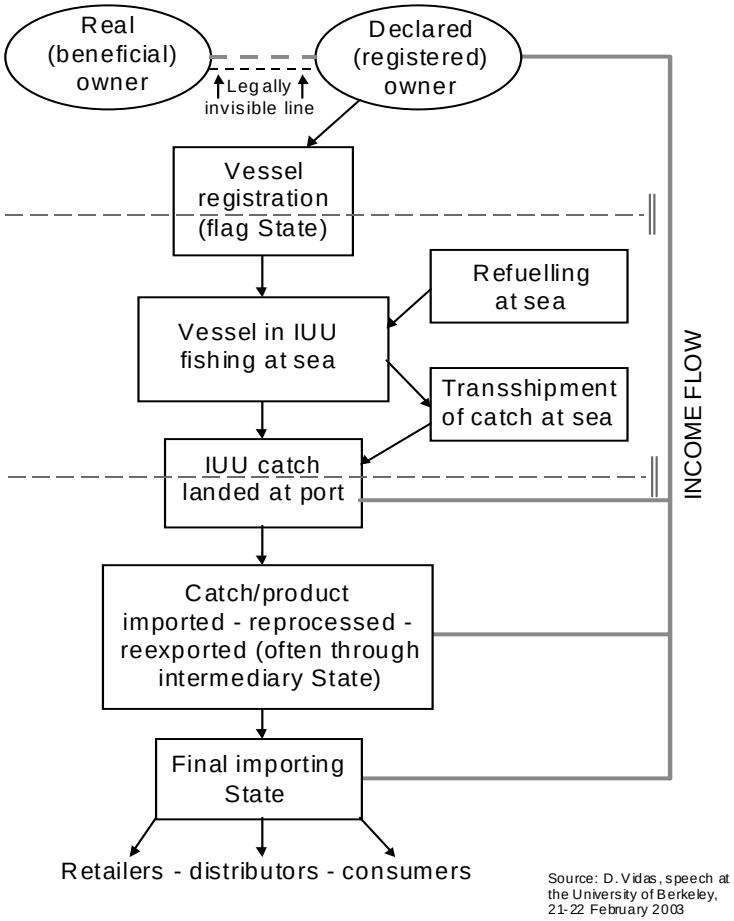
[3] IUU fishing can be conducted either for the market at the port state or for international trade. Our study focuses on the latter case, which is also the case of lucrative IUU fishing for valuable fish species.

6. Catch/product imported by the final importing state;

7. Fish product reaching retailers, distributors and final consumers at a domestic market.

Figure 1. The IUU Operation

Figure 1: The IUU Operation



10. Those links cluster in *three* segments of an IUU operation, each of which can be targeted by measures designed to combat IUU operations:

- first, *fishing vessel activity*, from vessel registration to landing of fish at a port. This is the international segment 'at sea', and largely corresponds to what is understood as 'IUU fishing'; this is in many ways *manifestation* of the problem.

- second, the *logistical* aspect of IUU operation addresses the organisation of supplies and services, and is largely played out in a transnational sphere.[4] This is where the main strength of any IUU operation is created: its flexibility.

- the third segment is *catch/product* in international trade and market, which is where income flows occur and net incomes are generated; this is the main *purpose* and the driving force for IUU operations.

11. Those three segments, then, constitute our diagnosis of the problem. Its manifestation is fishing vessel operations, its resilience and flexibility are enhanced by the transnational mode of its logistical activities; and its ultimate purpose is generation of net income. Measures that primarily address 'at sea' activities, as do most of the measures elaborated so far, are hampered by considerable flexibility available to IUU operators, all the way from vessel registration to the landing of the catch at a port, and have a limited potential to impact on the main purpose of an IUU operation: generation of net income.

12. Measures to effectively address an IUU operation need to adequately relate to all three segments of the phenomenon. In addition, effective measures must exploit potentials to cut across those three segments. This is in line with the perspective enshrined in the general objectives of IPOA-IUU. There, a 'comprehensive and integrated approach' is formulated, according to which 'States should embrace measures building on the primary responsibility of the flag State and using all available jurisdictions in accordance with international law, including port State measures, coastal State measures, market-related measures and measures to ensure that nationals do not support or engage in IUU fishing' (para. 9.3 of IPOA-IUU). This comprehensive and integrated approach, while perhaps not yet elaborated in various aspects, corresponds to our understanding of the problem as IUU operation rather than IUU fishing only.

* * *

13. According to the Introduction to IPOA-IUU, '[e]xisting international instruments addressing IUU fishing have not been effective due to a lack of political will, priority, capacity and resources to ratify or accede to and implement them.' There is no reason to dispute this view. Rather, the issue is whether we today do have measures that match complexity of an IUU operation? And what is the best way ahead: more measures, a better integration among existing ones, or a shift of emphasis among such measures?

14. In the following sections, we will explore measures as responding to the three main segments of the IUU problem: the vessels at sea; the transnational logistics, and the catch in trade. We will not enter into descriptive details of the measures devised so far, rather our purpose is to examine whether various categories of measures are responsive to the diagnosis of an IUU operation, to pinpoint the main causes for their (in) effectiveness, and to explore some possible ways and conditions for overcoming existing limitations. An important purpose here is also to indicate institutions and stakeholders that may have a potential to contribute to such enhanced effectiveness.

3. Measures targeting IUU vessel: the Law of the Sea domain

15. The Law of the Sea sphere governs an IUU operation from vessel registration to landing in a port. Here, we mainly talk about:

[4] 'Transnationality' is marked by *direct* involvement of individuals and/or companies from one state in the jurisdictional sphere of another state or states, and is thus different from the 'international' sphere, where subjects of international law, such as states, interact. This transnational element therefore provides many options for flexibility of an IUU operation, by utilising the comparative advantages, and loopholes, of different legal systems.

- vessel registration, through which IUU operators acquire a flag state (vessel nationality);

- jurisdiction, control and enforcement regarding fishing vessel operation at sea – the balance of flag state and coastal state competences; and between the flag state jurisdiction, on the one hand, and the regional fisheries organisation measures, on the other

- and (more seriously only in most recent years) landing in a port and thus port state jurisdiction regarding fisheries.

16. Let us take a somewhat closer look at each of those three stages of 'at sea' IUU operations, and the reach of the respective measures addressing these.

3.1 Vessel registration and acquiring of nationality of a flag state

17. Vessel registration can be described by various legal definitions; essentially, all those will state that, based as a rule on registration, a state grants its nationality to a ship. Every state has the right to sail vessels under its own flag. This is a fundamental right under the law of the sea, and is in itself not disputable. So far, states have not been able to successfully agree on whether this basic right can be conditioned by internationally agreed requirements that specify the nature and content of the link between a vessel and a state.[5] Consequently, conditions for registration are today determined by states largely at their own discretion.[6] When a vessel acquires the nationality of a certain state, that state becomes its flag state, and thereby retains the primary responsibility and jurisdiction over the vessel. This is, in very simplified terms, how the vessel registration, nationality, and flag state principle operate – from the perspective of states.

18. There is another perspective to the same issue, the perspective of an operator. This can be a physical person, though as a rule it is a juridical person, i.e. a company. Numerous companies have the opportunity to register business activity in more than one state. This is a core feature of international business and trade and in itself not controversial. Yet, the perspective of a company on vessel registration may be quite different from that of a state. If the company is an IUU operator, vessel registration is understood as a formal step by which that operator equips a vessel at its disposal with a *suitable* flag. Whether a flag is a suitable one will depend on circumstances, which in the case of fishing are more fluid than those related to the use of 'flags of convenience' in world shipping.

19. When the two perspectives are combined, the result is that many companies – whether IUU operators or not – may choose among many national arenas from where to conduct their businesses. Setting up a one-ship company in one country and registering a vessel there, to obtain a nominal nationality and a flag on a vessel, is essentially an initial phase of a business operation, which at that stage can not easily be seen as either illegal, unregulated or unreported. While the 'company' may consist of a post-box address only, and this may remain its main connection to the 'host' country, in many countries this is not contrary to national law. Likewise, having a vessel registered in a registry without any real attachment to the country, other than formal registration and payment of fees, is in many countries not contrary to national law. It is therefore not illegal, not unreported, and – if somewhat unregulated - it is not prohibited.

20. From here, an IUU operation starts its voyage. What can international law, or for that matter the law of the sea, do to assist in combating IUU operations at the stage of vessel registration and, subsequently, the licensing of a vessel to fish? Instead of immediately opening the evergreen discussion

[5] The contents and fate of the (still-born) 1986 UN Convention on Conditions for Registration of Ships is a good proof to that effect.

[6] See Art. 91 of the UN Law of the Sea Convention. For a discussion, see Vukas and Vidas (2001).

about 'genuine link' and 'flags of convenience', let us start by identifying the elements that an IUU operator needs at this stage. First, he needs to find a suitable flag state. Second, he needs to have at his disposal a suitable fishing vessel that can be entered in that country's register and thereupon licensed. Those are the two firm elements, while the rest (like setting up a company) may be an abstraction only, or as a rule too difficult to trace (e.g., employment of crew). We will therefore focus on those two firm elements: a state and a vessel.

21. Is international law, or for that matter international cooperation, entirely impotent here – or does it still contain some potential for further action in the sphere of vessel registration and licensing?[7] Can international cooperation assist in making some *states* less suitable for the purposes of IUU operators? And likewise, is it possible to make *vessels* less suitable for the purposes of IUU operators?

22. *States less suitable for IUU operators*. While there may be numerous companies, the number of states in the world is rather limited. Many states are indeed not suitable for IUU operators at the outset. Those that are, fall into two categories. One group is states not members to a certain regional fisheries management organisation; among those, only states that do not exercise their flag state responsibility will qualify as suitable for IUU operators. The other group is usually quite limited, but also a significant feature in IUU operations: states members to regional fisheries management organisations that lack either the will or capability to exercise their flag state responsibility.

23. The common element of all the states suitable for IUU operators is, therefore, their lack of flag state responsibility. Using the commonly accepted label of 'flags of convenience' for those states is neither correct nor productive.[8] It has been recently noted in a FAO study that the flags used in IUU fishing are actually 'flags of non-compliance'; soon after, that term was adopted by CCAMLR.[9] Yet, not all states are obliged to comply with the conservation measures of RFMOs, only those that are members of the RFMO in question, or parties to the UN Fish Stocks Agreement. Other states, if they so please, may remain in non-compliance as long as that does not conflict with duties they either accepted or are bound by under general international law. However, there is one minimal requirement valid for all flag states: to be responsible. Those who flag vessels without exerting any form of control over their activities, fail to exercise their basic responsibility as states in relation to vessels having their nationality. Such states therefore deserve a proper, and correct, label for their flags: flags of no responsibility.

24. Some states may accept to be considered 'convenient'; hardly any state will accept to be considered irresponsible. In international cooperation, 'naming and shaming' can be a powerful measure.[10] This can be done through a range of steps, including direct correspondence to the flag state by secretariats, through diplomatic demarches, etc. The more states (and with higher prominence in the particular context) join such pressure, the higher the sense of exposure, and thus the more embarrassment, will result for the state in question. The higher the transparency of this action, the increased the embarrassment. In addition,

[7] Here we will not enter into discussion of economic measures (such as subsidies) or national legislative measures (such as vessel registration denial by some countries), but will remain on the level of international cooperation and international law. Issues of subsidies and denial are discussed in section 3.

[8] Essentially, the term as such is also misleading, due to its relative nature. The notion of 'convenience' is accurate only from the perspective of IUU operators; for all others, those are esentially 'flags of inconvenience'.

[9] See: Port State Control of Fishing Vessels, FAO Fisheries Circular No. 987 (Rome: UN Food and Agriculture Organisation, 2003). See also CCAMLR, Resolution 19/XXI: 'Flags of Non-Compliance', adopted in November 2002; text in: Commission for the Conservation of Antarctic Marine Living Resources, Schedule of Conservation Measures in Force, 2002/03 (Hobart: CCAMLR, November 2002), pp. 125–126 .

[10] See also section 4.2 below.

an appropriate label may add to the convincing strength – and a label related to the lack of 'flag state responsibility' would be firmly based on the development of international law in the past decade.

25. The problem, however, remains that any such label, while essentially relative since linked to the context of particular fishery only, may easily become perceived as absolute; this dilemma has been faced by regional organisations, such as CCAMLR, when discussing proposals for the listing of flags. Enhanced coordination between RFMOs can assist in making this label less relative.

26. *Vessels less suitable for IUU operators*. A vessel will become less suitable for an IUU operator if it becomes difficult to register it in various national registers, or if it can be expected that the vessel will be denied a licence to fish. For this, a vessel needs a 'history', a bad record of involvement in IUU fishing. International cooperation has a potential to become a vehicle for establishing a record of IUU fishing for some vessels. Recently, CCAMLR parties agreed to prohibit issuing a licence to fish to vessels appearing in the newly established CCAMLR – IUU Vessel List, both for fishing in the Convention Area and in any waters under parties' fisheries jurisdiction.[11] While the CCAMLR Secretariat compiles this list, the Commission approves it; however, the list is available only at password protected pages of the CCAMLR website.[12]

27. Echoing the FAO Compliance Agreement, the IPOA-IUU contains clear limitations. While it holds that flag states should avoid flagging vessels with a history of non-compliance, the IPOA-IUU allows exceptions where the ownership of the vessel has subsequently changed, or if the flag state determines that flagging the vessel would not result in IUU fishing.[13]

28. Ultimately, where is the problem with all the measures that can be used through international cooperation in this area? While they do exert some effect – to gradually narrow down the scope of movement for IUU operators, they share one pervasive feature of international cooperation – due to cumbersome procedures, their effect is slow. Many RFMOs meet on an annual basis, and while their secretariats may operate year-round, decision-making occurs at an annual pace – and if consensus is the rule, it may take several years before a decision is agreed upon by all.

29. For an IUU operator to change a flag on a vessel, or to otherwise adjust to the emerging situation, will take far less time. As for almost everything these days, the vessels can be reflagged by some quick punches on a PC connected to the internet. There are several specialised web-sites that offer full services, from 'Q and A' to assisting in prompt company setting and vessel flagging. Probably the best known one is (www.flagsofconvenience.com).

30. While international cooperation is slow and operates through firm principles of international law, business – such as setting up an IUU operation – is swift and operates not according to but between these principles. This may be contrary to moral norms, but today – a decade after the adoption of the FAO Compliance Agreement and the UN Fish Stocks Agreement – IUU operators can still easily obtain flags and licences to fish for their vessels from one of a large number of states. From there, the IUU operation sails.

[11] CCAMLR Conservation Measure 10-06 (2002).

[12] Para. 15 of CCAMLR Conservation Measure 10-06 (2002).

[13] Para 36 of IPOA-IUU.

3.2 Jurisdiction, control and enforcement at sea

31. At sea, the Law of the Sea operates through a balance of sovereignty, sovereign rights and jurisdiction between the coastal state and the flag state. On the one hand, the rights of the coastal state decrease as the zones are more remote from its coasts or baselines; and in respect of fisheries management, individual coastal state rights cease at the outer limit of its EEZ. On the other hand, the rights of the flag state in respect of fisheries are in their full extent on the high seas where the freedom of fishing governs; the rights of the flag state over the vessel flying its flag decrease in the direction of any coast other than its own. In between this balance are RFMOs, who can adopt conservation and management measures on the high seas (as well as in coastal zones) comprised by their area of application; enforcement capability, however, rests with states.

32. From the legal perspective, in its various *coastal zones* the coastal state is entitled to exert control and enforcement over fisheries activities. In this connection, it has often been said that the only truly effective means against IUU fishing is a patrol boat at sea.[14] While the coastal state can indeed arrest a foreign fishing vessel involved in IUU fishing in its EEZ, there still are legal limitations: the flag state can require prompt release of vessel from detention upon the posting of a 'reasonable bond'.[15]

33. From a practical perspective, in areas where this is possible, a patrol boat at sea is indeed an effective means of control and enforcement. In many coastal waters, especially in EEZs and even in the territorial seas of many developing countries, this is however less possible due to the combination of poor capacity, high costs and extensive fishing grounds. Difficulties are enhanced in areas of disputed sovereignty, or in remote areas such as the coastal zones around various sub-Antarctic islands.

34. For an IUU operator, the abstract legal construction of coastal state jurisdiction in coastal zones at the outset matters only to the extent that effective physical control at sea can be expected. Where this expectation is higher, IUU fishing will depend on a simple risk assessment: probable net income from fish likely to be caught in a season *vs*. the value of a vessel likely to be sacrificed in case of arrest.[16] In most other areas, where likelihood to be arrested is practically negligible and fish resources well identified, an IUU operation will stand forth as a safe and good investment.

35. In this area, it is not realistic to contemplate any more significant conceptual legal developments in a foreseeable future, other than perhaps more rigorous interpretation by ITLOS, of what is understood as a 'reasonable bond'.[17] In respect of international cooperation, an available avenue is more intensive cooperation between the coastal state and the flag state, for instance in cases where observation has enabled identification of a vessel, but without other control or enforcement interventions taking place.

---

[14] In reality, this is comparable with the view that the only effective way to fight crime is a policeman on the street. Neither the causes nor most of the consequences can be dealt with in this way; and it is costly, above all.

[15] Arts. 292 and 73(2) of the UN Law of the Sea Convention. Several prompt release cases were decided upon in the past few years by the International Tribunal for the Law of the Sea, all originating in IUU fishing for Patagonian toothfish in EEZs around sub-Antarctic islands under French and Australian sovereignty.

[16] Also for this reason, many IUU operators use fishing fleets in which vessels have different roles (fuel supply, storage etc). One of the roles is, sometimes, the role of the vessel to be sacrificed in order that other, more valuable vessels, can escape. This was likely the role of 'Lena', apprehended in the same action together with 'Volga', both under Russian flag; the rest of that fleet, comprising more advanced vessels flying flags of third parties, escaped with the fish caught.

[17] This trend can be observed in ITLOS, especially after the 'Volga' case in December 2002.

36. On the *high seas*, the situation is different, both from the legal and, as a rule, practical perspective – and both work in favour of an IUU operator. Here, one of the basic legal principles of international law of the sea governs: *freedom of fishing*, which all states enjoy. This freedom is, however, subject to conservation and management of marine living resources. A mechanism increasingly used to specify conservation and management measures are RFMOs. Those measures, however, can legally bind only members to a RFMO; all other states remain 'third parties'. It is thus one other basic principle of international law that comes into play here: international treaties *do not oblige third states* without their consent.[18]

37. On the high seas, thus, not only practical impediments but also basic legal principles work in favour of IUU operators. Fishing here is free for all, and while increasingly subject to conservation measures by RFMOs, these do not bind third states and, accordingly, vessels under their jurisdiction.

38. In this area, post-UNCLOS law of the sea has seen some important developments, prompted primarily by innovative regional solutions. These, however, needed global sanction, and acquired it through the 1993 FAO Compliance Agreement and, especially, the 1995 UN Fish Stocks Agreement, now both legally in force. The development here can be summed up as going in two directions. First, extending the effect of measures adopted by RFMOs to third parties. And second, extending the reach of the 'patrol boat' from zones under national jurisdiction to the high seas. For international law, those were significant, if not revolutionary developments. As to their practical impact, in many areas this remains quite moderate, with little prospects for improvement.

39. As to the first, Article 8(3) of the UN Fish Stocks Agreement specifies how a flag state fishing on the high seas, where conservation measures adopted by RFMOs apply, is to give effect to its, otherwise general, duty to cooperate: by becoming a member to the RFMO or by agreeing to apply the measures in question. Moreover, Article 8(4) provides that only those flag states who act accordingly shall have access to the fishery resources to which the measures by the RFMO apply. Many RFMOs have followed up this by more specific requirements. However, among the parties to the UN Fish Stocks Agreement, there is only a small number of flag states truly addressed by those provisions. And, perhaps of even more concern, many problems of IUU fishing are caused by states that are parties to various RFMOs, but fail to implement their conservation measures or not exercising their flag state responsibility.[19] In such cases, as it has been demonstrated, the resort to persuasion by other members of that RFMO may require years of systematic follow-up – with the burden of proof regularly resting on those who wish to prove the offence.

40. As to the second major legal breakthrough, Article 21 of the UN Fish Stocks Agreement authorises states parties to the Agreement that are members of a RFMO to board and inspect fishing vessel flying the flag of any other state party to the Agreement regardless of whether this state is a member of the RFMO in question. This means moving a 'patrol boat' to the high seas, though limited to inspections. While certainly a useful solution in the specific regional context from which it originates,[20] and the areas of geographic and geopolitical proximity (e.g., the Barents Sea), or potentially in an semi-enclosed/enclosed sea not divided into EEZs (such as the Mediterranean Sea), in many other cases this innovation is of little practical value.[21] In the Southern Ocean, for instance, this would mean patrolling high seas fishing areas like Ob Banks and Lena Banks, several thousand kilometres away from the nearest harbours – only to do

[18] Art. 34 of the Vienna Convention on the Law of Treaties.

[19] Let alone, not willing or unable to control the activities of their *nationals* pursued under jurisdictions of other states.

[20] The provision is in many respects modelled after the Bering Sea Doughnut Hole Convention.

[21] Yet, that provision may be an additional impediment for some states to ratify the UN Fish Stocks Agreement. As to the regions such as the Mediterranean, where this type of compliance mechanisms can be conceived of, there is as yet little evidence of it being relevant in practice.

inspections, not arrests (and only in respect of vessels flying the flag of a party to the UN Fish Stocks Agreement). At the same time, inspections in the Southern Ocean are done almost exclusively in maritime zones under (disputed or not) sovereignty, covering a small fraction of the entire toothfish fishing area.

41. All this is not to say that RFMOs have no role to play in high seas control; quite the contrary, information collection, its transparency,[22] and collective pressure on the flag state are all important mechanisms. This, however, may function only in respect of those states who do exercise their flag state responsibility, or those who may decide to exercise it faced with increased international pressure.

42. In addition, for those areas where internationally agreed management and conservation measures apply, RFMOs do have a role to play also through introduction and implementation of catch certification and trade documentation schemes, whose operation begins at sea and from where the fraud regarding documentation often initially originates.[23]

3.3 Port state jurisdiction and control regarding fisheries

43. The last spot where an IUU operator meets the Law of the Sea is while landing a catch in a port. Port state control in respect of fisheries is a relatively new development. After some initial regional experiments, on a global level it is first found in the 1993 FAO Compliance Agreement. Under that Agreement, however, the power of the port state is quite limited: if it has reasonable grounds for believing that a vessel has been involved in IUU fishing, the port state can only promptly notify the flag state about this.[24] The 1995 UN Fish Stocks Agreement went further: it is 'the right and the duty' of the port state to take non-discriminatory measures against IUU fishing.[25] The Agreement entitles (and instructs) the port state to, *inter alia*, inspect documents, fishing gear and catch on board fishing vessel. If it is established that the catch originates in IUU fishing, the port state may, pursuant to its laws, prohibit landings and transhipment. Its power stops short of detaining the vessel, however.[26]

44. At present, fighting IUU operations in ports may look like another weak spot of the Law of the Sea. True, waiting for the catch to arrive to the port is far cheaper than chasing the fishing vessel on the sea. Nevertheless, there are many port states, and many more ports, and it is difficult to know in which of those an IUU catch will be landed. The history of landings of IUU catches of Patagonian toothfish is probably a good illustration here. When this IUU fishing started on a larger scale in the early to mid-1990s, initial ports used for landing were the South American ports. When the IUU fishing soon moved to the Indian Ocean sector, initially southern African ports were used, initially in Namibia, Mozambique and, then increasingly, ports in Mauritius. Although the latter is cited still today, this is largely 'old-fashioned' now; major landings have moved to ports in Asia.

45. As it stands, one can compare the effectiveness of unilaterally implemented port state control measures with the effectiveness of traffic police waiting at the very end of a highway, hoping here to meet all those who have run too fast on the entire highway. First, just like there are many exits from a highway,

[22] It is, however, transparency which is often difficult to achieve, with information about fisheries often being comprised by commercial privacy of data. Further obstacle is reliability of information, and thus an additional reason for caution when transparency is required. See further below, in Sections 3 and 4, and in Conclusions.

[23] On catch certification and documentation, see further in Section 5.1, below.

[24] Art. V(2) of the FAO Compliance Agreement.

[25] The exact wording is given in Art. 23(1) of the UN Fish Stocks Agreement.

[26] Some states, like the United States under the Lacey Act, do have stronger national measures; many other states deny access under some circumstances. Those measures, however, at present largely lack coordination.

there is always 'some other port' (and port facilities may be under private control). Second, just like one can adjust speed before passing speed control, IUU operators can adjust the usage of the vessel to appear in a port. Landing of IUU catch can be done by 'some other vessel', due to the prevalence of transhipment at sea.

46. In spite of such practical limitations, port state measures seems to be, more than any other Law of the Sea mechanism, an area with potential for development. There are probably three areas in which – based of development of RFMOs practice, indications from IPOA-IUU, and the on-going process in the FAO – we can expect further elaboration of port state measures as a mechanism against IUU fishing.[27]

47. First, any meaningful port state control must be based on coordinated efforts, resulting in compatible measures. This understanding has more recently led to the process towards developing such measures at FAO, first through an Expert Consultation in November 2002, while a Technical Consultation is scheduled for the second half of this year.

48. Second, widening the extent of port state measures is an obvious trend in state practice, RFMOs measures and in consecutive global instruments. The direction here is towards not only waiting for a vessel in a port, but also undertaking port state measures before that. Through state practice some requirements have developed in this respect, now formulated in IPOA-IUU: reasonable advance notice before entry into port, providing a copy of the authorisation to fish, and specifying details of the fishing trip and quantities of fish on board.[28] If this would lead to 'clear evidence' that the vessel has been involved in IUU fishing, landing or transhipment can be denied. Such re-directing of vessel may add to the economic burden for IUU operator, and is a direction worth considering for a wider global sanction.

49. Third, strengthening of the content of port state measures, as well as further specification of these, is also a trend obvious from recent practice and reflected in IPOA-IUU. In particular, reversal of the burden of proof, placing it on the vessel to establish that the catch was taken in a manner consistent with conservation measures, is already enshrined in IPOA-IUU (para. 63). The attention can also be drawn to the degree to which RFMOs need to provide proof of vessel being involved in IUU fishing: actual 'sighting' of a non-member vessel in an area of conservation measures is gradually becoming replaced by non-member vessel being 'identified' as engaged in fishing activities.[29]

50. Finally, an economic aspect of port state measures needs to be added. Due to cost-efficiency, their advantage over enforcement at sea is especially attractive for developing countries. On the other hand, implementation of port state measures requires adequate training in fishery inspection: this is an area where international assistance projects should be stimulated. This could also be an additional mechanism to persuade some of those states to forgo benefits from transhipment activities related to IUU fishing.[30]

*** * ***

[27] The requirement for all those developments is that the resulting measures need to be, as stated in IPOA-IUU: fair, transparent and non-discriminatory.

[28] Para. 55 of IPOA-IUU, stressing also due regard to confidentiality of data. For an overview of state and RFMOs practice, see: 'Implementation of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing', *FAO Technical Guidelines for Responsible Fisheries*, No. 9 (Rome: FAO, 2002), pp. 41–45.

[29] See *ibid*, comments at p. 46.

[30] On the latter aspect, see also comments in *ibid*, p. 45.

51. Which general conclusions about the reach of the law of the sea measures, applicable 'at sea' – from the vessel registration to the landing of catch in a port – can be drawn? First, the Law of the Sea as an effective tool in combating IUU fishing in clearly limited by general legal principles, otherwise necessary for upholding legal security. Those principles provide IUU operators with an ample space for manoeuvre. While international law by its nature needs to be inert, IUU operators, by the nature of their business, need to be efficient and creative. Second, development of legal measures, either through regional or global international cooperation, is a slow process; and when it brings results, those are as a rule in small portions. At the same time, an IUU operator, today also facilitated by information technology enabling him to react instantly, can quickly adjust to changes. Third, enforcement at sea is a costly operation; and even for states having at disposal a good enforcement machinery, sometimes the economic cost of it can exceed the value of the fish resources to be protected. Indeed, states may have various policy estimations, not only economic ones. For an IUU operator, the cost-benefit analysis is simpler, and a risk assessment rather straightforward; all this is facilitated by areas measured in millions of square kilometres, without any legal possibility of direct enforcement. And all this in combination gives IUU operators clear advantages.

52. Nonetheless, the measures developed so far to combat IUU fishing are predominantly in the Law of the Sea sphere of regulation. After some advances on harmonisation of port state control measures most likely to be made in the near future, the arsenal of the Law of the Sea will largely be exhausted for some time. Yet the real impact of those measures has so far not been in direct enforcement, but in their indirect effects. With more information available about IUU operations and with increased pressure from states, often through RFMOs, some flag states have improved the exercise of their flag state responsibilities. With some waters being more effectively patrolled, IUU operators needed either to change their fishing grounds or become involved in higher-risk operations.[31] With more international attention being given to IUU fishing, some loose grips – such as a 'reasonable bond' under the Law of the Sea Convention – are now becoming firmer through judiciary practice. With lesser number of ports being fully open to IUU operators, there is for them less flexibility and often more costs involved in circumnavigating new regulations, either by fraud or by changing the port. Yet all those are rather modest outcomes of rather sizeable investments of time, resources and political attention given to the IUU fishing problem over the entire past decade.

53. There is therefore an obvious need to target an IUU operation at links where opportunities for avoidance of regulation are fewer, where the implementation of measures is less costly, and where the measures can more directly target the financial purpose of an IUU operation (not only its visible manifestation), and its flexible transnational character.

4. Measures targeting IUU logistical activities

54. The logistics of a complex operation is the organisation of capital, man-power, supplies and services. Accordingly, this section will discuss governmental and private initiatives to create *frictions* by reducing the availability, or enhance the cost, of various resources needed for the smooth operation of IUU activities. Such resources include access to national waters, financial and legal services, insurance, bunkering, freight and processing services. Three sets of tools are addressed here: specific and hard measures that seek to restrict access to desired input factors; softer means that target the reputation of companies associated with IUU operations; and more general efforts aimed at reducing the overcapacity in world fisheries, which is believed to be a root cause of many IUU operations.

[31] It can be observed, however, that increased patrolling in some areas, including around some sub-Antarctic islands, is more often a result of political considerations, not necessarily only or primary prompted by marine living resources management and conservation needs, and can thus change with the motivation being changed.

4.1 Denial

55. The strategy underlying the first set of measures discussed here is denial: IUU operators, or those who cooperate with and support them, can be denied access to inputs or outlets that are controlled by actors prepared to use access as a leverage. Government black lists of vessels with a history of IUU fishing is an instructive example. Such lists can serve as a basis for refusing access to national resources, ports or services. More generally, three questions arise when classifying denial measures and considering expansion of existing measures. First, who is the denier: governmental or private actors? Second, what is being denied: port access, landing right, fishing rights, particular services, or any combination of these? Third, who is targeted for denial: the flag state, the beneficiary vessel owner, only the vessel, or only the cargo believed to stem from IUU fishing? Or is denial extended to 'IUU complicits', such as those who provide transhipment services, bunkering, insurance etc?

56. To illustrate, the CCAMLR IUU Vessel List is an instance of multilaterally coordinated denial that makes use of member states' authority to licence individual vessels for harvesting in the CCAMLR area and national waters. For its part, the Norwegian black list system implemented in order to close the Barents Sea Loophole was unilateral and extended beyond licensing to cover also port access.[32] The result of the latter was to reduce the second-hand value of vessels with a history of contravention of rules created by the Norwegian-Russian Fisheries Commission, especially on the European Community market. Corporate-level denial has also occurred in this region and have on some occasions even targeted companies or vessels that had provided inputs to IUU activities. For instance, during the peak years of the Loophole fishery, a series of private *boycott* actions were introduced that aimed at strangling Norwegian supplies of provisions, fuels, and services to Loophole vessels, as well as punishing domestic companies that failed to adhere to such boycotts (Stokke 2001). The Russian Fisheries Committee exerted similar pressure to bear even in the ports of the most active high-seas fishing state by encouraging the Murmansk-based trawler industry to discontinue landings of cod in Iceland.

57. As discussed further in section 4, denial can also be exercised indirectly by making landings and transhipment conditional on documents substantiating that the fish is legally caught. While both black lists and the 'white list' approach of documentation schemes can be circumvented by means such as document fraud, re-registering of vessels under new names, and the laundering of illegal catch by mixing it with legal harvest, even such circumvention can be costly and generally adds frictions to IUU operations.

58. Some reservations have been expressed with regard to the denial strategy, especially when applied by governments operating unilaterally. On one occasion, Iceland filed a complaint to the surveillance authority under the European Economic Area Agreement over Norway's refusal to render repair services to an Icelandic vessel that had been engaged in Loophole fishery.[33] More generally, the due process concerns articulated for instance by the United States with regard to black lists,[34] highlight the desirability for transparency regarding criteria for being placed on such lists, the accuracy and verifiability

[32] Norway, *St.prp*. 73 (1998-99), Sec. 2.2; legislation providing for blacklisting was introduced in 1994 but not used in practice until 'around 1997'; *ibid*.

[33] The Authority indicated the occurrence of such a violation, but no further action was taken because 'the underlying conflict concerned a dispute between Norway and Iceland over Icelandic fishing rights in the Barents Sea' 'Freedom to Provide Services', *EFTA Surveillance Authority: Annual Report 1998* (http://www.efta.int/structure/SURV/efta-srv.cfm) . Art. 5 of Protocol 9 to the EEA Agreement provides for access to ports and associated facilities but exemption is made for landings of fish from stocks, the management of which is subject to severe disagreement among the parties.

[34] See Draft for Public Review and Comment of the National Plan of Action of the United States of America to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, 2003, Sec. 7.3.

of information on which such placement occurs, and opportunities for targets of denial be permitted to present their case.

59. Although the relationship is not unequivocal, such means to ensure due process can be hampered by the prevalent confidentiality that surrounds information about IUU operations compiled within governmental management regimes.[35] Lists of IUU vessels compiled within one cooperative framework are in some instances, such as CCAMLR, not available to other management regimes or to the wider public. From one perspective, such confidentiality may be seen as constraining the effectiveness of the black list approach. Improved dissemination of the information contained in the list would enhance the ability of governments to act on it also in other geographic areas. On the other hand, the awareness that information will be broadly exposed may significantly hamper the provision of information to the regime secretariat.

60. If access to government-compiled IUU information becomes more available, it would facilitate the mobilisation of private actors, including insurance and financial service providers or freighters, that might see it in their interest to abstain from doing business with IUU operators or even support the development of lists by volunteering information about the identity of IUU actors and the extent of their operations. One group of actors with such incentives are legitimate fishers, cfr. the list of allegedly *rouge* vessels published by the Coalition of Legal Toothfish Operators (COLTO) in the Southern Ocean,[36] but the same is true for companies with strong brand names that are concerned with corporate environmental responsibility and reputation.[37]

61. The effectiveness of the denial strategy is obviously enhanced if the number of deniers, or more accurately the latter's share of the object desired by IUU operators, is high. As illustrated by NAFO and CCAMLR, regional fisheries management regimes are natural vehicles for coordinated denial, but the challenge is often to persuade non-party providers to join a boycott. For some government-level measures, such as refusal of resource or port access, this can be done by *ad hoc* diplomatic means. In the 1990s, for instance, Norway ensured that annual fisheries agreements drawn up with states neighbouring the Barents Sea included provisions to prohibit landing of fish taken in international waters without a quota under the regional fisheries regime (Stokke 2001). As discussed in section 2, broader options include memoranda of understanding among coastal states in conjunction with procedures for harmonised or even cooperative maintenance of lists of vessels or companies with a history of IUU engagement.

62. Turning to the objects being denied to IUU actors, any expansion from government controlled objects, like port and resource access, into privately provided supplies, such as refuelling, freight, and financial services, is constrained by the frequently fragmented structure of supply for such inputs. It has been argued that some important equipment, like means for satellite navigation, is sufficiently concentrated in supply to enable restrictions on access that might make acquisition more costly for IUU operators. However, since most of the input factors needed by the latter have many potential providers based in many jurisdictions, the transparency of supply is low and collective action difficult. This is one of the reasons why the recent resolution made by the International Coalition of Fisheries Associations that governments, importers, freighters, traders and distributors should abstain from dealing with IUU catch (Wynhoven 2004) cannot be expected to carry very far. Indeed, some of the input factors mentioned are probably of less importance to IUU operations than for legitimate fishers. Many vessels registered under flags of convenience (or flags of no responsibility), are not fully insured or not insured at all; and equipment

[35] The ambiguity arises from the argument that could be made that due process is best served if information about IUU operations is only acted upon in the context in which it was compiled.

[36] See (www.colto.org).

[37] See also the discussion of shaming in section 3.1 and below.

designed to improve environmental and worker safety is frequently sparse. Beyond this, many of the IUU operations in the tuna and toothfish sectors are parts of vertically integrated structures that, although sometimes loosely connected, ensure access to both supplies and outlets.

63. Denial measures may even extend to the manpower of IUU operations. Since wages make up a high proportion of the running costs of IUU operations, crews tend to be recruited in low-income countries where lack of alternative employment opportunities will continue to ensure stable supply of labour. Fishing masters and especially captains, however, are in many instances residents of wealthier countries some of which are prepared to introduce measures to at least reduce the leeway for its nationals to take part in IUU fishing operations. Thus, Spain introduced in 2002 legislation that constrain the involvement of Spanish citizens in fishing operations of vessels flying flags of convenience. While such measures are difficult to enforce, they may have some effect and over time strengthen the social norm among respected fishers that IUU involvement is unacceptable. That said, unemployment too is frequently perceived as unacceptable and will place limits on the effectiveness of this strategy.

64. All three dimensions of the denial strategy – the agent, the object, and the definition of the target – may be relevant to the compatibility of various denial measures with trade rules. If governmental denial of landing rights is applied at the level of flag states, for instance by targeting certain flags of convenience, this may run afoul of international trade rules. This is because such measures could in effect discriminate against vessels that have operated in consistence with RMFO regulations but fly a 'wrong' flag. If this happens, it could be seen as a violation of the national treatment and most-favoured nation principles of the World Trade Organisation (WTO).[38] That said, no complaint has been filed under WTO on the import bans implemented under the International Commission for the Conservation of Atlantic Tunas (ICCAT) on states whose vessels have been determined as harvesting bluefin tuna or swordfish in a manner not consistent with that regime (Chaytor et al 2003). For its part, denial of access to national fish resources based on black lists of individual vessels with a history of IUU harvesting is unlikely to be challenged under trade rules since access to EEZ resources are usually not among the entitlements flowing from international trade regimes. Notably, resource access does not fall within the category of a 'good' or a 'service' as understood under the WTO. As demonstrated in the Barents Sea Loophole case discussed above, measures that also prohibit port calls may become contested. An intermediate option, to deny access to all vessels owned or operated by a black-listed IUU company would probably be compatible with international trade rules, provided that national and foreign firms are treated identically, but is likely to be intractable in practice due to complex and rapidly shifting ownership situations. Nor would this option add much to effectiveness due to the prevalence among IUU operations of the one-vessel company structure. Exclusively private-level denial initiatives, like those implemented in the Barents Sea Loophole case, are not constrained by international trade rules since only states are bound by them.

4.2 Shaming

65. The naming and shaming of participants in IUU operations by actors who do not themselves control any input factors desired by IUU operators, is another strategy and one that targets the reputation of named companies. Indirectly, it may also support denial measures to the extent that public or private suppliers act on the information provided. The typical agents of shaming are business or environmental NGOs that provide vessel- or company-specific information about IUU operations. Sometimes, shaming can be extended to those who supply IUU operations with goods and services. Activities such as these have been undertaken in other environmental areas as well, starting in the 1970s but becoming more prominent in the 1990s (Haufler 2003). Underlying this 'corporate accountability' movement is the belief that information that indicate lack of environmental or social responsibility may harm the companies involved by reducing their net incomes, either directly by influencing input access and outlets or indirectly through

[38] WTO agreements are downloadable at (www.wto.org).

reputational costs or subsequent government regulation. A frequent problem with such initiatives, however, is that incriminating information, especially when involving claims about illegal activities, can be very difficult to substantiate.

66. In the IUU context, the International Southern Oceans Longline Fisheries Information Clearing House (ISOFISH) initiative is notable. Established in 1997 by an Australian NGO and funded by legal toothfish operators and Australian authorities (Agnew 2000:369), this initiative aimed at compiling and disseminating information about the harvesting operations and corporate ownership of IUU fishing vessels in the region. More recently, COLTO has become the major vehicle for the shaming of unregulated harvesting in the Southern Ocean. In general, activities such as these can be argued to follow up on the encouragement articulated in the IPOA-IUU of efforts to 'promote industry knowledge and understanding… and… cooperative participation in, MSC activities to prevent, deter, and eliminate IUU fishing' (para. 24.6).

67. Normally, IUU operators are not too vulnerable to this kind of social pressure, but it is nevertheless of interest to pinpoint factors likely to shape its potential. Thus, it is widely believed that Norwegian vessel owners disengaged from IUU operations in Antarctic waters largely as a consequence of ISOFISH publications having named them, drawn public attention to their activities, and rendered such engagement socially unacceptable in the domestic vessel-owner community. A second factor is concern with brand name and reliance on environmentally conscious markets, and this could become relevant for IUU fishing operators. Pacific Andes, for instance, a large transnational that have been claimed to be central in the Kerguelen Plateau fishery for toothfish, is reportedly planning to expand its market presence in Europe and Japan where environmental awareness and political attention to the IUU problem is higher than in the present stronghold, China.[39] This company rejects any allegation about involvement in IUU operations.

68. A third factor is the prominence of the shamer. There is much to suggest that lists based on information compiled by an international organisation would be the most credible, since such shaming would usually require that a number of governments have decided to back the criticism. Being named and shamed by an individual government would also be severe. Although private advocacy groups are generally seen as less accountable and more confrontational than governments and international bodies, there is considerable diversity among them with regard to public stature. It would be of interest, therefore, to explore the possibilities for mobilising NGO heavyweights with extensive attention to fisheries matters but no economic stakes in the activity, such as Greenpeace and the World Wide Fund for Nature (WWF), in specific naming and shaming efforts. Legal issues would be relevant here, including the vulnerability of list makers to being sued by companies that reject charges of IUU involvement. In the United States, where resort to court action is a frequent aspect of environmental controversies, many states have passed legislation to ensure that the freedom of speech and the right to petition government policies is not unduly constrained or chilled by so-called 'strategic litigation against public participation' (SLAPs).[40] Where individuals or advocacy groups have been able to demonstrate that public statements brought to court for alleged defamation is a part of, or in support of, petitioning activity, charges have usually been dismissed even in cases where statements are found to be partially false, deceptive, or unethical (Potter 2001). Major NGOs with ample legal resources of their own are rarely targeted by SLAPs; and there are many examples where they have upheld shaming campaigns in spite of law suits by major companies.[41]

[39] *The Standard* (Hong Kong newspaper), 12 January 2004, available at (www.thestandard.com.hk).

[40] See generally (www.clasp.net).

[41] For instances involving Greenpeace and Friends of the Earth respectively, see (http://archive.greenpeace.org/pressreleases/arctic/1997aug18.html) and (www.foe.co.uk/resource/press_releases/19990419174235.html), both visited 29 February 2004.

69. There are also more indirect causal pathways between private shaming and the resilience of transnational IUU operations. For example, company-level information compiled by private organisations such as ISOFISH and TRAFFIC (Lack and Sant 2001) have influenced the approach of international management bodies and, for instance, encouraged the examination of trade statistics and thus assisted in the development of CCAMLR's 'black list' system.

4.3 Efforts to reduce overcapacity

70. Overcapacity aggravates the problem of IUU operations in at least two ways. The periodic idleness associated with it provides incentives for individual vessel owners to pursue IUU opportunities; and overcapacity drives down the price of vessels, especially second-hand vessels but presumably new ones as well, and thus reduces the overall costs of illegitimate (as well as legitimate) harvesting operations. Efforts to reduce capacity and curb investments in vessels destined for IUU fishing are of several kinds but they have one feature in common: counterforces are strong and progress is likely to be limited, slow, or both.

71. A first type of measures is reduction or redirection of government subsidies. Figures on the amount of subsidies provided to the fisheries sector vary widely, a reflection partly of scattered knowledge and partly of different definitions or operationalisations (Milazzo 1998). Recent estimates suggest a level somewhere between US$ 7-14 billion each year (Ruckes 2000). The effect of subsidies on capacity is particularly relevant in cases where management policies are unsatisfactory (Hannesson 2001:17-9, Cox 2003), including in many high seas areas and developing-country zones where IUU harvesting is pervasive.[42] Demands for stronger disciplines on fisheries subsidies has been strong in recent years and the 2001 Doha Ministerial Declaration, which provides the mandate for the new 'Millennium Round' of multilateral trade negotiations, identifies this issue as worthy of serious consideration. The 1994 Subsidies and Countervailing Measures (SCM) Agreement under the WTO umbrella provides detailed and legally binding subsidies rules, supported by an elaborate compliance system that includes compulsory and binding dispute settlement procedures and authorisation of countervailing trade sanctions. To date, however, no fisheries subsidy has been challenged under WTO rules, an important reason being that only a limited subset of direct or indirect financial transfers to the fisheries industry is clearly disciplined under present rules.[43]

72. Conceptual unclarity contributes to a general lack of information regarding the extent, nature and objective of subsidies. All proposals for enhanced checks on subsidies emphasise transparency and the need for improved information and notification measures (Grynberg 2003:503), a number of international organisations, including the OECD and the FAO, have work programmes on the matter. Efforts to reduce fisheries subsidies are complicated by the fact that governments have a number of worthy reasons for providing them, including employment in shipbuilding, harvesting or processing sectors, food security, or protection of settlement in sparsely inhabited or economically disadvantaged coastal regions.[44]

73. Related to the subsidies issue is a second possible measure, the development of governmental buyback schemes aimed at reducing harvesting capacity. The overall efficiency and environmental impact of buyback schemes have been questioned, even when they require scrapping of the vessels withdrawn

[42] Access conditions are generally believed to be the most important factor explaining cross-state variation in excess capacity (Cunningham and Gréboval 2001).

[43] A study commissioned by the Asia-Pacific Economic Co-operation, which includes several of the world's foremost fisheries subsidy nations including Japan and South Korea, concluded that only 10 out of an inventory of 162 instances of fisheries subsidies in this region stood a high chance of being successfully challenged under the SCM Agreement (PricewaterhouseCoopers 2000).

[44] See e.g. WT/CTE/W/175, 24 October 2000, available at www.docsonline.wto.org/gen_search.asp

from national fisheries.[45] Further reservations are appropriate with regard to arrangements that are parochial in their approach by allowing the vessels involved to be exported. The recent change in EU regulations of government subsidies, which imply that buyback schemes can no longer permit such disposal of vessels by sales to third countries,[46] reflects the growing appreciation of the global nature of the overcapacity problem at its role in threatening sustainable management. It also reflects the fact that fisheries subsidies has been a priority issue among European environmental organisations during the past decade.

74. A third measure in this category is regulation of foreign direct investments, notably with regard to flag of convenience countries. Many if not most IUU operations are believed to have beneficiary owners who are residents in OECD countries, and Wynhoven (2004) discusses how, among others, the OECD 1961 Code on Liberalisation may impact on efforts to curb IUU operations. The overall effect of that investment instrument, implemented by member states subject to OECD peer review procedures, may even be to constrain such efforts since the guiding principle of the Code is non-discriminatory removal of restrictions on capital flows. Thus, introduction of new restrictions targeting vessel investments in flag of convenience states would run counter to the spirit of this agreement although reservations are permitted. According to Wynhoven (2004:10-12), only Japan maintains a reservation permitting it to restrict outward fisheries investments by its nationals, applying to enterprises engaged in fishing regulated by Japan or international treaties to which it is a party. More generally, in an increasingly liberalised world economy the tendency is less rather than more checks on global and regional capital flows.

75. On balance, the causal chain that may connect these various means to reduce the capacity of world fisheries to higher costs of IUU vessel purchase is rather long and there is considerable opposition to the strengthening of international rules. Although reductions of fisheries subsidies will be a positive contribution, this is a slow train coming rather than a policy measure easily mobilised. Subsidy reform and other capacity initiatives are relevant and important within a long term strategy to combat IUU fishing but cannot be expected to yield rapid results.

* * *

76. This section has dealt with measures designed to make IUU operations less smooth and more expensive by seeking to constrain their acquisition of various inputs and outlets. The effectiveness of these measures, whether denial, shaming, or various efforts to complicate new investments in IUU fishing capacity, depend critically upon the flow and management of information about IUU activities. The same is true for various measures to reduce the associated incomes, which are addressed in the next section.

5. Measures targeting IUU catch

77. Coordinated trade measures against non-members of international conservation regimes have been used since the early 1990s as inducements to join existing regimes, and later also as a compliance mechanism. One problem with early versions of this instrument is that they operated on a flag basis and thus did not permit differentiation between vessels that fish legitimately and those engaged in IUU fishing. In this regard, black lists of individual vessels was an important step forward.

78. This section addresses three categories of measures that seek to reduce incomes from IUU operations by targeting the products they bring to the markets. The first two categories are governmental and present permit-based restrictions on imports and exports of certain commodities: documentation

[45] See Porter (2002: 16-22); see also the discussion in Cox (2003).

[46] EU, Council Regulation amending Regulation (EC) No 2792/1999 laying down the detailed rules and arrangementes regarding Community structural assistance in the fisheries sector, COM(2002) 187 final.

schemes under regional fisheries regimes have been mentioned already and we will also discuss the possible use of a broader instrument, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The third set of measures discussed here, ecolabelling, can be privately organised and seeks to mobilise environmental awareness among retailers and consumers for purposes of enhancing the sustainability of harvesting operations.

5.1 Catch documentation schemes

79. Catch documentation schemes developed within several fisheries regimes for management and conservation of particular species reflect a further step ahead in differentiation between legal and IUU catch. Such schemes are especially relevant for IUU fishing done with the purpose of international trade, like that for valuable tuna species and toothfish stocks.

80. After ICCAT had introduced trade documentation for bluefin tuna, several other 'trade documentation' schemes were developed on that model, largely within the tuna trade: those by CCSBT, IOTC, and by ICCAT for bigeye tuna and swordfish. The 'catch certification' system, as developed by CCAMLR since 2000, differs from those. While in trade documentation systems documents are issued at the point of *landing* and only for products that enter international trade, in catch certification system the documents are issued at the point of *harvesting* and related to *all* fish to be landed or transhipped.[47] The CCAMLR catch documentation scheme (CDS)[48] covers toothfish catches taken in the Convention area as well as on the high seas outside of that area. Participation in CDS is open to CCAMLR parties and non-parties alike; so far, several non-parties with significant roles in various stages of toothfish catch movement between the vessel and the market joined CDS: China, Seychelles, Singapore and, partly, Mauritius. Most of the toothfish market is currently covered by countries participating in the Scheme, including United States, European Union, Japan, though some is not (especially Canada). It has been estimated that countries involved in CDS constitute about 90 percent of the market for international trade of toothfish; and that it is being applied to an area comprising 90 percent of the global population.[49]

81. The purpose of CDS is to hamper the smooth trade of the IUU catch in several ways. First, toothfish caught in the Southern Ocean without a 'paper' should become more difficult to export and import, and therefore less attractive at the market – and this would result in a diminished net income to IUU operators. Soon after the introduction of CDS, it was estimated that the price of toothfish not accompanied by a valid catch document may as much as 25-40 percent lower;[50] and even higher difference have been cited.[51]

82. Second, CDS operates in tandem with other CCAMLR measures, and with national legislation in some countries. Port state measures are especially relevant. Based on CDS information, landing and transhipment in ports can be denied. The burden of proof is placed on the operator, who must establish that toothfish has either been caught legitimately outside the Convention area or within the CCAMLR area in

[47] See discussion in Miller, Sabourenkov and Slicer (forthcoming 2004).

[48] CDS is currently based on CCAMLR Conservation Measure 10-05 (2003), 'Catch Documentation Scheme for *Dissistichus* spp.' On CDS see especially Agnew (2000).

[49] Miller, Sabourenkov and Slicer (forthcoming 2004).

[50] Para. 2.3 of the 'Report of the Standing Committee on Observation and Inspection (SCOI)', Annex 5 in:

[51] Miller, Sabourenkov and Slicer (forthcoming 2004) indicate prices at 8.40 USD/kg for fish with catch document against 3 USD/kg for fish not accompanied with the document.

accordance with the applicable conservation measures.[52] Moreover, this denial targets both exports and imports, strengthened by national legislation in major market countries, such as the United States.

83. Third, an important purpose of the system is to supply parties and the CCAMLR secretariat with data on toothfish trade and to assist in verification of that data. With the obligatory VMS for parties fishing in the CCAMLR area,[53] against the backdrop of licence requirements authorising fishing in the Convention area, the flag state is able to determine the catch location and certify the catch before it is landed or transhipped. The introduction of electronic, web-based CDS, currently as a pilot-project, aims at almost real-time data and at further facilitating cross-checking and verification capabilities.

84. While CDS targets a weak spot of an IUU operation, it is still open to circumnavigation. Upon CCAMLR introducing the CDS, an increasing amount of toothfish has been reported as caught in FAO Statistical Areas 51 and others, in the Southern Ocean yet just beyond the area of application of CCAMLR conservation measures. Current scientific knowledge suggests that such amount of toothfish found in those areas is highly unlikely. Difficulties related to VMS verification and the fact that VMS data is not sent directly to the CCAMLR secretariat, but only via the flag state (and coastal state, for fishing licensed within its EEZ), have facilitated this situation. While some CCAMLR parties have advocated the adoption of a centralised reporting system, modelled after NAFO or NEAFC, which would enable direct (parallel) sending of satellite data to the CCAMLR secretariat, no consensus on that has been reached. Nevertheless, several CCAMLR parties now participate in a voluntary centralised system as a 'pilot project'.

85. Import restrictions such as documentation schemes, coordinated under regional management regimes and pertaining to fish caught in violation of regional conservation measures, could be challenged under WTO rules, especially by non-parties to the relevant management regime as implying discrimination against 'like products' (Chaytor et al. 2003). In designing its documentation scheme, the parties to CCAMLR were highly attentive to this possibility and drew upon the dispute settlement reports on the tuna/dolphin cases and the more recent shrimp/turtle case (Agnew 2000:369-70). Like ICCAT before it, the CCAMLR Secretariat has also presented and discussed its documentation scheme with the WTO Committee on Environment and Development with a view to minimising tension.[54] The conservation measure that established the documentation scheme placed it explicitly in the range of policies that may be justified under the WTO environmental exceptions. Moreover, the non-effectiveness of less trade-restrictive measures was emphasised as was the placement of the scheme in an inclusive and transparent multilateral process that would render usage for protectionist purposes difficult. Failure to exhaust measures that would impinge less on international trade, notably under multilateral environmental regimes, has been severely criticised in WTO dispute settlement reports. Moreover, to avoid charges of discrimination, the CCAMLR scheme is implemented on domestic as well as foreign vessels and it is open for participation by non-parties to CCAMLR, and extends also beyond the CCAMLR area.

5.2 Use of a broader instrument: species-oriented trade restrictions

86. The objective of the Convention on International Trade in Endangered Species of Wild Fauna and Flora is to remove or reduce the pressure exerted by profitable international trade on the survival of

[52] CCAMLR Conservation Measure 10-03 (2002), 'Port Inspections of Vessels Carrying Toothfish'; in accordance with that conservation measure, advance notice is required, as well as a declaration of not being engaged or supporting IUU fishing, and access to the port can be denied. On trends in port state measures, see section 3.3, above.

[53] See CCAMLR Conservation Measure 10-04 (2002), 'Automated Satellite-Linked Vessel Monitoring System (VMS)'.

[54] WT/CTE/W/148, 30 June 2000, The Commission for the Conservation of Antarctic Marine Living Resources, Communication from the CCAMLR Secretariat.

threatened species. This goal is pursued by a set of appendices containing lists of species that are subject to varying degrees of restrictions on export, import, and introduction from the sea, involving national permits, quotas, or a combination of the two.[55] The prominence of CITES in discussion of IUU measures is due to the attempt by Australia, encouraged by domestic advocacy organisations, to muster support for Annex II listing of Patagonian toothfish and the opposition that was mounted against this initiative. Such listing would imply that export or re-export of toothfish would require a national permit that, according to CITES provisions, can only be given on two conditions. First, a nominated scientific authority must confirm that trade will not be detrimental to the survival of the species; and second, a nominated management authority must confirm that the toothfish has been acquired lawfully (Art. IV). Correspondingly, imports of toothfish by a CITES party would require presentation of an export or re-export permit. For catch 'introduced from the sea', i.e. 'taken in the marine environment not under the jurisdiction of any State', the requirements are somewhat softer as no lawfulness assessment is necessary.[56] Landings of catch taken in national waters for domestic consumption do not fall within the scope of the convention.

87. The main rationale for proposing CITES listing of fish subject to IUU fishing is threefold. First, with a membership 162, CITES provisions would constrain more flag states, port states, export states, and import states than does any relevant regional fisheries regime. Although for instance CCAMLR has had some success recently in expanding participation in its measures to combat IUU operations, by the accession of new parties and the participation in its catch documentation scheme of certain non-parties that have loomed large in the toothfish trade, the availability of flags and ports that do not require any catch documents remains the major flaw of the system. Second, the geographic scope of CITES covers also high seas harvesting areas; and third, CITES has a more forceful compliance system than most fisheries regimes. The Conference of the Parties of CITES has on several occasions recommended effective suspension of trade in one or more listed species with states that had failed to implement its obligations under the Convention.[57]

88. That said, listing of fish species has been highly controversial in CITES, with opponents holding that this organisation lacks the expertise and the competence needed to play a productive role in fisheries management. Such arguments, notably on the appropriate division of labour with the FAO, were prominent in the rejection of proposals to list three species of shark in Appendix II in 2000 (Stokke and Coffey 2001). Those who favour a greater role for CITES in fisheries matters, such as the United States, suggest that closer collaboration with international agencies with recognised fisheries expertise, such as FAO, would ameliorate any such problems.[58] Others emphasise the complementarity of CITES listing and existing documentation schemes under regional fisheries regimes. Willock (2002), for instance, argues that any valid non-detriment finding with regard to Patagonian toothfish would have to be based in assessments by CCAMLR's Scientific Committee and that slightly modified versions of CCAMLR catch documents could be used under CITES too for purposes of export and re-export control.[59]

---

[55] The Convention, appendices, and resolutions are available at (www.cites.org).

[56] CITES Convention, Arts. I (definition) and IV (substantive requirements).

[57] *Yearbook of International Co-operation on Environment and Development 2003/2004*, p. 209; on the procedure, see CITES Convention, Arts. XI and XIII.

[58] See Draft for Public Review and Comment of the National Plan of Action of the United States of America to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, 2003, Sec. 7.5; CITES Decision 12.7 provides for the drafting of a Memorandum of Understanding between CITES and FAO; see (www.cites.org). report on

[59] Willock (2002) is published by TRAFFIC, a programme under WWF and IUCN-The World Conservation Union that is closely connected to the CITES Secretariat.

89. There is nevertheless a perception among many fishing nations that CITES provides a tool that is excessively blunt and would be likely to elevate trade barriers for not only products that originate in IUU operations but those extracted from well-managed stocks as well. The listing of a number of whale species under CITES, not all of which are threatened under CITES criteria, has nourished this perception. The term 'species' in the Convention is defined as 'any species, subspecies, *or geographically separate population thereof*',[60] so there is nothing to prevent the listing of individual stocks under CITES. However, the convention goes on to require that if necessary to ensure the effective control of trade of a threatened species, other species that 'a non-expert, with reasonable effort, is unlikely to be able to distinguish' from the listed species shall also be listed.[61] This highly expansive provision might be problematic in the Antarctic context, in that for instance the South Georgia stock of Patagonian toothfish is comparatively well managed but would nevertheless be a strong candidate for listing. Many fishing states are presumably even more concerned with the impacts that this 'look-alike' provision might have should any future CITES listing involve a stock of a commercial heavyweight species such as cod or other major whitefishes, many stocks of which are deeply troubled today.

90. If implemented in collaboration with the regional fisheries management regime, a CITES listing of toothfish in Appendix II would radically increase the number of states legally obliged to require CCAMLR catch and trade documents, or very similar ones, when engaging in toothfish trade. All the major toothfish landing and importing states are CITES parties. However, political impediments to such listing could be difficult to overcome without changing the CITES regime itself, either substantively or procedurally, to reduce fears among fishing nations that CITES might become a preservationist tool with inadequate precision.

5.3 Ecolabelling

91. Ecolabelling schemes is a third set of market-oriented measures that could be relevant in the combat of IUU operations. Unlike the permit-based schemes discussed above, ecolabelling is 'a voluntary multiple-criteria-based third party programme that… authorizes the use of environmental labels on products indicating overall environmental preferability… based on life cycle considerations'.[62] Its history in fisheries is relatively brief. The most prominent example is the US government-backed 'dolphin safe' tuna label issued in conjunction with the decision of the major US tuna processing companies that they would only buy fish from harvestors who adhered to bycatch provisions based in the US Marine Mammals Protection Act (Carr and Scheiber 2002). The effectiveness of this particular initiative is widely seen as high but conditions were unusually favourable (Teisl et al. 2002).

92. Multi-criteria, global, third-party certification schemes are even more recent, starting with the initiative taken by WWF and Unilever in 1996 to establish the Marine Stewardship Council (MSC) (Schmidt 1998). To date, only rather small fisheries have been certified under this scheme but this is changing now, especially with the ongoing Alaska pollack process.[63] If such schemes manage to establish themselves in major seafood markets, they can provide a competitive edge for legal fishers. Under MSC,

[60] CITES Convention, Art. I (a), italics added.

[61] CITES Convention, Art II 2 (b); citation is from Annex 2b to Resolution Conf. 9.24 (available at www.cites.org) which clarified the interpretation of Art. II.

[62] WT/CTE/GEN/1, 19 November 2002, Progress in Environmental Management Systems (EMS) Standardization. Statement by the International Organization for Standardization (ISO); the definition is contained in ISO 14024:1999, 'Environmental labels and declarations – Type I environmental labelling – Principles and procedures.' The life cycle approach implies an assessment of environmental impacts not only from the use and disposal of a product but also from its production – sometimes referred to as 'cradle-to-grave' analysis.

[63] Information about past and ongoing certification processes are available at (www.msc.org/).

certification is conducted by means of criteria based on three key principles. First, the harvesting pressure must be consistent with the precautionary approach; second, ecosystem impacts must be considered; and third, an effective management structures must be in place. As shown in the South Georgia toothfish longline fishery application, the effective management principle implies that measures to deal with IUU fishing can be an important criterion for awarding a certificate.[64]

93. A general limitation of ecolabelling initiatives is their geographic scope: they feed on 'green consumerism' which is widespread only in certain parts of the world. Thus, the MSC is firmly established only in some Northern European markets, especially the UK, and its area of expansion is, predictably, Australasia and North America (cfr. British Columbia salmon and Alaska pollack). MSC officials are much less optimistic about, for instance, Japan (May et al 2003:28). Even within environment-conscious markets, the effectiveness of ecolabelling programmes may be jeopardised by the presence of several green labels. This fact can be exploited by industry whenever existing labelling schemes are seen as detrimental to their interests. For instance, the National Fisheries Institute which, despite its name, is the primary trade association of the US commercial fishing industry, has set up the Responsible Fisheries Society charged with developing an alternative programme to MSC (Carr and Scheiber 2002). From an IUU combat perspective, such proliferation of labels is not necessarily problematic provided that other labels too include among its certification criteria that firms and management authorities take adequate measures against IUU operations and have adequate structure to implement such criteria.

94. Another specific challenge to management-oriented labelling is the diversity, complexity and length of the chains of custody associated with most seafood products (May et al. 2003:15), amplified in the IUU context by the unlawful activities frequently associated with it, such as 'laundering' of illegally obtained fish and bribes of customs officials. Accordingly, under MSC a chain-of-custody certification distinct from the fishery certification is designed to ensure that products carrying the MSC logo actually originates in a certified fishery. Particular attention is directed at the processing stage, and plants must document satisfactory control systems for keeping MSC produce apart from other inputs keeping (Scott 2003: 89-91). Main components are MSC-endorsed chain-of-custody certificates issued by suppliers, physical or temporal separation of certified and non-certified products, product labelling, output identification, and adequate record keeping.

95. A third challenge is the potentially trade distortive effect of ecolabelling schemes (Vitalis 2001). The Doha Declaration pinpointed also environmental labelling as one of the areas where WTO rules might be in need of clarification.[65] However, while most ecolabelling schemes are non-state and voluntary, WTO rules have focused on mandatory governmental labelling schemes. The Technical Barriers to Trade (TBT) Agreement explicitly acknowledges that unrestricted trade may sometimes collide with other legitimate objectives such as national security or protection of human health and the environment.[66] If this happens, measures like labelling regulations or standards may be introduced. To ensure that such rules are non-discriminatory and no more restrictive than necessary, however, the Agreement obliges governments to ensure a high level of harmonisation and transparency of such regulations and standards. Accordingly, even governmental labelling schemes are explicitly permitted provided reasonable operational safeguards are included against protectionist abuse. Harmonisation and transparency provisions under the WTO are

[64] Annual catches in the 2000-2002 period was around 5,000 tons. While IUU fishing is an issue also in the South Georgia area, it is much less pervasive than on the Kerguelen Plateau of the Indian Ocean. Agnew et al (2002:4) estimate the IUU share of the 2000/2001 South Georgia IUU catch at only 5% and on its way down.

[65] WT/MIN(01)/DEC/1**,** 20 November 2001, Ministerial Declaration. Adopted 14 November 2001; see Art. 32.

[66] TBT Agreement, Arts. 2.2, 2.10, 5.4 and 5.7, available at (www.wto.org).Labelling is also addressed in the Agreement on Sanitary and Phytosanitary (SPS) measures but only in the context of food safety.

softer for regulations and standards upheld by local government or non-governmental bodies, such as MSC. Notification rules are not as strict and the role of member states is indirect. Governments are only required to 'take such reasonable measures as may be available' to ensure that harmonisation and transparency rules are accepted and complied with by those other bodies and refrain from measures that 'require or encourage' violation of those rules.[67]

96. Ecolabelling programmes shares with a few other measures to improve environmental sustainability in the fisheries sector, including shaming of IUU activities, the active involvement of private organisations and even individual consumers. As such, this measure may enhance societal awareness about the IUU problem and support more extensive public efforts to cope with it. Ecolabelling in fisheries is still a fairly new phenomenon and one that is yet to take off. The recent MSC certification processes involving larger fisheries may change that situation and it is encouraging that IUU activities receives considerable attention when certification criteria are operationalised.

6. Conclusions

97. Focusing on three segments of an IUU operation – vessel at sea, transnational logistics, and catch in trade – this paper has examined varieties and limitations of measures designed to cope with this problem. An underlying theme is that to succeed, efforts to combat a complex, transnational, and evasive phenomenon as the one faced here must apply the broadest range of tools. When seen alone, each of the measures at hand has severe limitations and cannot be expected to deliver the goods. When seen in conjunction and given time to mature, the accumulated costs they impose on IUU operations and their complicits can become substantial and thus reduce the lucrativeness of, and limit the space available for, such activities.

98. The following conclusions seem warranted. First, the list of global and regional instruments developed within the sphere of the *Law of the Sea* to address IUU fishing is quite impressive, especially given the rather short time that has passed since this issue reached a prominent place on the political agenda. Nevertheless, measures that primarily target the vessel at the stage of registration and at sea attack the chain of an IUU operation at its most robust links. Activities conducted here enjoy a high degree of insulation from those seeking to constrain them. This is due to general legal principles, especially the primacy of flag state jurisdiction and the rule that treaties do not create obligations for third states without their consent – as well as the physical remoteness of much IUU harvesting.

99. There is a need, therefore, to target the IUU operations at links where there are fewer opportunities to avoid regulation and where enforcement can be made in more cost-efficient ways. After all, the purpose of an IUU operation is not fishing *per se*, or for that sake avoidance of legal measures, but rather to maximise the net income. Further development of port state measures looks a promising avenue, especially with regard to regional harmonisation and pre-entry documentation procedures that reverse the burden of proof by obliging vessels demonstrate that the catch is taken legally.

100. Second, measures that target the *logistical* activities of IUU operations has a potential to involve a large number of states and non-governmental actors. There is, however, a need to improve the generation and management of relevant information. The denial strategy, frequently in the form of 'black lists' of vessels with a history of IUU fishing and subsequently denied licensing or even port or supply access, relies upon information that is both extensive and reliable – two requirements that are sometimes difficult to combine. Due process concerns and the need for compatibility with international trade rules dictate transparency and harmonisation of the procedures that guide various denial measures, and regional fisheries management regimes are important vehicles for achieving this.

[67] TBT Agreement, Arts. 3, 7, and 8.

101. The mobilisation of non-governmental organisations, including other harvestors and environmental advocacy groups, in the generation and dissemination of information about IUU activities has been important also for exposing corporate irresponsibility on the part of individual firms and vessel-owners. When the amount and quality of information permits, this shaming strategy can be extended to those who provide necessary inputs to IUU operations. Both flexible company structures and rapidly shifting ownership situations place limits of the effectiveness of such measures. However, the number of IUU vessels engaged over extended periods of time in a given fisheries is usually not very high. There is much to suggest, therefore, that time will work in favour of the denial and shaming strategies.

102. Third, long term efforts aimed at reducing or checking the growth of fishing capacity face strong counterforces, including the resilience of governmental subsidies in some countries and liberalisation of capital flows. That said, some progress has been made in recent years and the issue remains high on the political agenda.

103. Fourth, measures targeting the final segment of IUU operations, the *commodities* they bring to the market, are promising also because they are somewhat less dependent upon costly monitoring and physical surveillance activities. Still, catch documentation schemes work best when other components of the monitoring and enforcement system, especially port state coordination and VMS coverage, are well advanced. The design of present schemes implies that tension with international trade rules are minimised. The use of CITES in the combat of IUU operations could in effect expand the coverage of permit-based documentation schemes based in fisheries regimes but remains politically contested by many fishing states. For their parts, ecolabelling schemes in the fisheries sector are still at a rather early stage and it is too early to pass judgement on the role they will play in the combat of IUU fishing. It is promising, however, that procedures for certification under the Marine Stewardship Council includes assessment of the level of IUU fishing and the adequacy of measures taken to combat it.

104. Finally, in all the segments we reviewed in this paper, the impact of *information* about IUU operations is crucial. Regarding the vessel at sea, where the number of flag states involved is actually relatively small and the size of the marine areas huge, international pressure based on accurate information can support the exercise of flag state responsibilities. Regarding the logistics of an IUU operation, its resilience is enhanced by the 'grey zones' of transnationality and becomes considerably diminished when exposed by means of accurate information. And regarding the flows of IUU catch in international trade, if current catch documentation schemes are seconded by timely and accurate information, fraud can be significantly reduced. While technology limitations do play a role here, these are not the main concern. On the one hand, the strength of information as a tool for combating IUU operations is enhanced if it can be made transparent. On the other hand, this is impeded by the fact that commercial data are involved, by reduced willingness among some stakeholders to provide information knowing that it can become public, and by the preparedness of other stakeholders to provide information that, at times, is not sufficiently substantiated. Improving the quality and management of information about IUU operations is a key task in the combat of this phenomenon and one that involves governments, international institutions, as well as non-governmental organizations.

REFERENCES

Agnew, D.J., G.P. Kirkwood and J. Pierce, 'An analysis of the extent of IUU fishing in Subarea 48.3', (A report for the UK Government in respect of South Georgia and the South Sandwich Islands*),* 2002

Agnew, David J. and Colin T. Barnes, 'Economic Aspects and Drivers of IUU Fishing: Building a Framework'. OECD AGR/FI/IUU(2004)2, 2004.

Agnew, David J., 'The Illegal and Unregulated Fishery for Toothfish in the Southern Ocean, and the CCAMLR Catch Documentation Scheme', *Marine Policy,* Vol. 24, 2000, 361-74.

Carr, Christopher J. and Harry N. Scheiber, 'Dealing with a Resource Crisis: Regulatory Regimes for Managing the World's Marine Fisheries', *University of California International and Area Studies Digital Collection,* Vol. 1, No. 3, 2002, http://repositories.cdlib.org/uciaspubs/editedvolumes/1/3/.

Chaytor, Beatirce, Alice Palmer and Jacob Werksman, 'Interactions with the World Trade Organization: The Cartagena Protocol on Biosafety and the International Commission for the Conservation of Atlantic Tunas', 2003,

Cox, Anthony, SG/SD(2003)12 'Environmental Aspects of Fisheries Subsidies', *OECD Technical Expert Meeting on Environmentally Harmful Subsidies,* Paris: OECD 2003,

Cunningham, Steve and Dominique Gréboval, 'Managing Fishing Capacity: A Review of Policy and Technical Issues', *FAO Fisheries Technical Paper,* No. 409, 2001

Grynberg, Roman, 'WTO Fisheries Subsidies Negotiations: Implications for Fisheries Access Arrangements and Sustainable Management', *Marine Policy,* Vol. 27, 2003, 499-511.

Hannesson, Rögnvaldur, 'Effects of Liberalizing Trade in Fish, Fishing Services and Investment in Fishing Vessels', *OECD Papers,* Vol. 1, No. 1, 2001

Haufler, Virginia, 'Corporations and Conflict Prevention: Normative Change in the International Community', Lysaker: The Fridtjof Nansen Institute: Report for the project Oil Companies in the New Petroleum Provinces, 2003.http://www.ecologic.de/projekte/interaction/results.htm.

Lack, M. and G. Sant, 'Patagonian Toothfish: Are Conservation and Trade Measures Working?', *TRAFFIC Bulletin,* Vol. 19, No. 1, 2001, 1-18.

May, Brendan, Duncan Leadbitter, Mike Sutton and Michael Weber, 'The Marine Stewardship Council (MSC)', B. Phillips, T. Ward and C. Chaffee (eds.), *Eco-labelling in Fisheries: What is it All About?,* Oxford: Blackwell Science, 2003, 14-33

Milazzo, Matteo, 'Subsidies in World Fisheries: A Reexamination', *World Bank Technical Paper: Fisheries Series,* No. 406, Washington, DC: The World Bank, 1998.

Miller, Denzil, Eugene Sabourenkov and Natasha Slicer, 'Unregulated Fishing – the Toothfish Experience', in: Michael Richardson and Davor Vidas (eds.), *The Antarctic Treaty System for the 21st Century* (London: UK Foreign and Commonwealth Office, forthcoming 2004).

Porter, Gareth, 'Fisheries Subsidies and Overfishing: Towards a Structured Discussion', Geneva: United Nations Environment Programme, 2002, www.unep.ch.

Potter, Lori, 'Strategic Lawsuits Against Public Participation and Petition Clause Immunity', *Environmental Law Reporter News and Analysis*, Vol. 31, 2001, 10852-56.

PricewaterhouseCoopers, 'Study Into the Nature and Extent of Subsidies in the Fisheries Sector of APEC Members Economies', (Prepared for Fisheries Working Group, Asia Pacific Economic Co-operation (APEC), 2000, www.apecsec.org.sg.

Ruckes, E., 'International Trade in Fishery Products and the New Global Trading Environment', *Multilateral Trade Negotiations on Agriculture: A Resource Manual*, Rome: FAO, 2000, www.fao.org/DOCREP/003/X7351E/X7351E00.HTM.

Schmidt, Carl-Christian, 'Marine Stewardship Council: The Role of Eco-labelling in Helping to Achieve Sustainable Fisheries', Conclusions and Papers Presented at the International Conference: Green Goods V - Ecolabelling for a Sustainable Future, Paris: OECD Doc. ENV/EPOC/PPC(99)4/FINAL, 1998, 123-4.

Scott, Peter, 'MSC Chain-of-custody-Certification', B. Phillips, T. Ward and C. Chaffee (eds.), *Eco-labelling in Fisheries: What is it All About?,* Oxford: Blackwell Science, 2003, 86-93.

Stokke, Olav Schram and Clare Coffey, 'Institutional Interaction in High Seas Fisheries Management: An Inventory', 2001, www.ecologic.de/interaction/890_deliverables.html.

Stokke, Olav Schram, 'Managing Fisheries in the Barents Sea Loophole: Interplay with the UN Fish Stocks Agreement', *Ocean Development and International Law*, Vol. 32, 2001, 241-62.

Teisl, Mario F., Brian Roe and Robert L. Hicks, 'Can Eco-labels Tune a Market? Evidence from Dolphin-Safe Labeling', *Journal of Environmental Economics and Management*, Vol. 43, 2002, 339-59.

Vitalis, Vangelis, 'Eco-Labelling and WTO Rules: What Needs to Be Done?', Paris: OECD, 2001, www.oecd.org.

Vukas, Budislav and Davor Vidas, 'Flags of Convenience and High Seas Fishing: The Emergence of a Legal Framework', Olav Schram Stokke (ed.), *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes*, Oxford: Oxford University Press, 2001, 23-52.

Willock, Anna, 'Uncharted Waters: Implementation Issues and Potential Benefits of Listing Toothfish in Appendix II of CITES', Cambridge: TRAFFIC International, 2002,

Wynhoven, Ursula A., 'OECD Instruments and IUU Fishing', OECD AGR/FI/IUU(2004)1, 2004.