
BIODIVERSITY, TRADE, AND THE FISHING SECTOR

Case Study: West Africa

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1. Introduction

In 1997, IUCN-The World Conservation Union, with the financial support of the German Federal Ministry for Economic Co-operation and Development, initiated a project to examine the relationship between the Convention on Biological Diversity (CBD) and the rules of international trade—those administered by the World Trade Organisation (WTO), in particular. The project was motivated by a widely shared concern that the aims of the CBD, which are essentially to conserve and equitably distribute the benefits of the environment, might be undermined by the WTO, which aims at the liberalisation of trade. Liberalised trade has the potential to integrate economies, regionally and globally, in mutually beneficial ways. But some observers are concerned that it may do so at a cost of impairing the environment and amplifying disparities in wealth, much of which, in poorer nations, is disproportionately represented in endowments of natural resources. Other commentators have claimed to locate synergistic potential, suggesting, for example, that trade law's anti-subsidy disciplines might be conscripted into the campaign against environmental abuses such as over-fishing.¹

Can the agenda of the two regimes be reconciled—with each other and with other major regimes shaping international relations, such as the Law of the Sea? To foster a concrete discussion, the Project Advisors launched three Case Studies. The studies are designed to identify how the institutional tensions might be affecting sustainable development of resources in the field. One study is examining forests in Chile. The second looks at biogenetic resources in India, with special emphasis on the treatment of intellectual property rights under the two regimes.

The instant paper is the third of the three studies. It analyses the legal and policy framework in the context of marine fisheries in sub-Saharan Africa, and, in particular, on the six West African nations party to the CSRP

¹Christopher D. Stone, *Too Many Fishing Boats, Too Few Fish: Can Trade Laws Trim Subsidies and Restore the Balance to Global Fisheries?*, 24 *ECOLOGY LAW QUARTERLY* 505 (1997). Environmental damage in areas other than fishing could be confronted on the same basis, for example, a diligent application of trade laws could alleviate damage to soil that results from subsidies and trade barriers in the agricultural sector.

(Commission Sous-Regionale Des Pêches). In what position do these nations find themselves? What are their policy objectives and options? And, especially, what are the implications of the CBD and trade laws (in the context of other major laws), in advancing or impeding their—and the larger global—interests?

2. Background

2.1 The Role of Fishing in Sub-Saharan Africa

Sub-Saharan Africa is endowed with some of the world's most fertile fishing grounds.² The significance of these robust fisheries displays itself in many ways. (All figures refer to the sub-Saharan area and are in U.S. Dollars.)

2.1.1 Diet

Fish are important in diet; between 1973 and 1990 the fishery sector provided on average 20% of the region's animal protein intake.³

2.1.2 General Economy

Total gross revenue from domestic landings almost doubled from 1980 (\$965 million) to 1990 (\$ 1.8 billion).⁴ Relative to agriculture as a whole, the role of fisheries, while not dominant, is significant and growing. Across the region as a whole, average contribution of the fishery sector to agricultural GDP increased from 2.6% in 1990 to est. 4% in 1994.⁵ Even among the coastal states, the relative importance of fisheries varies considerably from country to country. FAO includes Senegal and Mauritania as nations whose fishery sector contributed over 5% either to total GDP or to foreign currency earnings.⁶

2.1.3 Government Revenues and Foreign Exchange

Over and above the general economic impact, fish are an important source of foreign exchange. In 1994 the total export value of fish from the region passed \$1 billion, producing a trade surplus of \$322 million).⁷ Senegal's \$15 million of seafood exports accounted for nearly 25% of its export earnings.⁸

²Although the area represents only .0002 % of the oceans, it produces 2% of the world's catch. World Wildlife Fund's Endangered Seas Campaign, *THE FOOTPRINTS OF DISTANT WATER FLEET ON WORLD FISHERIES*, (Godalming, Surrey, England, WWF International, 1998) 22 [hereinafter, *Footprints*].

³FAO Fisheries Circ No. 992 FIPP/C922), 1-2.

⁴*Ibid* at 1. The figure does not appear to include export value.

⁵*Id.* Of course, the dependence varies considerably across nations. (Some of Sub-Saharan nations are landlocked: suggesting that a sub-Saharan *total* figure, such as in the text, understates the impact of fishing on the coastal states).

⁶*Id.*

⁷FAO Fisheries Circ., *supra* note 3 at 2.

⁸The figures are for 1985. See Thomas Goffinet, *Development and Fisheries Management: The Case of Northwest Africa*, 17 OCEAN AND COASTAL MANAGEMENT 105, 125 (1992).

Even more significantly, the coastal African nations earn a considerable share of their budgets directly from disposition of fishing rights. EU access payments to sub-Saharan African countries (discussed more fully below) amounted to \$300 million in 1993.⁹ This figure represents over 65% of total foreign income.¹⁰ In Guinea-Bissau, fishing licenses financed 43% of current government expenditures.¹¹

2.1.4 Employment

In a region plagued by high unemployment, FAO estimates 8 million people (20% of total agricultural workforce) are directly or indirectly involved in the fishing sector, including 2 million full time artisanal fishers.¹² In Guinea-Bissau alone, 12,000 to 15,000 are employed in the fishing industry, and the industry directly accounts for 14% of GDP.¹³ In Senegal, a reinvigorated artisanal sector dominates: it accounts for two-thirds the total catch.¹⁴ But elsewhere, by degrees, there is reliance on foreign fleets: at the other end of the spectrum from Senegal is perhaps Mauritania, only 10% of whose catch is attributable to the national fleet.¹⁵

2.1.5 Other Benefits

In addition to the direct benefits of fish sales and access fees—direct acquisition of foreign currency—the nations have been able to extract value in other ways. Mauritania has set up joint ventures assuring that almost the entire catch is landed for inspection and processing; on export, it is taxed, so that export taxes have become the principal strategy for capturing the value of the resource.¹⁶ Some nations have traded fisheries access for tariff concessions: in fact, Senegal allegedly agreed to open up its waters to EU fleets because tariff concession as quid pro quo “was the only way it could guarantee access to higher priced European markets . . .”¹⁷ Some of the countries have used their stock to leverage provision of training and infrastructure (such as port facilities and patrol vessels in exchange for access).¹⁸

⁹FAO Fisheries Circ., *supra* note 3 at 2.

¹⁰Footprints, *supra* note 2, at 35: 68% of the 1988 rent from fisheries (\$308 million).

¹¹FAO Fishery Country Profile FID/CP/GUB rev. 1 (Guinea Bissau), at 3. Gareth Porter reports that for Sao Tome and Principe, fish exports account for 10% of foreign exchange earnings. Gareth Porter, *Euro-African Fishing Agreements: Subsidizing Overfishing in African Waters*, in World Wildlife Fund's Endangered Seas Campaign, *SUBSIDIES AND DEPLETION OF WORLD FISHERIES*, (Washington D.C., 1997) 10.

¹²FAO Fisheries Circ., *supra* note 3 at 2.

¹³FAO Profile(Guinea Bissau), *supra* note 11 at 3.

¹⁴Footprints, *supra* note 2, at 26.

¹⁵Footprints, *supra* note 2, at 28.

¹⁶Footprints, *supra* note 2, at 33.

¹⁷House of Lords, Select Committee on the European Committees, *Third Country Fisheries Agreements Report*, Session 1996-97, 3rd Report (December 17, 1996), 13.

¹⁸Footprints, *supra* note 2, at 34.

2.2 The Current Crisis

The current situation cannot be appraised without reference to the general economic and social conditions in the region. Across Africa the population is growing at a 3% annual rate, portending increased pressures on food supplies and prices. Non-fishery agricultural production has been hampered by droughts; and many economies, not infrequently beset by civil disturbances, are having to cope with diminished world demand for their raw materials, including iron and copper.¹⁹ All these factors amplify the importance of the area's fisheries. But the fisheries picture has its own clouds. There are reasons to doubt that the African nations are realising—perhaps one should say conserving—the full potential of one of their most promising resource bases.

From 1970 to 1990 production steadily increased in sub-Saharan Africa. But

The Fisheries outlook

“In sub-Saharan Africa, per caput consumption [of fish] will probably continue to decline . . . owing to continued low imports [aggravated by declining purchasing power] and the inability of local production to keep up with population growth.”

— FAO, THE STATE OF THE WORLD FISHERIES AND AQUACULTURE: 1996, p. 28, 102.

from the beginning of the '90s the total harvest appears to have plateaued.²⁰ The plateau is not entirely attributable to over-fishing—that is, to impaired stock. The withdrawal of the Soviet fleet from the region in the early 1990s is generally believed to have affected the catch figures.²¹ On the other hand, direct measures (acoustical) of biomass provide independent bases of concern for many stocks.²² Gareth Porter reports that the biomass of Guinea's demersal fishery resources was found in 1990 to have been reduced by 56 percent in the wet season and by 33 percent in the dry season compared with the 1985 level, and that yields of all commercially valuable species in Guinea-Bissau waters dropped continuously between 1990 and 1994.²³ Per caput fish consumption in the region has been dropping, having

¹⁹See Footprints, supra note 2, at 22. Is this a good strategy: note that the fishery is underexploited.

²⁰FAO Fisheries Circ., supra note 3, at 3. Inland fisheries represent 30% of total catches. Ibid.

²¹Footprints, supra note 2, at 25. Gareth Porter reports that the annual marine fisheries catch for the West African region (from Morocco to South Africa) was reported to be 6.2 million tons in 1988, but declined to about 4.4 million tons in 1993, but he attributes the drop mainly to the reduced presence of fleets of the former Soviet Union and other East European countries. Porter, note 11, supra at 9.

²²Footprints, supra note 2, at 33.

²³Porter, supra note 11, at 23.

peaked at 9.4 kg in 1982, down to 6.4 kg in 1994—the lowest level since 1968.²⁴ CECAF (Fishery Committee for the Eastern Central Atlantic) concluded in 1991 that regionally there had been a decrease in the catch per unit of effort, which is a further indicator of stagnation if not of impending collapse.²⁵ The latest FAO projection for the contribution of fish products to food security in Sub-Saharan Africa (Box) is bleak.

But overfishing—excess pressure on the stocks²⁶—is not the only concern. Some stocks may be under-exploited. For example, the World Wildlife Fund suggests that Mauritania does not utilise much of the very abundant pelagic stocks found in and just outside its EEZ.²⁷ Instances of such under-utilisation should also be identified, the reasons understood, and the situation remedied.

Furthermore, fishing is more than an economic activity, to be evaluated by reference to commercial gain. There are social and cultural externalities to fishing. For many fishing communities, the shrinking of stocks threatens long-standing ways of life. And intensive fishing imperils the marine ecosystem in ways that do not show up in target stock statistics—particularly in the short to mid-term. Recent studies have documented the less publicised but potentially quite disruptive marring of “lower” elements in the marine food web, such as by near-shore trawling.²⁸ Further studies have suggested that the resilience of the marine ecosystem to such damage—its ability to bounce back—is far less than had once been hoped.²⁹ Marine ecosystem damage off the West African coast has not been well-studied. But the work that has been done testifies to loss of sea turtles accidentally caught by industrial trawlers that die before the opportunity of being released back to sea.³⁰

2.3 The theoretical background

Optimal Fisheries Management

24FAO Fisheries Circ., supra note 3, 1-2. Compare FAO, the State of the World Fisheries and Aquaculture: 1996, at 92, which indicates a decline in per caput consumption of “about 9 kg in 1990 to less than 7 kg in 1994 (live weight equivalent.)”

25Porter, supra note 11, at 21.

26 There is no single measure of “overfishing”; effort can be deemed “excessive” with respect to a target stock profiling biology referent (MSY), an economic referent (MEY) or an even more stringent environmental referent (OBY). these are discussed in the text below.

27Footprints, supra note 2, at 27.

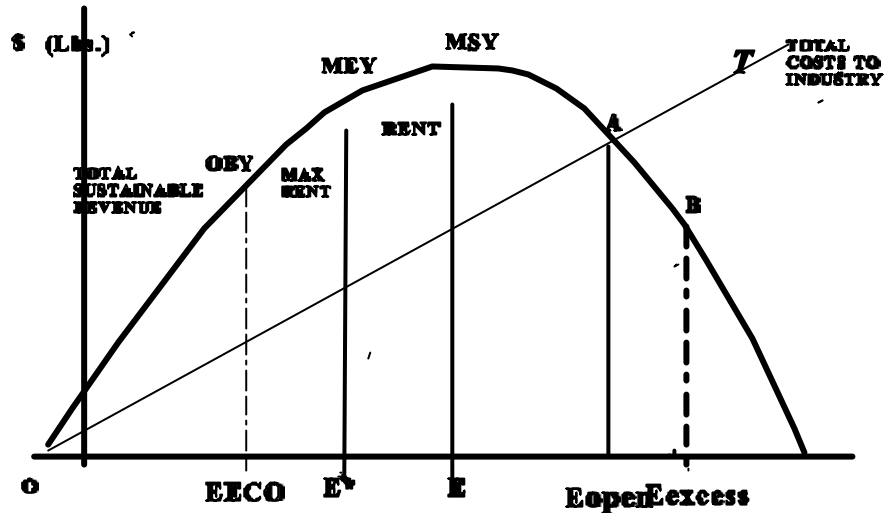
28See Nigel Williams, Overfishing Disrupts Entire Ecosystems, 279 Science 809 (February 6, 1998). See also Paul K. Dayton, Reversal of the Burden of Proof in Fisheries Management, 279 Science 821 (February 6, 1998).

29See David Malakoff, Extinction on the High Seas, 277 Science 486 (July 25, 1997), at 488.

30Annette C. Broderick and Paulo Catry, A Preliminary Assessment of the Possible Impact of Industrial Fisheries on Marine Turtles in Guinea-Bissau, IUCN-Bissau, Marine Turtle Research Group, University of Glasgow (UK. February, 1998), 3.

Economic (E^*) and Ecological (E_{ECO}) Ideals

2.3.1 The ideal level of fishery exploitation



To understand the policy options (below), it is best to return to some basic elements of fishery management, as illustrated on the adjacent Figure. Each point on the curve represents a potential equilibrium in size (mass) and catch value (\$) that a stock may obtain. The point achieved depends upon fishing effort: the number of vessels, the length of the season, and so on. Increasing levels of effort are represented as increases along the x-axis. As one can see, the catch rises with effort to a point—and then begins to diminish as the stock is fished excessively.

The peak of the curve is Maximum Sustainable Yield (MSY), a classic biologist's target: the associated level of effort EMSY is the level that will maximise the level of catch that can be harvested on a sustainable basis.³¹

The economist's analysis varies from the biologist's, however. This is because there are costs to fishing, which are subject to diminishing returns per unit landed as the intensity of exploitation increases. (As effort intensifies, fishing lines entangle, the stock becomes less dense, so that more water must be filtered per unit landed, etc.) Therefore the fisheries literature ordinarily sets MEY (for Maximum Economic Yield) as its target equilibrium, a point achieved at level of effort E^* , less than EMSY.³² At E^* the marginal benefit from the fish caught equals the marginal costs of

³¹Modern fisheries management is more sophisticated than depicted in this classic model which remains, however, well suited to illustrate the points this analysis requires. Indeed, as indicated below, the Straddling Stocks Agreement, Annex II, formally rejects maximization of a single target stock as the sole referent. And UNCLOS Art. 61.3 qualifies MSY "by relevant environmental . . . factors" which may be read as an endorsement of what we call OBY.

³² MEY marks the point where the distance between total costs and total revenues is at a maximum; at that point, the slope of the total revenue curve parallels that of the total costs curve.

capture: at any further level of effort, the social costs of capturing additional fish exceeds the benefit.³³

We must remember, moreover, that excessive fishing represents a loss not only of the targeted resources, but of all the nonmarketable life that is destroyed in the fishing process. The environmental damage includes not only turtles and sea-birds. Near-shore trawling mars “lower” elements in the marine food web, which, however unspectacular, poses serious long-term effects, and are in the province of the Convention on Biological Diversity (CBD) to protect.³⁴ Assuming that ecosystem damage is positively correlated with general level of fishing, the optimum yield from an ecological perspective that respects biodiversity (more generally, nonmarketable features of the environment) is at a point to the left of MSY/E* on the classic bio-economic model.³⁵ The optimal level of activity, existence and biodiversity value included, is represented as EECO, corresponding to the point OBY (Optimum Biological Yield) on the diagram.³⁶ EECO represents the environmentally sensitive level of fishing that the world community should regard as ideal, as distinct from E*, which would be the target of a single owner of the resource who wanted to maximise profit, but was unwilling to account for non-market environmental externalities. As distinct from the traditional MEY, which focuses on the costs and benefits of harvesting target species, OBY reflects some variant of contingent valuation—that is, roughly, how much people would be willing to pay (to give up in the value of foregone target fish, to buy more environment-sensitive gear, etc.) to preserve features of the environment that are not exchanged in market transactions.

33 The identification of marginal revenue and costs with social benefits and social costs is linked to the simplifying but improbable condition that price is independent of output, which eliminates considerations of consumer surplus that would flow from a larger catch at a reduced price. While the identification of E* with the socially ideal level of effort may be inexact, it is safe to assume that the true social ideal, with the condition of price independence relaxed, is less than E MSY. After MSY supply not only decreases, but costs, such as congestion costs, increase, with no reduction in price. Nonetheless, it should be remarked that the “Maximum” arc between TRC and total costs represents the price that a monopolist would charge—or the fisheries manager would realize if it sold the rights to a single producer. For a much more complex and technical analysis where prices are variant, see Lee G. Anderson, *The Economics of Fisheries Management* (Baltimore: John Hopkins U. Press: rev. ed. 1986) at 74-83.

34 *Supra* note 28, at 488.

35 Note that some benefits of marine biodiversity may be priced in markets, given appropriate property rules.

36 A general reduction in effort is not the only way to protect the environment. Strategies that mandated cost-increasing technology, such as turtle excluder devices, or forced substitution of long lines for more efficient drift nets, would also carry out a protective policy. The economic effect of these measures could be represented by raising slope of (perhaps also raising the height of, to the extent the added costs were wholly “fixed”) of the total cost curve (much as though some form of tax were to be imposed on fishing). However, inasmuch as OBY locates the point at which marginal benefits (including environmental protection) equate with marginal costs, (the point at which the slope of the TRC = the slope of T), OBY would remain well represented at the point where it is placed in the charts, to the left of MEY.

The bottom line, in general, is that from a theoretical standpoint, coastal waters ought to be fished at the level E^* if not (ideally) EECO. What are the impediments to achieving these goals?

2.3.2 Problems facing management

The problem of sustaining fisheries yield--that is, of achieving the level E^* or EECO--begins with the fact that capture fisheries are fundamentally common pool resources. As long as virtually anyone takes as many fish as he can catch, fishing effort expands to E_{open} , even though the corresponding point A represents less revenue and higher costs than at MEY. The reason is that, under open access conditions, the least efficient fishers will continue to enter until their revenues just equal their private opportunity costs (which equates with the level at which producer surplus is thoroughly dissipated). To put it another way, while MEY maximises profits from the fishery over time, open access pushes the harvest "out" beyond the environmentalist's preferred target, OBY, beyond the economic target MEY/ E^* and all the way around to a level of effort E_{open} at which the catch, dominated by juveniles (because under the intense pressures few fish escape to maturity), reaches a shrivelled equilibrium. Moreover, even while beyond A marginal revenue of further effort exceeds the marginal costs of the most inefficient fishers, there is no guarantee the E_{open} level constitutes a barrier. Given the fixed investment in labour and capital, the inevitable information deficits, and each fisherman's notorious faith in his own luck, it is not unlikely that the fleet will respond to a sudden downward fluctuations in stock abundance by pushing out beyond A to a more excessive point B, putting the future of stocks in further jeopardy.

Of course, proper management--guiding fishing effort to the optimum--seeks to head off this outcome by acquiring the relevant data, providing the right incentives, and monitoring vessels for excess effort. But to discharge these tasks successfully, if it can be done at all, requires a level of fishery management resources beyond the financial capability of any debt-ridden coastal state.

2.3.3 The access agreements

Another factor compounds the management task. The African coastal nations are dealing not only with their own fleets, but all have access agreements with fleets of distant water fishing nations (DWFNs).

Theoretically, such access agreements can be mutually beneficial. The EU or other DWFN obtains access to fish stocks. In exchange, the coastal states get foreign currency. Across the world, the EU expends \$300 million a year for access, together with other "compensation" ranging from tariff

preferences, technical assistance, and other forms of aid. Some of the aid is earmarked for improving the domestic management capacity, such as overcoming the deficit in monitoring capabilities.³⁷

Foreign Fleet Access Agreements to African EEZs

Because of irregular surveillance and reporting, no one knows for certain what percentage of the fish taken from African EEZs are captured by distant water fishing nations (DWFNs). Over the past 45 years, it has been estimated that the ratio of DWFN to coastal state catches in the Central Eastern Atlantic (FAO Area 34) has run 4-1 in favour of DWFNs. For Northwest Africa, DWFNs outfished coastal states 6.25 - 1 over the same period.

With the assertion of EEZs, many DWFNs have negotiated access in the West African region, including Algeria, China, France, Libya, Russia (since withdrawn), Nigeria, Japan, Republic of Korea, and Tunisia. But the EU is the dominant presence.

The history of EU-African Access Agreements goes back to the Lomé Convention, first signed in 1974 and updated every fifth year thereafter. At Lomé, in the context of guiding Africa to a post-colonial modernity—and in face of freshly asserted coastal state fishery zones—it was agreed that the EU would negotiate with individual African coastal states to open their fishing grounds to Community fleets. The access rights that the EU acquired were distributed among its members; the member then allocates the rights to member fishing firms.

The first access agreements were negotiated with Senegal and Guinea-Bissau in 1979. Since then, the number of EU-African agreements has risen to 19.

– See generally, World Wildlife Fund Endangered Seas Campaign, *THE FOOTPRINT OF DISTANT WATER FLEETS ON WORLD FISHERIES*; Gareth Porter, *Euro-African Fishing Agreements: Subsidising Overfishing in African Waters*.

Moreover, it is in no way evident that a coastal state should prefer to rely on its own domestic fishers exclusively, rather than to contract with a DWFN. In many circumstances, modern efficient DWFN vessels may be able to fish and/or process a particular stock at less cost than the coastal state. Where such comparative advantage favours the foreign fisher, the “importation” of services (catching and/or processing) provides a “comparative advantage” opportunity from which both parties may benefit.³⁸ Access agreements can also shift the risk of fluctuations in stock to the most efficient bearer of the risk: DWFN fleets can more flexibly divert capital and labour around the

³⁷Porter reports that the agreements with Morocco, Senegal, Seychelles, and Guinea “either provide explicit budgetary support for fisheries agencies or allow [our italics] the Ministry of Fisheries or the government in general to use funds for administration of fisheries.” Porter, *supra* note 11, at 11. To say that some funds are allowed to support fisheries management is not to say that they are required to or in fact are so applied.

³⁸See G.R. Munro, Coastal States and Distant Water Fishing Nation Relations: an Economist's Perspective, 5 *FISHERIES REVIEW* 3 (1989). Footprints, *supra* note 2, at 95-96.

world in response to changes in local stock abundance.³⁹ Hence, in principle, some level of access contracting makes sense for all parties.⁴⁰ In terms of the study, there are potential advantages to liberalised trade—in the import of services and the export of fish.

There is, however, considerable scepticism about the benefits to the African nations of the existing contracts. Critics have raised two main concerns. First, it is argued that payments for access are too low compared to the value of the catch taken. Second, subsidies by the EU and other DWFNs to their fleets artificially reduce the cost of fishing, thus increasing the pressure that the DWFNs impose on stocks beyond what would be economic in a free market, and also unfairly competing against domestic, often artisanal, fleets operating in the same waters. In addition, some raise concerns about the impact on coastal state nutrition that may result from displacement of domestic by foreign fleets.

The equity claim is that the coastal states are not receiving their fair share of the catch value. Regrettably, the catch is so inadequately monitored that it is difficult to reconstruct with confidence what the EU payments actually amount to on a ton-caught basis. For example, even if the quantity of tuna boated by a DWFN is duly and accurately reported to the International Convention for the Conservation of Atlantic Tuna (ICCAT), it is virtually impossible, at the present level of monitoring, to confirm whether the actual catch occurred within or outside—on the high seas side of—the coastal state’s fisheries zone. Gareth Porter, who has grappled with the available data, estimates that the EU tuna seiner fleet does not pay for as much as one per cent of the value of its catch under any of its agreements.⁴¹ He calculates that in 1994 Guinea-Bissau received only .07 per cent of the value of the catch from its zone.⁴² Tuna seiners in Guinean waters are said to pay .6 percent of the value.⁴³

We cannot rule out the possibility that, considering the uncertainties of the data and the difficulties of constructing inferences from them, Porter’s estimates somewhat understate the value the coastal states are receiving. For example, as indicated above, the quid pro quo for access is not limited to cash payments; DWFNs often “compensate” with technology, management assistance, and tariff benefits; some of these benefits are hard to quantify,

³⁹The access agreement can be construed as the sale of an option by the coastal state to the DWFN. In many cases the option goes unexercised.

⁴⁰Footprints, *supra* note 2, at 96 points out that if the DWFN has the comparative advantage in fishing but the coastal state is the more efficient processor, it makes sense for the parties to arrange a joint venture in which the DWFN catches, but lands for the coastal state to process.

⁴¹Porter, *supra* note 11, at 17.

⁴²*Id.*, at 16.

⁴³*Id.*, at 15.

but accounting for them would presumably raise the coastal state's return considerably.⁴⁴ An accurate accounting of what the coastal states receive "per ton" would have to add to the value of the licenses, etc. that Porter tallies the value of other forms of compensation that are "tied" to the explicit payments. Indeed, one may wonder whether differences in data firmness and methodology may not partially explain why Porter finds shrimp trawlers to be paying 13% of the value of the shrimp catch.⁴⁵ (If the apparent difference is real, one would want to identify the causes--differences, for example, in negotiating structure--and capitalise on them.)

But if Porter's figures are anywhere near accurate--and the burden of proof is perhaps on the EU and other DWFNs--they certainly deserve further discussion. Are the African nations being grossly under-compensated? And if so, why (and what can be done about it)?

Lacking any consensus on fairness of price ⁴⁶ (and, indeed, not knowing what price is being paid because we do not know the aggregate collateral compensation such as linked aid and tariff concessions) it is natural to approach the question from the perspective of economic efficiency: are there any market or structural failures that would warrant rejection of the negotiated price as the fair (or efficient) value?

There are certainly structural reasons not to accept the negotiated price as "fair" uncritically. As a group, the African states are hard pressed for foreign exchange to service their debts. Under those circumstances, there is pressure to sell down their fish stock (and other natural resource heritages) at prices that would probably be viewed, by less cash-strapped nations, as inadequate.⁴⁷

There is another source of concern. The EU has set itself up as the sole purchasing agent for the Member nations; hence, it is free to negotiate with

⁴⁴To suggest a sense of the magnitude of collateral compensation, Morocco's 1995 renegotiation with the EU, which provided for payment of US \$162 million per annum for explicit fishing rights, included an additional US \$420 million in extra EU aid over the next three years for other projects, as well as concessions on access to EU markets for other agricultural products. EU Sets its Sights in Africa's Fishing Grounds, Mail & Guardian, May 22, 1996.

⁴⁵Porter, supra note 11, at 18. Porter notes that if one includes the value of the commercial catch the shrimp trawlers make of stock other than shrimp, the payments represent only 7% of the value of the take, authorized and unauthorized. *Ibid.*

⁴⁶The question, what is a "just" price for natural resources or anything else has been long debated. Porter offers 20% of market value as a "fair price," but that is no less arbitrary than would be any other figure. By comparison--if comparisons be relevant--the Asian Development Bank reports that the Pacific Island States receive 3-5% of the total gross annual value of fish taken in their waters. ADB, Office of Pacific Operations, *The Pacific's Tuna 3* (1997). There is potential value over licensing fees, such as by dockside operations, processing, etc. The FFA estimates that the Marshall Islands receives 12% of total revenues. *Ibid.*

⁴⁷The financial pressure and poor credit of these nations presumably raises their imputed discount rate, eroding the value of the future income stream from sustained fisheries.

each African state on an individual basis. This puts the EU in a favourable position: a dominant buyer facing competitive sellers. (Compare the strategy of the FFA in the box.) Any monopsony power⁴⁸ the EU may thus garner is most strongly displayable in the context of stock that straddles EEZs. Because these stock constitute common pool resources, the sale of access to them is most vulnerable to exploitation by the buyer. To illustrate, imagine any stock S that straddles nations A, B and C. In negotiating access, A knows that if it does not come to terms acceptable to the EU, the EU can access the same stock when it swims through B's waters, and so on. The potential to play off A, B and C puts the EU in the position of extracting the entire rent from the stock.

The Case of Morocco

No two coastal states enter DWFN negotiations with the same bargaining strength. Nonetheless, Morocco's position may be informative. In 1995 it decided to block renewal of its existing pact with the EU, reportedly docking 700 EU vessels in Spain, Portugal and the Canary Is. Up to 40,000 EU fishing industry jobs were imperilled. The resulting renegotiation provided for:

reduced EU fleet access to Moroccan waters;
a rehabilitation period for some stocks;
more fish to be landed for processing in Morocco to boost local employment;
a raise in access fees from US \$135 million to 162 million per year.
\$420 million in additional aid over three years for other projects, as well as concessions on access to EU markets for other agricultural products.

Source: *EU Sets its Sights in Africa's Fishing Grounds*, Mail & Guardian, May 22, 1996.

Coastal State Negotiating Power:

How much monopsony power the EU enjoys is questionable. After all, the EU has to compete with many other DWFNs eager to exploit the African coast. Namibia and Morocco have each to some degree managed to take control over their fishing resources (see Box). Argentina and the EU have negotiated a "second generation" agreement in which (not uncontroversially) access fees are eschewed in favour of joint venture arrangements and some transfer of technology to foster the capacity of the coastal state to exploit the resource.⁴⁹ There is talk of a set of "third generation" agreements in which, among other features, vessels would be transferred and monitoring and control provisions instituted.⁵⁰

⁴⁸A monopsonist is the mirror image of a monopolist: a purchaser with market power to extract noncompetitive rates of return.

⁴⁹The details of the agreement, their negotiating history, and some of the skepticism, are detailed in United States Department of Commerce, (National Marine Fisheries Service) *Argentine-European Fisheries Agreement* (Office of International Affairs IFR-94/08 F/IA2-DW).

⁵⁰See "Third Generation F.A.: A Developing Concept," (Coalition for Fair Fisheries Agreements, Newsletter No. 5, September-October 1996).

There is the prospect, therefore, that forms of agreement more favourable to the coastal state may be available to aim for. But there are additional factors that reinforce the likelihood the EU will be dominant in negotiations—and, indeed, emerge having arranged for a level of harvest that is excessive whether from the perspective of an MSY, MEY or OBY target.⁵¹ One factor is the excess investment in harvesting capacity: no matter under what flag or ownership conditions excess vessels are exported to developing nations, there will be pressure to operate them at incremental, rather than average cost levels. A second factor is continuing subsidies to foreign fleets (following).

2.3.4 Foreign fleet subsidies

The situation is made more complicated—and from the perspective of sustainability and the environment, worsened—by subsidies. Subsidisation, by lowering costs to the fishers,⁵² extends effort to E_{sub} ; the equilibrium stock size passes beyond the optimal, E_{ECO} and E^* , beyond A, the level associated with common pool withdrawal, and proceeds to an even more shrunken equilibrium point, C. In short, subsidies extend the intensity of fishing to a level that is difficult to defend, as well as being subject to distributional criticisms. Presumably, subsidised DWFN vessels displace some domestic fishers who would otherwise have a comparative advantage. This market distortion will result in losses of domestic employment as well as reduced returns on investment in the domestic fisheries sector. What is the level of subsidisation driving the over-exploitation of African waters?

The Impact of DWFN Subsidies Optimal Fisheries Management:

We know that the EU—not the vessel owners—contribution to access fees amounts to approximately \$300 million a year. Individual nations may make further contributions in the form of access fee co-payments.⁵³ This means that only a portion of the resource costs (the costs of stock depletion that may be charged by the coastal states), is borne by the fleets plying the local waters. In addition, Matteo Milazzo, in a study for the World Bank, has demonstrated how lavishly the EU subsidises its fleets in ways other than shouldering the access fees, for example, fleet modernisation, the

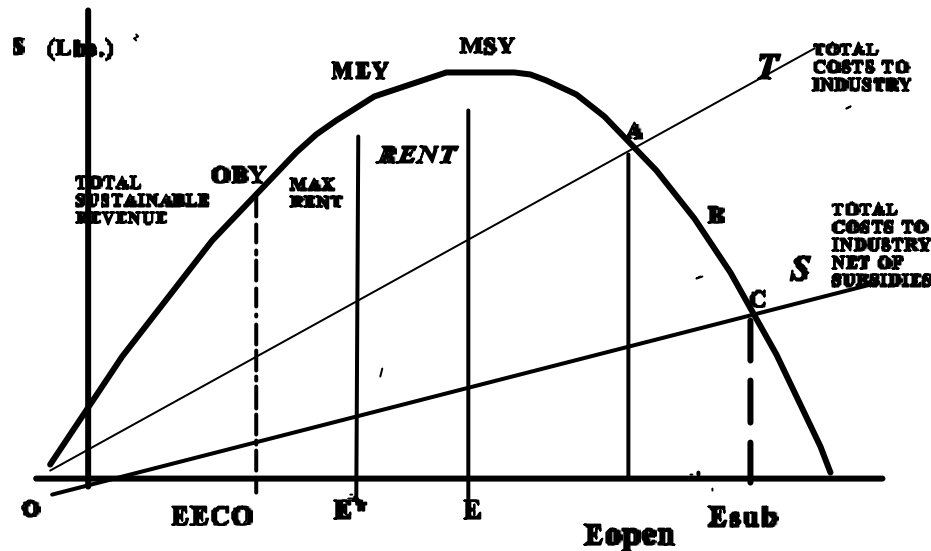
<http://www.gmt2000.co.uk/appoints/cffa/english/news/5.htm>.

⁵¹Although, as we shall see, by paying access fees on behalf of European fleets, and via other subsidies, the EU actually places more resources in the hands of the coastal states.

⁵²Note that the curve S represents the costs to fishers (which the support programs reduce) and not costs to the society, which would be represented by a cost curve T_1 above T (not depicted). To the extent that subsidies shift investment to low performing, even moribund, activities, and away from potential high growth industries, the societal effects are even worse than one might read off budget figures. But this would be a concern for the EU and other nations subsidizing their DWFNs—not the coastal states.

⁵³Matteo Milazzo, *Subsidies in World Fisheries: A Reexamination*, (World Bank Technical Paper No. 405, 1998), 22. The level of national co-payment earmarked for various access fees is unclear.

development of port facilities, and so on. These payments amount to additional hundreds of millions of dollars in subsidy a year.⁵⁴



It is clear, as the adjacent figure indicates, that the effect of these subsidies is to deplete the fisheries (and erode the environment and disadvantage artisanal fishers) at an excessive rate. It is likely, also, that the subsidies could be assailed as unlawful under the Code on Subsidies and Countervailing Measures (SCM) of the GATT, should some nation mount a challenge.⁵⁵ However, by artificially lowering the costs of exploiting African waters, the EU exercises an upward force on the price the coastal states are able--or should be able with a co-ordinated policy--to extract for access rights. For this reason, because the subsidy system supports a favourable wealth transfer, one can expect the coastal states to be ambivalent about challenging EU subsidies under the trade laws, despite their demonstrably negative impact on stock and the environment, as well as the undercutting of local fishers.⁵⁶

⁵⁴*Id.*, at 20-23.

⁵⁵Stone, *supra* note 1, at 523.

⁵⁶See note – *supra*. This ambivalence may explain the dilution of the Commission on Sustainable Development's condemnation of subsidies by the United Nations General Assembly Special Session (UNGASS) on Agenda 21. The CSD, in its preparation for the UNGASS was unequivocal: "Governments are urged to reduce subsidies to the fishing industry and abolish incentives leading to over-fishing." Fourth Session (18 April-3 May 1996), 21(c) [gopher://gopher.un.org:70/00/esc/cn17/1995-96/sector/96--3.en](http://gopher.un.org:70/00/esc/cn17/1995-96/sector/96--3.en). But at the UNGASS the language emerged as "Governments [are] to consider the positive and negative impact of subsidies on the conservation and management of fisheries through national, regional and appropriate international organizations and, based on these analyses, to consider appropriate action." 36(f) Programme for the Further Implementation of Agenda 21, Adopted by the Special Session of the General Assembly, 23-27 June 1997. [gopher://gopher.un.org:70/00/ga/recs/spec/RES-S19.2](http://gopher.un.org:70/00/ga/recs/spec/RES-S19.2) 1 July 1997.

2.3.5 The impact of liberalised trade on the environment and natural resources

The failure of governments to restrict fisheries production to sustainable levels is not unique to Africa. Almost two-thirds of the world's marine fisheries are fully or over-harvested. A temporary reprieve from effort, allowing stocks to rehabilitate, would increase productivity in the long term.⁵⁷ To put it another way, the private costs of fishing—the costs fishers bear (“internalise”)—fall far short of the full social costs: the toll fishing exacts in terms of depleted natural resource and environmental bases.

Failure of regulations to internalise externalities is widely observed. It is commonplace, too, that these failures to internalise environmental and resource externalities is bad policy for any host country's economy and bad for the environment. What is less evident, but also demonstrable, is that in a global economy increasingly marked by international trade, the local failures to internalise are transmitted through and aggravate inefficiencies around the world.

What happens with trade liberalisation, is that falling tariffs expand the market reach of the local fishery. At the same time, the ease of importing capital and the “services” of DWFNs adds pressure to whichever fishery offers investors the lowest—which may mean most drastically distorted—private cost.

To illustrate the dynamic, consider a simplified hypothetical.. Imagine two countries, one typically Poor, in which social costs are inadequately imposed on resource exploiters (Poor may fail to charge extractors the full resource cost, and, because of budget deficits, poaching is inadequately monitored) and the other, Rich, in which property rights in resources are typically well-defined (the natural resource assets are privatised or nationalised with rational pricing, and rules against trespass enforced). Even if we assume that as between Poor and Rich all the other variables that drive trade (wealth, endowments, etc.) are fixed in such a manner that would otherwise have lead to an equilibrium in which no trade took place, (1) the relative difference in internalisation of costs will drive commodities to move from Poor to Rich; even if Rich has a (true) competitive advantage at the

⁵⁷A major study for the United Nations Food and Agricultural Organization (FAO) estimated that if fishing pressures were relaxed, allowing stocks to rehabilitate, the catch of capture fisheries, rightly managed, could stabilize at a level 20 million tons higher globally, adding \$16 billion to global gross revenues annually. *Special Chapter: Marine Fisheries and the Law of the Sea: A Decade of Change in The State of Food and Agriculture 1992* (hereinafter SOFA 1992) (using the 1989 global fisheries data). In the U.S., the Department of Commerce has estimated that rational fisheries management, including a rehabilitation-permitting reduction in pressure, would increase domestic fishing revenues \$2.9 billion a year. U.S. Department of Commerce: *NOAA Strategic Plan: A Vision for 2005*, (May 1996), 89.

current margin of production (2) the resources of Poor will be excessively expended; (3) Rich will consume its own resources at a correspondingly retarded rate; and (4) the entire global economy suffers inefficiencies.⁵⁸ The inefficiencies should be understood to include not only the accelerated/retarded harvest of the marketable resources, but also the over-consumption of biodiversity, etc. properly valued.

The Lomé Convention

The Lomé Convention is in fact a series of agreements between the European Community and ACP states (African, Caribbean, Pacific) going back to 1974. Lomé obliges the Community to co-operate in promoting optimum utilisation of fishery resources and to increase the involvement of the ACP states in exploitation of fishery resources in their EEZs. (Lomé IV: Art. 58 and 59). The ACP states are also to benefit from Community assistance in fishery development in the form of environmental monitoring and rational management, as well as co-operation in the training of ACP nationals to manage all areas of fisheries (Art. 60 and 61). Lomé favours ACP states in trade relations generally since the contractual nature of the agreement provides preferential treatment for ACP exports that in most cases is better than *most-favoured-nation* status (See generally Art. 168). The trade preference provides needed income and stability to the ACP states' export sector, and the EU benefits in return from stabilised commodity prices and employment of its own nationals in development and aid-related industries. In addition, Lomé sanctions ACP countries negotiating as a group rather than as individual states. Of particular relevance is the EU obligation to "support moves by ACP coastal States towards harmonised arrangements for access for fishing vessels" (Art. 66).

The optimistic potential of Lomé has been questioned in practice, however. And the EU's willingness to continue its role in ACP trade development may diminish with subsequent multilateral free-trade agreements.

—Source: (<http://www.eurosur.org/wide/weng/lome5.htm>). Lomé IV, 29 ILM 824, 825.

2.3.6 Anticipated changes in export preferences

Trade and trade laws have the potential to affect the current situation in another way. Under the 1979 Lomé Convention, African, Caribbean and Pacific (ACP) States enjoy preferred access to the EU markets—that is, they enjoy preferentially low tariffs.⁵⁹ As a consequence, 70-85 per cent of the

⁵⁸Graciela Chichilnisky has presented the theoretical case for how local inefficiencies, stemming from inadequately defined property rights, are amplified by free trade. Chichilnisky, *Global Environment and North-South Trade*, 84 AM. ECON. REV. 851 (1994). See, however, Anna Strutt and Kym Anderson, WLL TRADE LIBERALIZATION HARM THE ENVIRONMENT? THE CASE OF INDONESIA (Centre for Economic Policy Research: Discussion Paper No. 1933 (July 1998)) (casting doubts on the negative effects of trade liberalization even in the face of nonconforming environmental standards among traders).

⁵⁹The Lomé Convention is an agreement between the European Union and African, Caribbean and Pacific (ACP) States on co-operation in the development of all economic sectors, and in matters of cultural, social and regional co-operation and the protection of the environment. In the field of trade co-operation, it aims at developing trade relations between the ACP states and the EU.

sub-Saharan fish exports have gone to the EU.⁶⁰ However, the GATT Uruguay Round of Trade Negotiations (1994) provides for the gradual reduction of tariffs, and, indeed, casts doubt on the continuance of Lomé's tariff preferences.

Any erosion of favoured access will improve the relative disadvantage of other nations competing with Africa as exporters for the EU market. This would seem to imply less pressure on the fish stocks and environment of the sub-Saharan nations than otherwise—but also lower revenues. If, on the other hand, the nations are constrained to maintain the same level of government revenues, the effect will be, tragically, further intensified pressures on the resource and environmental bases.

2.4 Policy Objectives

In light of this background, what policies should the West African nations pursue? The answers are not easy, will presumably vary from nation to nation, and cannot be prescribed by outsiders. As a start, each nation will probably seek to locate the most financially rewarding mix of access fees, export earnings, and various combinations (for example, relying on DWFNs to make the catch, but requiring the fish to be landed and processed by local firms).⁵³

But even within the arc of such a financial rewards policy, each nation has to decide how it is to balance long term against short-term financial needs, such as obtaining foreign currency to service debt. Valuable near-term “investments” may range from stock enhancement measures (nursery-ground maintenance, pollution control) to the foregone revenue of a reprieve period in which, pressure on stocks being diminished, productivity can be optimised in the long run. In effect, at what rate are enhanced future revenues to be discounted?

There are issues, too, of domestic policy that defy measurement in economic terms—issues that are straightforwardly and unavoidably political. What is the value to each nation of maintaining or increasing domestic fishery employment, perhaps particularly in the artisanal sector, even—should it come to this—at some loss of foreign exchange?⁵⁴ What premium is to be

⁶⁰FAO, SOFA (1996) at 103. Recall that the fisheries management programs of some nations are dependent upon payments from the fishing fleet nations. See Dale Squires, et al., *Individual Transferable Quotas as a Fisheries Management Tool*, 3 REVIEWS IN FISHERIES SCIENCE 141 (CRC Press, 1995). See also Dale Squires, et al., *Individual Transferable Quotas in Multispecies Fisheries*, 22 MARINE POLICY 135 (Great Britain, Elsevier Science Ltd., 1998).

⁵³This strategy would be indicated only where the added domestic benefits and export earnings dominated consequent reductions in access fees.

⁵⁴For example, the National Collective of Senegalese Fishworkers (CNPS) have urged terminating

placed on issues of food security—that is, of insuring domestic capacity to assure food in times of turmoil? To what extent should coastal resources be leveraged to develop local processing and other related industries?

And there are questions of the integrity of the marine ecosystems, as raised by the CBD. The exploitation of fish, as presently practised, is presumably taxing the ecosystem in manners that do not show up in economic calculations (as well as in ways that will undoubtedly have adverse economic impacts in the long term). Reducing some of these impacts should be viewed more as an international obligation than as a strategic option. For example, CBD Article 8(k) obliges members to establish regulatory provisions for protection of threatened species or populations. Under that rule, Parties to the CBD, which includes all the members of the CSRP, would appear to be obliged to take steps to reduce industrial fishing's toll on sea-turtles as by-catch.⁵⁵ (CITES would restrict trade in them, should trade in turtle products be attempted.) Other provisions may be read as compelling other, further-reaching policies—that is, policies that go beyond the protection of endangered species to pay heed to the health of the ecosystem and the diversity of its life.⁵⁶ But one must recognise that the obligations of the CBD are limited. Regarding injuries to the marine environment, the repair of which is neither economically cost-beneficial nor legally mandated, a clear policy question is raised for each nation: is it prepared to make economic sacrifices—should it come to that—on behalf of a biologically prosperous environment?⁵⁷

2.5 Strategic Options

The strategic options are in a sense logically posterior to the determination of policies: the strategies selected presumably will reflect and respond to the policy trade-offs. Nonetheless, there are a number of strategic options available to service each of the policies, although subject to different force and reliance.

DWFN access to coastal demersal resources and requiring DWFN fleets to use selective gear—perhaps even to set aside a 12 mile exclusive fishing zone for Senegalese fishermen. See “CNPS Get Ready . . .” (Coalition for Fair Fisheries Agreements, Newsletter No. 5, September-October 1996). <http://www.gmt2000.co.uk/appoints/cffa/english/news/5.htm>.

⁵⁵See Broderick & Catry, *supra* note 29, and Annette C. Broderick, Paulo Catry & António Araújo, A PROPOSAL OF A STRATEGY FOR THE CONSERVATION OF MARINE TURTLES IN GUINEA-BISSAU (IUCN Bissau, 1998).

⁵⁶*United Nations Framework Convention on Biological Diversity*, opened for signature June 5, 1992, 31 I.L.M. 818 (1992). For example, Article 10(b) obliges Parties to adopt measures to minimize adverse effects of activities on biological diversity—a broader but probably “softer” mandate discussed below.

⁵⁷The issue can be regarded as targeting production to MEY or OBY. Some costs of protecting the marine environment might be covered by other sources, for example, grants from the Global Environment Facility (GEF). See also CBD Art. 20(2): “The developed country Parties shall provide new and additional financial resources to enable developing country Parties to meet the agreed full incremental costs to them of implementing measures which fulfil the obligations of this Convention . . .”

A number of options fall under the heading of *improved fisheries management*. These responses would include adoption of management devices that have been developed in other fisheries, including establishment of Total Allowable Catches (TACs) and their effective enforcement. . Of course, deployment of TACs (and even more so, individual tradable quotas (ITQs) requires financial and managerial resources that may be beyond the reach of the nations involved. Devising and implementing management policies requires financing of a fisheries management force; the regulations, in turn, require *enhanced monitoring capability*. CSRP Arts 5-8 certainly contemplate monitoring, but , in view of the costs, implementation has been spotty. However, because the returns on increased investment in management and monitoring at present margins are almost certainly positive, it is possible that World Bank (or Global Environment Facility) funds could be made available. Indeed, monitoring need not require full capital investment. Monitoring assets could be employed on a service contract basis.⁵⁸

Another set of options comes under stock enhancement. This category includes measures to safeguard and even improve nursery grounds such as mangrove areas. There are strategic options for environmental monitoring. Indeed the Abidjan Convention has already put in place a framework for joint, co-operative pollution control efforts.⁵⁹ Senegal, in its filing with the CBD, has already outlined measures that it hopes to take in this direction.

Finally, there is the question of improving the CSRP membership's power in dealing with the EU and other DWFNs. One tactic would be to challenge the subsidisation of DWFN activities in CSRP coastal waters. Such subsidisation, which ranges from access fee payments to underwriting of vessel construction, increases pressure on regional fisheries, leading to an accelerated ransacking of stocks. The CSRP governments could assail these subsidies under the WTO (discussed more fully below). But it is not entirely clear that such an attack would be strategically acceptable to most coastal states. After all, subsidisation by the EU of its fleets means that the EU brings to the negotiation more money than otherwise. To put it another way, for a nation, A, to subsidise its own fleet in its own waters is clearly bad policy. But for A to allow other nations to subsidise fishing in A's waters is not so clearly a bad deal. Fish stocks may be under excess pressure from a sustainability point of view; but the subsidies shift the demand for access

⁵⁸Porter, *supra* note 21, at 28.

⁵⁹*Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region*, Art. 14. (1982).

Successful Regional Co-ordination Strategies

Faced with many of the same problems that beset the West African states, the South Pacific States have authorised their Forum Fisheries Agency (FFA) to promote regional interests by co-ordinating trade and resource issues. For example, while CSRPs states negotiate with EU and other DWFNs independently, the South Pacific states commissioned the FFA to co-ordinate negotiation of the multilateral fisheries access treaty with the United States. FFA has also facilitated the development of regionally adopted minimum terms and conditions of fisheries access. It was behind the 1992 Niue Treaty on Co-operation in Fisheries Surveillance and Law Enforcement and the 1992 Palau Arrangement jointly limiting purse-seining in the region. Working in association with the FAO to advance co-operative conservation, trade and fishing revenues have increased perhaps most dramatically in the small island developing states

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The South Pacific Regional Environmental Program (SPREP) helps its members deal with the adverse effects of human activities on fishing. The South Pacific Commission (SPC) is developing a mechanism for the compilation of fisheries data and greater harmonisation of member policies.

–Source: FAO, THE STATE OF THE WORLD FISHERIES AND AQUACULTURE: 1996, p. 122-123, 54.

rights favourably for the coastal state from the perspective of government fisc. From a short term economic point of view, it may be difficult to convince CSRPs states that an assault on foreign subsidies is clearly indicated. Indeed, some divisiveness regarding subsidisation was displayed in the Commission on Sustainable Development (CSD) discussions over fisheries policy (below).⁶⁰

But there is another, related strategic option. As indicated above, it is likely that as long as the EU acts as a sole purchasing agent negotiating access with CSRPs states, as sellers, individually, the CSRPs will capture only a small share of the potential wealth transfer that subsidisation makes possible. A better strategy would be for the CSRPs to meet the joint purchaser through a joint selling agent. In that way, whatever monopsony power the EU may enjoy in the circumstances will be met by joint (limited) monopoly power of the coastal states: an oligopoly to face down an oligopsony. The creation of a joint selling agent is certainly contemplated by Lomé, and encouraged, if not mandated, by UNCLOS as far as concerns

⁶⁰Consider by way of analogy a government program that assists low-income tenants by paying part of their rent. This is not a subsidy that a landlord's association is likely to oppose, since putting extra money in the hands of the tenants (here, the fishers) puts more money in the pockets of the landlords (the coastal states). There is, of course, a difference: it is easier to see how excessive subsidization could destroy the coastal state's asset (the fishery) than the landlord's (the building). For each state, the issue will be, is the extra benefit of the subsidy (the added purchasing power) worth the damage to the asset in the long term? There is no a priori answer likely to hold across all situations. Whether the long-term losses (the asset depletion) outweigh the short term gains (the added revenues) is linked to discount rates and opportunity costs. In the light of estimates of LDC "returns" on investment in infrastructure, for some states disinvestment from fisheries on "favorable" enough terms, accompanied by a shift of revenues to education, sewage, and so on, will be a controversial, but not an irrational policy.

the stocks that straddle CSRP EEZs.⁶¹ Indeed, as indicated by the accompanying box, co-operation that took the form of a joint selling agent would not be unique—the FFA has done the same—and is in fact only one of the forms that strategic co-operation could take. But it has to be remembered that, despite the similar circumstances, each coastal state is apt to consider itself in a somewhat unique financial and resource position. There are likely to be political obstacles to weaving a common front. Indeed, the prospect of each state going its own way is contemplated by CSRP Art. 4 with its reference to licenses being variable among the states in accord with “la spécificité de leurs politiques de pêche ou de leurs pêcheries.”

3. The General Legal Environment: Bases of Obligation in Environmental and Resource Laws.

Fishing has significant impacts on marine and coastal biodiversity, through the taking of target species, taking of bycatch, and impacts on habitat. Thus, the provisions of the Biodiversity Convention (CBD, to which all CSRP members are party) have implications for the management of fisheries.⁶²

The CBD’s objectives are the conservation of biodiversity, the sustainable use of its components, and the equitable sharing of benefits from genetic resources. Sustainable use is defined as the use of components of biodiversity so as to avoid long term decline of biodiversity. The Convention defines biodiversity to include diversity among living organisms and systems at the genetic, species and ecosystem levels. Measures to protect biodiversity in the context of fisheries will entail consideration of a range of factors in addition to the size of the stock of the target species, such as the impact on the target species’ genetic diversity and the impact on relevant marine ecosystems.

Most of the CBD’s provisions mandate national-level measures to protect biodiversity within national jurisdiction and to regulate activities or processes within national control or jurisdiction. In addition, under Article 5 parties are obligated to co-operate for the conservation and sustainable use of biological diversity beyond national jurisdiction, AS FAR as possible and as appropriate. This requirement in a sense adds a biodiversity dimension to

⁶¹See Lomé Convention, Art. 66., 29 ILM 825 (1990). See also UNCLOS Art. 63, UNITED NATIONS CONVENTION ON THE LAW OF THE SEA, December 10, 1982. 1982 WL 184359, A/CONF.62/122.

⁶² For further discussion of the implications of the Convention’s requirements for fisheries management, see A. Charlotte de Fontaubert, David R. Downes, and Tundi Agardy, BIODIVERSITY IN THE SEAS: IMPLEMENTING THE CONVENTION ON BIOLOGICAL DIVERSITY IN MARINE AND COASTAL HABITATS 18-27 (IUCN 1996), reprinted in 10 GEORGETOWN INTERNATIONAL ENVIRONMENTAL LAW REVIEW 753 (1998). While beyond the scope of this paper, it is worth noting that other international conservation agreements may also be relevant to fishing in the West African region, including the Bonn Convention on Migratory Species and the Convention on International Trade in Endangered Species (CITES).

the obligations under the Law of the Sea (below) to co-operate on conservation of high seas stocks, migratory species, and straddling stocks.

Many of the Convention's requirements are relevant to management of fisheries, as they are to the management of biological resources generally (See Box).⁶³ For instance, Article 7 requires the identification of components of biodiversity, the monitoring of their status, and the identification of processes and types of activities likely to harm biodiversity, as far as possible and as appropriate. Article 8(1) requires regulation or management of processes and types of activities identified as harming biodiversity, as far as possible and as appropriate. This would argue for assessment of marine biodiversity related to fisheries, and regulation of fishing activities that cause adverse effects to that biodiversity.

Article 14 requires governments to introduce procedures for assessment of environmental impacts of projects likely to have significant adverse impacts on biodiversity, as far as possible and as appropriate, and incorporating public participation "where appropriate." Governments must also make arrangements to ensure that environmental consequences of programs and policies likely to have significant adverse impacts are taken into account. These requirements imply that governments should conduct environmental assessment of proposed agreements for DWFN access to EEZs, with appropriate public participation.

⁶³ For further discussion of provisions of the CBD relevant to trade impacts on biological resources, see the background paper prepared for this project, DAVID R. DOWNES, INTEGRATING IMPLEMENTATION OF THE BIODIVERSITY CONVENTION AND THE RULES OF THE WORLD TRADE ORGANIZATION (IUCN, in press).

Relevant Obligations of the Convention on Biological Diversity

(APPLYING “AS FAR AS POSSIBLE AND AS APPROPRIATE”)

Art. 5: obliges states to co-operate for conservation and sustainable use of biological diversity beyond national jurisdiction; applies to adjacent high seas and contiguous EEZ marine stocks

Arts. 7 and 14: arguably require EISs for access fee agreements by all parties to those agreements.

Art. 8: requires in-situ ecosystem conservation and protection of threatened species or populations, as well as of customary use and traditional practices of local communities

10: obliges states to adopt measures to minimise effects-on biological diversity, to protect—customary community practices, and to support local efforts to remedy degradation of biodiversity.

Art. 11: requires creation of economic and social incentives, and COP 4 decision requires identification and mitigation of effects of perverse incentives (applies to EU subsidies).

A number of other provisions are relevant for fisheries, although most of them also apply only “as far as possible and as appropriate.” For instance, marine species threatened by fishing should find some protection under Article 8(k), which requires governments to take regulatory measures for protection of threatened species or populations. Traditional sea tenure and access to marine living resources should receive support under Articles 8(j) and 10(c), which require protection of sustainable customary use of biological resources, and preservation of traditional knowledge and practices of local communities relating to conservation and sustainable use.

Article 10(d) requires a Party to “[s]upport local populations to develop and implement remedial action in degraded areas where biological diversity has been reduced.” Article 10(b) obliges governments to adopt measures to minimise effects on biological diversity from the use of biological resources. Article 11 requires the creation of economic and social incentives for conservation and sustainable use.

3.1 The Jakarta Mandate

In 1995, the Conference of Parties (COP) to the Biodiversity Convention agreed upon the “Jakarta Mandate on Marine and Coastal Biological Diversity,” which recommended mechanisms and strategies for implementing the Convention in the marine and coastal context.⁶⁴ In the

⁶⁴ The recommendations adopted in Jakarta in November 1995 were styled the “Jakarta Mandate on

Mandate, the COP endorsed the recommendations of the Convention's science panel -- the Subsidiary Body for Scientific, Technical and Technological Advice (SBSTTA) -- while adding some conclusions and modifications of its own.⁶⁵ Recommendations covered integrated area management, protected areas, sustainable use of living resources, sustainable mariculture, and alien species.

With respect to living resources, the Mandate emphasises application of the precautionary approach, reliance on best available science in management, and identification of critical ecosystem functions. Of particular relevance to trade, the SBSTTA recommended reduction in waste in the trade in living organisms, including discard, spoilage and excess mortality. The SBSTTA also recommended consideration of the possibility of reducing subsidies for fisheries.⁶⁶

The Jakarta Mandate places the main responsibility for implementation upon national governments, consistent with the emphasis of the Biodiversity Convention. However, the Mandate also envisions a major role for international and regional co-operation, including co-operation within existing institutions and instruments. In fact, the Mandate and explicitly refers to the role of existing mechanisms -- such as the FAO Code of Conduct for Responsible Fisheries and the Straddling Stocks Agreement -- in achieving the goals of the Convention with respect to marine and coastal biodiversity.

The COP's plan, in 1995, was for a series of international expert meetings to elaborate on the Mandate's recommendations, as well as a continuing process of co-operation among international organisations able to assist with implementation. Since the adoption of the Mandate in 1995, however, there has been only one expert meeting, and the international process seems not to have made much progress. However, the Mandate remains relevant as a reference for governments seeking to integrate biodiversity protection with fisheries management.

Marine and Coastal Biological Diversity" by the Jakarta Ministerial Statement on the Implementation of the Convention on Biological Diversity. See A CALL TO ACTION: DECISIONS AND MINISTERIAL STATEMENT FROM THE SECOND MEETING OF THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY, JAKARTA, INDONESIA, 6-17 NOVEMBER 1995 (Montreal, UNEP, 1996). Available on the web site of the Secretariat of the Convention on Biological Diversity, <<http://www.biodiv.org>>.

⁶⁵: See *id.* at 30 (Decision II/10 of the COP, "affirm[ing]" that the SBSTTA's recommendation "represents a solid basis for future elaboration of the issues presented" and "support[ing] the recommendations in paragraphs 10-19" subject to "additional conclusions" made by the COP).

⁶⁶ While a number of governments expressed concern about an overemphasis on fisheries as compared to other marine problems such as pollution, and some highlighted the political sensitivity of fishery subsidies, in the end the COP supported the SBSTTA's recommendations while noting these concerns. See *id.* at 30, 33, 34-35.

One other relevant activity in the international CBD process is the discussion of Article 11, which calls for incentives for conservation and sustainable use. At the last COP in May 1998, the Parties called for the identification of perverse incentives and consider the removal or mitigation of their negative impacts. This would support reduction of subsidies. Parties are invited to submit case studies and other information for distribution through the clearing-house mechanism of the Convention, which could thus help disseminate information on reduction of fisheries subsidies. However, the international process for the next several years will focus on perverse incentives in ecosystem themes other than marine and coastal.

As an effort to fill the need for international guidance on how to manage biodiversity and biological resources through “ecosystem approaches,” the Jakarta Mandate and its follow-up represent a promising developments.

In the context of fisheries, this effort must complement and augment the existing international and regional frameworks of rules and network of institutions that are already active on fisheries and marine living resources and environment generally. The Mandate in a sense adds a biodiversity dimension to what is already happening, enriching it. It depends on existing initiatives to bring it on board and carry it along with them.

4. General Legal Background: The Laws of Marine Exploitation

4.1 United Nations Convention on the Law of the Sea

Fishing is also affected, of course, by the laws of the sea. When it was adopted in 1982, the UN Convention on the Law of the Sea (UNCLOS) effectively put an end to the Freedom of the Seas paradigm that had prevailed hitherto. Under UNCLOS, coastal States are granted exclusive jurisdictional rights over marine living resources within an area known as the Exclusive Economic Zone (EEZ) and which usually extends up to 200 nautical miles from the coastline. This radical jurisdictional shift is particularly important for the coastal States of West Africa, which can now exercise effective control over these resources. Fishing by distant water fishing nations used to occur in African waters before 1982 but the coastal States did not derive any benefits from these activities. Under the new UNCLOS regime, West African coastal States acquired the clear right to benefit from the activities of distant water fleets in their waters.

Some Relevant Obligations of UNCLOS

Art. 58(3) and 62(4): obliges non-national fishers to obey coastal state's laws.

Art. 61: obliges coastal state to determine allowable catch in EEZ (1) using best scientific evidence, to insure against over-exploitation (2) to maintain or restore (!) stocks to MSY.

Arts. 63, [116]: oblige states fishing straddling stocks to co-operate as through regional and subregional organisations.

Art. 5(h) 1995 Supplement to UNCLOS (Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks) [not yet in force]: obliges Parties to avoid unsustainable use of fisheries resources.

The UNCLOS regime is based on a number of key provisions that regulate the rights and obligations of the coastal States. Under Article 56, the coastal State has exclusive sovereign prerogatives “for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non living.” The Convention obliges the coastal state to determine the total allowable catch (TAC) of the living resources (Art. 61.1) and to adopt the appropriate conservation and management measures to ensure that the resources are not endangered by over-exploitation (Art.61.2). Hence, UNCLOS not only establishes coastal state rights in the exploitation of the resources, but also a duty to ensure that exploitation is sustainable. Article 61.3 specifically refers to the Maximum Sustainable Yield (MSY, above), “as qualified by relevant environmental and economic factors.” The independent reference to “environmental factors” could be read to support the concept of OBY, proposed above, as a legal obligation. There is certainly basis for an ecosystem approach in UNCLOS’ requirement that the managing State take into account “the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened.” Under this Convention, therefore, coastal States have both an exclusive right and an obligation to manage all marine living resources sustainably.

The Convention provides specifically for cases, such as that of West Africa, where coastal States may not have the capacity to harvest all the resources that can be fished sustainably. In that case, the coastal State must allow distant water fishing nations or any other State to fish in its waters, but under very specific conditions. First, the coastal State need open its waters to other States only if there is “a surplus of allowable catch” beyond what it can harvest with its own national fleet (Art. 62.2). If the coastal State does grant access to another State, the latter is specifically required to comply with the conservation and management measures and with the other

conditions established in the laws and regulations of the coastal State” (Art. 62.4). Some of the important conditions upon which the entry of foreign fishing can be made contingent include, in addition to adequate compensation, compliance with all local fishing regulations (see Box).

Illustrative Conditions on DWFN Entry

the licensing of fishermen and fishing vessels, including adequate compensation in the field of financing, equipment and technology relating to fishing industry;
respect of quotas and the designation of species that may be caught;
respect of seasons and areas of fishing, gear restrictions and vessel restrictions;
meeting the reporting requirements on vessels and catch;
landing of all or part of the catch in the ports of the coastal State;
conducting, under the authorisation and control of the coastal State, specified fisheries research
respect of enforcement procedures; and
training of personnel and transferring fisheries technology, including enhancement of the coastal State’s capability of undertaking fisheries research.

The Convention therefore provides the coastal State with an arsenal of measures with which they can require distant water fleets to comply to ensure the sustainability of fishing in coastal waters. Indeed, even without expressly conditioning access on observation of local laws in the license agreement, Article 73 of UNCLOS provides the coastal State with strong enforcement powers to ensure that distant water fleets respect the conservation and management measures it has adopted. These powers include the right of inspection, boarding, arrest and judicial proceedings “as may be necessary to ensure compliance with the laws and regulations adopted ” by the coastal State.

These measures, however, apply only when the stock fished is found in the EEZ of a single coastal State and the Convention recognises that this does not always hold true in practice. Specific articles deal with the management of straddling stocks (which migrate between EEZs and the high seas) and highly migratory stocks (which migrate over long distances and often through several EEZs), anadromous stocks and catadromous stocks.

4.1.1 Anadromous stocks

Anadromous species, like salmon, are species that spawn in fresh water but spend part of their lives outside of the waters of the coastal State where they have spawned. For those species, Art. 66 provides that the States in whose rivers the stock originates have primary responsibility for the management

of the stock. The Convention also calls on those coastal States to co-operate with other States that may have an interest in the stocks, particularly if they migrate beyond the EEZ of the coastal States.

4.1.2 Catadromous stocks

Catadromous species, like eel, are species that spawn at sea but spend a good part of their life in the fresh water of some coastal States. For those species, art. 67 provides that the State in whose waters the species spends the greater part of their life cycle shall have responsibility for the management of these species. Harvesting of these species must only take place outside of the EEZ of the coastal State or, when within the EEZ, subject to the sovereign rights of the coastal State. If the catadromous stock migrates through several EEZs, the other States shall co-operate with the State that has primary management responsibility.

4.1.3 Straddling fish stocks

Straddling stocks are not defined in the Convention and art. 63.2 merely refers to “stocks that occur both within the exclusive economic zone and in an area beyond and adjacent to the zone.” With regards to these stocks, the coastal State and the State fishing in the adjacent area “shall seek, either directly or through sub-regional or regional organisations, to agree upon the measures necessary for the conservation of these stocks in the adjacent area.” The obligations are therefore limited to a duty to co-operate between the coastal States and the States involved in fishing. (Art. 63.1 addresses stocks that straddle two EEZs in similar manner.)

4.1.4 Highly migratory stocks

The Convention is much more explicit with regards to highly migratory species, which are not defined but listed in Annex I of UNCLOS. Article 64 calls on coastal States and other States whose nationals fish in the region for those species to “co-operate directly or through appropriate international organisations with a view to ensuring conservation and promoting the objective of the optimum utilisation of such species throughout the region, both within and beyond the exclusive economic zone.” In regions where no such international organisations are in place, coastal States and other fishing States are called upon to co-operate to establish such organisations and participate in their work.

Articles 63 and 64 merely call on States to co-operate to ensure the management of straddling and highly migratory stocks but do not assign clear rights and duties between coastal States and distant water fishing nations.⁶⁷ This uncertainty led to conflicts between these two categories of

⁶⁷See E.L. Miles and W.T. Burke, *Pressures on the United Nations Convention on the Law of the Sea of 1982 Arising from New Fisheries Conflicts: The Problem of Straddling Stocks*, 20 *Ocean Development*

nations and as a result the UN Agreement on Straddling and Highly Migratory Fish Stocks was negotiated and adopted.⁶⁸

4.2 The United Nations Agreement on Straddling and Highly Migratory Fish Stocks

4.2.1 Reliance on Regional Approaches

The UN Agreement on Straddling and Highly Migratory Fish Stocks (the “Straddling Stocks Agreement” (SSA)) essentially builds upon UNCLOS and its shortcomings by establishing a more detailed regime for the management of these stocks. The Straddling Stock Agreement recognises UNCLOS’ call to coastal States and distant water fishing nations to co-operate but extends the general obligations contained in Articles 63 and 64 by highlighting and advancing the role of regional and sub-regional arrangements and organisations. In some respects, then, the Agreement codifies rather broad duties to co-operate by recognising that this co-operation can only take place through the relevant arrangements and organisations, such as CSRP.

In its Part III, Mechanisms for International Co-operation, the Agreement is divided into a number of articles that specify the modalities under which the organisations and arrangements are supposed to operate. The Agreement makes quite clear that specific arrangements will be set up for specific geographical areas (SSA, Art. 8.1), that the States will participate in these negotiations in good faith (SSA, Art. 8.2), that the States will join the relevant organisations and arrangements already in place (SSA, Art.8.3), that only States that are Party to these arrangements will have access to the resources that it manages (SSA, Art. 8.4), and that such organisations and arrangements will be created when they are not already in place (SSA, Art.8.5). These obligations to co-operate within the regional organisations and arrangements also apply in cases where a State wants to see action taken through an intergovernmental organisation that has competence with respect to living resources.

By relying on States to co-operate within regional and sub-regional arrangements and organisations, the Straddling Stocks Agreement actually stops short of settling disputes that pitch the interests of coastal States against those of distant water fishing nations. It does, however, go much further than the Law of the Sea Convention by beginning to clarify and to regulate the functioning of these organisations, for example, envisioning

and International Law, 1989.

⁶⁸ See A.C. de Fontaubert, *The UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks, Another Step in the Implementation of the Law of the Sea*, Ocean Yearbook 12, University of Chicago Press, 1995.

separate regional and sub-regional regimes through which the coastal states in one area can co-operate and come together.⁶⁹ In that regard, the Straddling Stocks Agreement is a very useful tool that the West African states can use in order to manage their shared resources on a regional basis.

4.2.2 An Altogether New Approach to Fisheries Management

Another paramount aspect of the Straddling Stocks Agreement is that it adopts a number of key principles, contained in Part II, Conservation and Management, that essentially refocus the way in which all States (coastal as well as distant water fishing) are meant to manage fisheries operations. It is interesting to note that the Straddling Stocks Agreement was negotiated in parallel to the FAO Code of Conduct for Responsible Fisheries (see below), which also embodies some of the new approaches to more sustainable fisheries. In practice, Part I also provides guidelines for coastal States on what they can demand of distant water fishing nations fishing in their waters. Articles 5, 6, 7 and Annex II deserve special attention. Straddling Stocks Agreement I(Art. 5)

Measures shall be adopted that:

- ensure the long term sustainability of the stocks and promote the objective of optimum yield;
- are based on the best scientific evidence available and are designed to maintain or restore the stocks;
- do not exceed MSY level, as qualified by a number of relevant factors;
- apply the precautionary approach;
- take into account the impact of other human activities on the stocks and on the marine environment;
- take into account the impacts on other related species, with a view to maintaining these species above levels where their reproduction may become seriously threatened;
- minimise the impacts of the fishing activities through pollution, waste, discards, by-catch, through, inter alia the use of more selective, environmentally safe and cost-effective gear and technologies;
- protect marine biodiversity;
- prevent or eliminate overfishing and excess fishing capacity;
- take into account the interests of artisanal and subsistence fishers;
- are based on complete and accurate data;
- are supported by scientific research and appropriate technologies; and
- are implemented and enforced through effective monitoring, control and surveillance.

⁶⁹ See D. A. Balton, *Strengthening the Law of the Sea: The New Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks*, 27 OCEAN DEVELOPMENT AND INTERNATIONAL LAW, 1996.

Article 5. One of the most promising provisions in this new approach is to be found in Article 5, which, while reaffirming the obligations that States have under the Law of the Sea Convention, such as to harvest target stocks at MSY levels, goes far beyond UNCLOS in expressly widening the scope of conservation and management measures. Specific measures are to be adopted that range from protecting biodiversity to accounting for the interests of artisanal and subsistence fishers.

In this single article, the drafters of the Agreement have endorsed the view, which had become widely spread, that fisheries management has reached the point of a sea change, where managers need to consider all the impacts of the fishing activities, even beyond pressures that are brought to bear on the target stocks.

Article 6. Article 6 takes up on the recommendations of Article 5 by calling on the States to adopt a precautionary approach. This represents a major shift in fisheries management, as it reverses the burden of proof in the debate between conservation and exploitation objectives. Throughout the history of fishing, remedial measures had been taken following the collapse or severe depletion of stocks and thus were, in essence, reactive. Likewise, conservation measures were only agreed to after managers had shown that a) the stocks were being unduly impacted, and b) the conservation measures would likely remedy this situation. The precautionary approach, as prescribed under Article 6, requires that the conservation and management measures be based on the best scientific evidence available, that States be more cautious when information is uncertain, unreliable or inadequate and that the absence of scientific information not be used as a reason for postponing or failing to take conservation and management measures. This application of the precautionary approach is not restricted to the targeted fish stocks, but is also relevant for non-target and associated or dependent species. Annex II provides guidelines for the application of the precautionary approach in the form of “Guidelines for the Application of the Precautionary Reference Points in Conservation and Management, see below).

In the case of new fisheries, Article 6 calls for the application of catch limits and effort limits, which will remain in place until enough information is available to assess the impact of the fisheries on the long term sustainability of the stocks. Finally, the article refers to the measures States may need to take following the occurrence of a natural phenomenon likely to have a significant impact on the status of the stocks.

Article 7. Importantly for West African coastal States, Article 7 deals with the issue of compatibility between conservation and management measures

within EEZs and on the high seas. The Agreement strikes a delicate balance between the interests of coastal States and distant water fishing nations. All the provisions apply “without prejudice to the sovereign rights of coastal States for the purpose of exploring and exploiting, conserving and managing the living marine resources within areas of national jurisdiction as provided for...” in UNCLOS. While the article makes quite clear that the measures in the EEZ and on the high seas need to be compatible, it does not indicate clearly whether the coastal States will need to harmonise their measures with those of regional arrangements, or conversely whether the measures of the regional arrangements will need to be compatible with those adopted by the coastal States in the zones under national jurisdiction.

Annex II. Annex II is the forum in which the application of the precautionary approach is defined, but only through the adoption of “guidelines for the application of the precautionary reference points.” This Annex tolls the bell of the old exclusive MSY approach, under which the MSY of one individual stock was the only reference point for managing the effort addressed to that stock. In addition, the Annex establishes a clear link between the limit point (within which the stocks can produce the maximum sustainable yield) and the management measures. Managers are invited to take any measures to ensure that a stock does not fall below the reference point, and that action will be taken to facilitate stock recovery where required. In addition, Annex II provides that in the absence of scientific certainty, provisional reference points will be set, based on similar and better-known stocks and subject to enhanced monitoring.

While the Straddling Stocks Agreement has not yet entered into force, it nevertheless represents an evolution in the international norms that regulate international fisheries management. Importantly, the Agreement represents a case where all the negotiating Parties have recognised the principles embodied in Articles 5 and 6 and codified them into a legally binding instrument. It is not unrealistic to expect that the European Union and other nations that fish extensively in African coastal waters will soon ratify the Agreement and that their duty to comply with these measures will be reinforced as a consequence. Furthermore, many of these same important principles are endorsed in another international instrument (though not a legally binding one), the Code of Conduct for Responsible Fisheries of the UN Food and Agriculture Organisation.

4.3 The FAO Code of Conduct for Responsible Fisheries

While application of the Straddling Stocks Agreement is limited to straddling and highly migratory fish stocks and its application is in great part restricted to the high seas, the FAO Code of Conduct for Responsible

Fisheries (the Code of Conduct) is to be applied both within areas of national jurisdiction and on the high seas, for all vessels above a certain size flying the flag of a State party to the Code.

General Principles

- the right to fish carries with it the obligation to do so in a responsible manner;
- States authorising fishing should not undermine the effectiveness of conservation and management measures adopted at the national, subregional, regional or global levels;
- fisheries management should promote the availability of fishery resources for present and future generations;
- management should ensure the conservation of non-target as well as target species;
- conservation and management decisions for fisheries should be based on the best scientific evidence available;
- states and sub-regional and regional fisheries management organisations should apply a precautionary approach;
- selective and environmentally safe fishing gear and practices should be further developed and applied in order to maintain biodiversity; and
- states should ensure that their policies and practices related to trade in fish and fishery products do not result in environmental degradation or negative social impacts

4.3.1 FAO Code of Conduct for Responsible Fisheries

The Code—which, unlike the SSA, is not a legally binding agreement—consists of six thematic articles on Fisheries Management, Fishing Operations, Aquaculture Development, Integration of Fisheries into Coastal Area Management, Post-Harvesting Practices and Trade and Fisheries Research. The Code focuses on the practices of national fishing fleets, calling on countries to act at the national level. It covers activities within EEZs, as well as on the high seas. In that respect, it applies to the activities of distant water fishing nations in West African waters.

Some of the key provisions of the Code are contained in Article 6 (General Principles) which lays down principles of far-reaching significance (See Box).

Article 7.5 refers specifically to the need for all States to apply the precautionary approach widely to conservation, management and exploitation of marine living resources. In a very similar approach to that of the Straddling Stocks Agreement, the Code of Conduct also highlights the

key role that can and must be played by subregional and regional organisations and arrangements (Art. 6.12).

Overall, the Code of Conduct represents a blueprint for action for all States, coastal States and distant water fishing States, to achieve sustainable management of marine living resources. The Parties to the Code of Conduct recognise that the practices contained therein, while not “binding”, are an ideal towards which they should strive.

The Straddling Stocks Agreement and the Code of Conduct refer to one another, and the full implementation of one will require implementation of the other. Both are key parts of the mosaic of international instruments that will form the building blocks of a new global regime for the management and conservation of marine living resources. Ultimately, this new regime must be implemented at the regional and national levels.

4.4 Relevant Regional Agreements

The three main instruments that contribute to the new international fisheries management regime, the Law of the Sea Convention, the Straddling Stocks Agreement and the FAO Code of Conduct for Responsible Fisheries recognise the importance of a regional approach. This realisation is based on a combination of jurisdictional factors, namely the sovereign rights and obligations of the coastal state in its EEZ and biological factors, such as the fact that stocks migrate and do not abide by politico-judicial boundaries. The Straddling Stocks Agreement highlights regional approaches the most strongly since it not only establishes the right of states to participate in regional efforts, but also their duty to do so. Co-operating on a regional basis is therefore not merely an option for West African coastal states, but also an obligation.

Such regional co-operation may take many different forms and in that respect West African States can draw important lessons from the experience of other states in other regions. As a rule of thumb, the success of a regional or subregional arrangement or organisation tends to depend on a) the commercial interests that are at stake, and b) the political will--and power--of the parties to the agreement. A good such example is that of the South Pacific island States and their collective bargaining through the South Pacific Forum Fisheries Agency (FFA, above). By teaming their efforts, and with the support of New Zealand and Australia, these small island developing States have achieved greater control over the activities of foreign fleets within their EEZs, and even in the areas of the high seas adjacent. In particular, the FFA and the United States participated in the South Pacific Fisheries Treaty, whereby the number of tuna fishing vessels

in the area is limited, appropriate fees are due and paid to the coastal States and American vessels self-enforce the requirements of the Agreement.⁷⁰ The key to the success of those small States with relatively little power was their willingness to come together politically and to negotiate as a whole with the U.S., a much more powerful negotiator.

One should also note that a regional agreement is currently being negotiated, in implementation of the Straddling Stocks Agreement, in the Southeast Atlantic high seas area off the coasts of Angola, Namibia and South Africa. This negotiation to form a Southeast Atlantic Fisheries Organisation (SEAFO) is another example, closer to home, from which West African States might look for guidance. The SEAFO structure is taking a shape that includes participation not only of the coastal states, but of some of the distant water fishing nations with an interest in the area, perhaps including the EU, Japan, Russia, Norway, and the USA.

As indicated above (Section I) the central eastern Atlantic states already have a regional organisation in place, the Commission Sous-Regionale des Peches, or CSRP. The CSRP, established by the Convention of 29th March 1985 Establishing the Sub-Regional Fisheries Commission (as amended, 1993), brought together the Governments of Republic of Cape Verde, the Republic of the Gambia, the Republic of Guinea, the Republic of Guinea-Bissau, the Islamic Republic of Mauritania and the Republic of Senegal. The agreement embodies the realisation by these governments that marine living resources are shared resources, which call for a co-operative approach to their management.

CSRP Convention on “Conditions of Access”

- a maximum length of two years for each access agreement;
- variable levels of effort depending on the status of the stocks;
- strict regulation of factory vessels and collecting vessels (when collection occurs at sea);
- sustainable utilisation of the resources;
- minimum mesh size requirements;
- strict licensing requirements;
- compulsory notification each time a vessel enters or exits the zone of jurisdiction
- mandatory observer schemes;
- minimum landings in coastal ports;
- accurate data reporting; and
- mandatory penalties and other enforcement measures

⁷⁰ W.M. Sutherland, *Management, Conservation and Cooperation in EEZ fishing: The Law of the Sea Convention and the South Pacific Forum Fisheries Agency*, 18 OCEAN DEVELOPMENT AND INTERNATIONAL LAW – (19xx).

Working within this regional structure, the member States of the CSRP negotiated a Convention Regarding the Determination of Conditions of Access to and Exploitation of Fish Resources off the Coasts of the Member States.⁷¹ This Convention aims to specify the terms under which any Member can grant access to foreign fleets in its waters. It is based on the understanding that all states must share a common, strong negotiating position vis-à-vis the distant water fishing nations (DWFNs). As indicated in Part I. DWFNs, in negotiating with coastal states, have a history of playing off one State against the other, aiming to deal with whichever state imposes the lowest “price”, not only in terms of monetary compensation, but in terms of the least stringent conservation requirements. The negotiators attempted to thwart these efforts by agreeing on a number of minimum terms that any DWFN would have to meet to gain access to any of the Members’ waters (See Box).

Unfortunately, this Convention is not yet implemented and access agreements are still being negotiated one-on-one with DWFNs and the minimum terms of the Convention are not implemented. Whilst the political structure of the CSRP is currently in place, it would appear that its functioning could still be improved, if appropriate political pressure is applied by its member States.⁷² Nevertheless, co-operation at the regional level is an ongoing effort between West African countries, representing a right and a duty to do so, with a hope of negotiating better terms to the access agreements they grant distant water fleet nations.

4.5 The Commission on Sustainable Development

The Commission on Sustainable Development (CSD) is a forum created in the aftermath of the UN Conference on Environment and Development (UNCED), or “Earth Summit,” which was held in Rio de Janeiro in June 1992. The outcome of this Conference was Agenda 21, a blueprint for sustainable development, which in Chapter 17 deals with oceans issues. It was in Chapter 17 of Agenda 21 that the need to adopt a new agreement on straddling and highly migratory fish stocks was officially endorsed. Every year a new session of the CSD is convened at UN Headquarters in New York and in this political forum member States of the UN can renew their commitment to sustainable fisheries. The CSD has made special efforts to

⁷¹Opened for signature on July 14, 1994. While not yet in force, (the Parties are still in the process of ratifying) all parties having signed the agreement, they have an obligation under international law not to undermine its objectives.

⁷² For suggestions to that end, see K. Kelleher, *Improvement of the Legal Framework for Fisheries Cooperation, Management and Development of Coastal States in West Africa*, FAO Document GCP/RAF/302/EEC.

keep all ocean issues, including those of affected marine living resources, under review.

5. Trade Law Sources of Legal Rights and Obligations

In addition to the environment and resource laws, above, a number of trade laws are relevant for policy and strategic planning. Recall that, in general, liberalisation of trade, by eroding tariff protection, expands market reach; further, that under these circumstances, pressure will be intensified on the stock of nations that fail to impose full costs on vessels fishing their waters. Free trade amplifies local inefficiencies to a global scale. But this does not imply that the remedy is to tamper with trade laws, rather than to move towards fuller cost imposition in all fisheries. An ideal response would consist of improved management, including monitoring and surveillance, etc.—not necessarily the renunciation of free trade.

5.1 Tariff preferences

A specific sector of trade laws with fisheries implications involves the phasing out of tariff preferences. Such a phase-out would have repercussions for all of Africa, inasmuch as African exports to the EU have long been assured access to the EU markets under favourable terms under the fourth Lomé. Of course, these preferences represent a breach of the most-favoured-nation treatment provided for in Article I of the GATT. Assuming the favoured treatment pass, until 29 February 2000, under a special derogation (a "waiver"), granted pursuant to Article IX of the Marrakesh Agreement Establishing the World Trade Organisation, they will have to phase out. Hence, Africa faces losing some competitive advantage—and, ironically, probably faces additional pressure on its fish stocks and marine environment.⁷³

5.2 The anti-subsidy disciplines

Another potential impact of trade laws on the environment is through subsidy disciplines.⁷⁴ The WTO's Code on Subsidies and Countervailing Measures (SCM) provides relief against subsidies by any Member that result in "adverse effects" on other Members. Adverse effects include:

1. injury to the domestic industry of another member;

⁷³See [p. 17] supra.

⁷⁴Trade laws are not the only routes to attack subsidies. Some subsidies might be construed to violate either European Law Art. 130 u-v, and Lomé Title III; further, Art. 5(h) of the Straddling Fish Stocks agreement [not yet in force], obliging Parties to avoid unsustainable use of fisheries resources, might be the basis of an attack on subsidies as well.

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2. nullification or impairment of benefits that a signatory has a right to under the 1994 GATT (say, a bound tariff concession); and
 3. “serious prejudice” to the interests of another member.⁷⁵
 4. The “serious prejudice “ provision is potentially the most significant. Serious prejudice exists wherever
 5. Imports into the subsidiser’s market are displaced or impeded;
 6. the subsidiser’s exports displace other exporters from a 3rd country; or
 7. the subsidiser increases its world market share;⁷⁶
 8. Most potently, under certain circumstances the burden of showing that the subsidy did not have the above effects shifts from the complainant onto the subsidiser. Those circumstances include:
 9. when the total ad valorem product subsidisation exceeds 5%;
 10. when subsidies are designed to cover operating losses by an industry;
 11. when subsidies have been made to cover operating losses by an enterprise (other than one-time measures);
 12. when there has been direct forgiveness of a debt.⁷⁷

What this comes down to is that if a country—to illustrate, N—subsidizes its fishers to an extent exceeding 5% of the value of an exported product, the burden will be on N to show that the effect was not to displace imports from its own markets, not to displace other exporters from a 3rd country, Q ; and not to increase N’s own share of the world market.

The implications for CSRP countries are however unclear. Technically, subsidies by CSRP nations supporting export efforts, or making their own markets less accessible to outsiders, could trigger actions. But it is unlikely that any CSRP nation is practically vulnerable to charges of subsidy to their fleets to fish in their own waters.⁷⁸ This is not to deny that each CSRP member, in common with all nations, would be well advised to review its domestic subsidy policies. Typical catch-capacity enhancing subsidies strain stocks, the environment, and national budgets, all at once. But pressures for reform of West African subsidies are not going to come through the WTO when the subsidies of so many developed nations go unchallenged.

There are further considerations. Subsidies from EU and other DWFNs to their fleets to fish in CSRP waters are vulnerable to challenge under the SCM. But it is doubtful (although worth considering) that any of the CSRP nations could mount a challenge. The problem is that they are (on the face

⁷⁵Agreement on Subsidies and Countervailing Measures (SCM), Art. 6.3. See Gary N. Horlick and Peggy A. Clarke, “The 1994 WTO Subsidies Agreement”. 863 PLI/Corp 683, 714 (1994). Stone, *supra* note 1 at 529.

⁷⁶SCM Art. 6.3.

⁷⁷SCM Art. 6.1.

⁷⁸The status of subsidies by CSRP nations is further complicated by SCM Art. 27: *Differential Treatment of Developing Country Members*, which defers and mitigates the application of subsidy disciplines to less developed countries.

of it) beneficiaries of the EU's largesse.⁷⁹ Even if one of the countries dealing with the EU were so motivated, would it have standing to complain about transfers to underwrite fees that it was voluntarily receiving? If some WTO member is to mount a challenge, it would probably have to be a fish exporter not itself a beneficiary, whose fleets sell to (and are presumably losing shares in) markets in which the EU nations are selling subsidised product from the CSRP nations. Namibia, for example, might have a suit for displacement of Namibian exports by EU-subsidised products taken in CSRP (and other) waters. But this possibility lies outside the range of the CSRP options we are reviewing.

5.3 The Legality of Trade Restrictions Designed to Promote Fisheries Conservation

Another significant intersection of trade law with fisheries management and conservation involves the deployment of measures that may be challenged as inappropriately restrictive under the trade laws. The ability to deploy appropriate measures without hindrance from trade law will be important for regional fisheries management organisation such as CSRP which are struggling to monitor compliance with conservation measures and to enforce them effectively. At the same time, such measures should be defined and implemented so as to take into account internationally agreed-upon trade policy objectives, such as the prevention of unjustifiable discrimination, embodied in trade laws.

Conflicts between fisheries conservation measures and trade rules typically have arisen when a nation has sought to implement or enforce the conservation measures by restricting trade in products raised or caught in violation of the ecologically responsible fisheries practices—for example, bans on the import of fish caught in a manner that disrupts the environment. The starting point is that all import restrictions are facial violations of Article XI, so that the nation imposing them would have to present a defence under Article XX which allows, under certain conditions, a country to maintain a measures otherwise inconsistent with its GATT obligations. (For example, that the measure was undertaken to protect exhaustible natural resources.)

There is some suggestion in part interpretations of the trade rules that such a defence is less likely to be accepted when the manner of harvest (such as the gear employed), rather than the product itself (such as the fish caught) is the target of the objection. This is consistent with a general although not

⁷⁹ However, policy makers should consider whether government revenues from access fees might be outweighed by the damage to the national fisheries sector—in terms of jobs, nutrition and domestic profits—inflicted by the unfair competition from foreign fleets that results from subsidies.

uniform tendency to disfavour all distinctions between otherwise identical products based upon production and process methods (PPMs) that are not related to physical characteristics or end uses of the product itself.⁸⁰ A blanket prohibition of non-product-related PPM distinctions could, however, hinder the use of trade measures that are needed to protect fisheries in today's global economy, where some 40% of the world fish catch is exported; and the method by which this product is taken is so often what the environmentalists are concerned about. In fact, restrictions on imports of fisheries products based on how they were harvested have already sparked three of the leading trade and environment disputes to date: the Mexican GATT challenge to the US ban on tuna (Tuna/Dolphin I), the EU GATT challenge to the same US law (Tuna/Dolphin II), and the recent WTO case in which India, Malaysia, Pakistan and Thailand challenged a US ban on shrimp caught without turtle excluder devices (Shrimp/Turtle). While these cases present an array of complex issues, in each of them the PPM-based import restriction was found to violate GATT principles, in particular the principle against quantitative restrictions (Article xi).⁸¹ Notably, however, the appellate body decision in the shrimp/turtle case does not rule out the possibility that some PPM- based trade measures could be justified as an exception to GATT principles under Article XX.

From the trade policy perspective, a blanket prohibition on trade restrictions that distinguish between products based on non-product-related PPMs is a simple, if over-inclusive, rule for guarding against three evils: protectionism, parochialism, and eco-imperialism. It forbids protectionist regulations that could be based on arbitrary or otherwise problematic rationales that undercut the principle of comparative advantage (for instance, regulations prohibiting products produced by workers earning less than a certain minimum wage). It blocks countries from designing PPM-based regulations based on a well-intentioned but parochial understanding of what is environmentally sound that is derived from domestic ecological conditions but does not apply to conditions in distant countries. And it guards against what has been called "eco-imperialism," in which a country with strong purchasing power conditions access to its markets upon compliance with its environmental standards, putting economic pressure on

⁸⁰For further discussion, see DOWNES, INTEGRATING IMPLEMENTATION, *supra n.* 63; and DAVID R. DOWNES AND BRENNAN VAN DYKE, FISHERIES CONSERVATION AND TRADE RULES: ENSURING THAT TRADE LAW PROMOTES SUSTAINABLE FISHERIES 10-12 (CIEL/Greenpeace 1998). An exception to the general suspicion of non-product-related PPM-based distinctions is found in the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), which explicitly requires governments to distinguish between identical products according to whether the producer possessed legitimate intellectual property rights over the product or production process.

⁸¹Notably, however, the appellate body decision in the shrimp/turtle case does not rule out the possibility that some PPM- based trade measures could be justified as an exception to GATT principles under Article XX.

other countries (frequently less developed than the importer) to match those standards or lose market access.

The GATT and WTO cases that have found PPM distinctions in violation of GATT principles have concerned trade restrictions imposed by a country unilaterally in the service of conservation. The concerns that motivate suspicion of PPM-based measures are, however, largely irrelevant to trade-related measures taken pursuant to multilateral agreements. Trade measures agreed to by the numerous parties to multilateral agreements are highly unlikely to reflect protectionist, parochial or eco-imperialistic rationales or motivations. Perhaps for this reason, there has never been a challenge under the GATT or WTO to a trade restriction specifically authorised by a multilateral environmental agreement (MEA). As a political matter, the chances of a future challenge are unlikely. Yet in light of past cases interpreting WTO rules to forbid PPM-based distinctions, it might be useful to clarify the extent to which trade related conservation measures deployed pursuant to MEAs are consistent with WTO rules, in order to avoid confusion or a “chilling” effect that prevents policy-makers from employing useful measures to accomplish environmental goals. In addition, it will be important to strengthen the confidence and competence of these fisheries management institutions such as RFMOs to continue elaborating and using trade measures.

One key MEA for fisheries is CITES, which regulates trade in species as needed to prevent their extinction. Under CITES, Parties take multilateral decisions to list species on the CITES Appendices; Parties are legally obligated to restrict trade in specimens of listed species.⁸² While a number of marine species are listed under CITES, including species of sea turtles, whales and corals, there has been resistance to the listing of fishes that are subject to large scale commercial harvesting.⁸³

CITES, of course, is a plenary international instrument. But the same considerations apply to regional multilateral agreements, most importantly regional fisheries management organisations (RFMOs). Enforcement has always been a severe problem for these organisations. Trade measures are among the most effective enforcement mechanisms available in international law. Accordingly, two RFMOs have recently begun to develop trade measures to support enforcement.⁸⁴ Such measures should be a part of

⁸² Appendix I bans commercial trade of species that are or may be threatened by trade. Appendix II requires strict regulation of species that may become threatened unless trade is regulated. These determinations are to be made on the basis of the biological status of the species.

⁸³At COP-10 in 1997, the Parties rejected a proposal to set up a working group on marine fish species that would discuss large-scale commercially harvested species and the possible application of Appendix II. See CITES Doc. 10.60.1.

⁸⁴The International Commission for the Conservation of Atlantic Tunas (ICCAT), at its annual meeting in 1996, authorized parties to impose trade restrictions against non-parties that failed to comply with

the toolkit available to RFMOs, just as for MEAs, particularly since the objections that are amplified against unilateral action are muted when the measures are agreed through a multi-national process. Yet the doctrinal resistance of the trade community to trade restrictions could get in the way. So could the resistance of DWFNs. It may thus be advisable to clarify, within the WTO, the power of RFMOs, such as CSRP, to implement trade measures as a crucial means to stabilise fishery conservation agreements.

5.4 Eco-labelling

Eco-labelling of fish products is perhaps the least intrusive market incentive that could be used to encourage a shift to sustainable fishing. Under eco-labelling, product from fisheries managed in agreed upon ecologically sensitive ways--assuring, for example, that environmentally harmful gear was not employed, or that OBY or MEY was observed. Yet even eco-labelling is making limited headway. Partly, this is because of the difficulty of agreeing to, and the anticipated problems of monitoring observance of, "green" (eco-label worthy) criteria. And partly, there is industry resistance. But in considerable measure, the impediment to eco-labelling is another trade law problem. This is because eco-labelling of products from biological resources such as fisheries is ordinarily referred to as distinctions about PPMs, and such distinctions are frowned upon at the WTO, as discussed above. Developing countries in particular are concerned that eco-labels may shift consumer preferences in industrial country markets at the expense of developing country producers, which are less able to pay the cost of obtaining certification and complying with expensive production measures needed to protect biodiversity or other aspects of the environment.

Trade rules may affect eco-labelling because product standards and labels are subject to the Agreement on Technical Barriers to Trade (TBT Agreement), one of the agreements that bind WTO members.⁸⁵ In the WTO Committee on Trade and Environment, as well as the WTO Committee on Technical Barriers to Trade, WTO members have had a number of inconclusive discussions of eco-labelling. There have been suggestions that eco-labelling of products from biological resources such as fisheries is inconsistent with trade rules, because eco-labels of such products are typically awarded based on an evaluation of the products' PPMs, and PPM-based distinctions have been frowned upon in trade policymaking, as discussed above. The TBT Agreement itself may, however, contain the

ICCAT catch limits. Parties to the 1980 Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), at their most recent meeting in 1998, authorized parties to require certificates of origin for the import of Patagonian Toothfish, in order to monitor trade volumes and thereby improve monitoring of compliance with catch limits.

⁸⁵ The Agreement on Sanitary and Phytosanitary Measures (SPS Agreement) may also be relevant. Indeed, opponents of eco-labelling may seek to categorize eco-labelling under this agreement because it may support interpretations of trade principles that are less favorable to eco-labelling.

seeds for resolving the controversy, through its provisions for deference to product standards based on international standard, and through preambular language acknowledging that countries should be able to take appropriate measures to protect the environment.

The TBT Agreement seeks to prevent the use of technical regulations and standards as disguised measures to protect domestic industry. It also seeks to encourage harmonisation in order to lower barriers to market access. It is unusual in trade law in that it applies not only to mandatory requirements--termed "regulations"--but also to voluntary requirements, termed "standards." Even more unusually, the TBT Agreement applies indirectly to such standards even when they are developed and applied by private organisations within their territories as well as regional bodies of which they or bodies within their territories are members.⁸⁶ Standards and regulations covered by the TBT include not only those for products themselves but also those relating to packaging and labelling.

Although the TBT's language is not entirely clear, it appears that it covers standards and regulations that pertain to a product's PPM. Thus, they would cover eco-labelling schemes as they are usually proposed for fish products. Given the past prevailing hostility in trade circles to PPM distinctions, this poses a risk that the TBT agreement could be used to interfere with eco-labelling schemes. The risk is heightened by the fact that the TBT does not include an explicit exception to its requirements along the lines of Article XX of the GATT. However, it can be argued that language in the agreement's Preamble indicates that TBT requirements should be interpreted so as to allow an exception for eco-labelling that involves PPMs.⁸⁷ But this is unresolved.

As with other trade-related measures, eco-labelling based on an international process could address the concerns the PPM rule is designed to prevent. Currently there are at least two international eco-labelling efforts underway involving fish products, including the Marine Stewardship Council and the Marine Aquarium Fish Council.

Such efforts could be accommodated within the trading system. The TBT Agreement provides for recognition of international standard setting bodies. Standards set by such organisations receive deference under the TBT. If the

⁸⁶ Under Article 4, paragraph 1 of the TBT agreement, WTO members "shall take such reasonable measures as may be available to them to ensure that local government and non-governmental standardizing bodies within their territories, as well as regional standardizing bodies of which they or one or more bodies within their territories are members, accept and comply" with the "code of good practice for the preparation, adoption and application of standards in Annex 3 to [the TBT agreement]."

⁸⁷ The Preamble states that countries should not be prevented from taking measures necessary to protect human, animal or plant life or health, or the environment, at the levels they feel appropriate.

WTO recognises the right body then the WTO could operate to leverage rather than block the impact of the eco-labelling standards.

Of course, the eco-labelling body recognised as authoritative must be satisfactory from the perspective of conservation and sustainable use as well as of trade. The body must be impartial in both setting and applying standards. This requires both balanced stakeholder participation and strong technical and scientific input. It must develop good criteria for ensuring chain of custody, and fair, efficient yet rigorous procedures certifying applicants. It must be international, and must consider the special situations of developing countries as well as small firms and artisanal producers. Finally, its members should be committed to the goal of sustainable fishing, a criterion bound to spark controversy among firms eager to gain the cachet of the label yet unwilling to commit to rigorous, costly production and processing standards.

5.5 Alien Species

Across the world, introduced varieties or species of fish, and introduced pests and diseases, are major risks to native fish and marine ecosystems. These risks are most important, of course, for major importers of fish products, or for countries that import populations of fish, larvae, or eggs for use in fish farming. West African countries do not currently appear to fall within these categories.

Strange as it may seem, here, too, uncertainties in the trade law casts their shadow over formation of a fitting response. In this area, the problem is rooted in the WTO Agreement on Sanitary and Phytosanitary Measures (SPS Agreement). This is because keeping out alien species, etc., often requires keeping out foreign products, in which “immigrant” pests may ride. The SPS is the WTO’s effort to prevent such measures from constituting protectionist or discriminatory trade barriers, and to manage disputes arising from exporter challenges to barriers raised by importers in the name of protecting human and non-human health. The SPS is complex enough to merit separate treatment. Here we wish only to flag a possible conflict between the presumptions and burdens of the SPS rules, on the one hand, and the precautionary principle, on the other. The SPS rules, in general, place the burden on a Member whose restrictions are allegedly motivated by environmental concerns; the WTO has claimed that the precautionary principle “is reflected in” the SPS, but it is open to doubt whether its decisions are truly consistent with how the precautionary approach is defined and required in other environmental contexts.⁸⁸ Hence, there is a

⁸⁸ In its 1998 decision in a dispute between the European Union and the United States, the WTO Appellate Body noted that the precautionary principle “is reflected in” the preamble and Article 3.3 of the SPS Agreement. See *EC Measures Concerning Meat and Meat Products (Hormones): A report of the*

possibility that the development of laws needed to protect against alien species will be retarded by the threat of challenge under the SPS Agreement.

5.6 Investment Liberalisation

It is worth noting that even trade-law driven liberalisation of investment has the potential to interfere with local best-efforts to manage fisheries in a socially responsible manner. This is because the aim of investment liberalisation is to over-ride domestic restrictions on investment; but some domestic restrictions, at least in form, favour existing users over new entrants, or that favour local people over foreigners. In fishing, such restrictions on access by foreigners may be defended on the basis of preserving artisanal fishers, whose persistence is seen as desirable not only socially and culturally, but also perhaps as more environmentally benign. For West African nations with significant artisanal fishing sectors, the potential for investment liberalisation to clash with legal protections warrants concern. Similar restrictions favouring national users were indeed struck down under similar rules in the EU in a dispute between the United Kingdom and Spain.⁸⁹

A clash with investment liberalisation is a long term rather than imminent risk. Negotiations on the proposed Multilateral Agreement on Investment (MAI) have ended without agreement. (The draft MAI produced in the OECD talks would have obligated countries to treat foreign and domestic investors equally.) At this point, some countries have indicated a propensity to include investment in the “Millenium Round” of WTO negotiations scheduled to start in 2000; other countries oppose the idea, so that the outcome, and much more any agenda, remain uncertain. The implications for fisheries are uncertain—and a final item worthy of attention.

6. Conclusion

The living marine resources of the CSRP waters are a potential long term asset—as a source of local protein, foreign currency, and basis for employment.

Appellate Body, WTO, WT/DS26/AB/R, WT/DS48/AB/R ¶ 124 (January 16, 1998). The decision could be read, however, to interpret the SPS Agreement to require a WTO Member to justify an SPS measure by demonstrating that the substance affected by the import restriction poses an identifiable risk to human, animal or plant health. *Id.* at paras 201-209. In contrast, food safety regulation has often employed a more precautionary approach in which a substance must be demonstrated to be safe before it can be added to the food supply. If the Appellate Body applies a similar approach in the area of environmental regulation it could well conflict with the growing trend toward a precautionary approach that requires those who introduce a new substance into the environment to demonstrate its safety.

⁸⁹ See DAVID R. DOWNES AND BRENNAN VAN DYKE, FISHERIES CONSERVATION AND TRADE RULES: ENSURING THAT TRADE LAW PROMOTES SUSTAINABLE FISHERIES 46 (CIEL/Greenpeace 1998).

However, in common with most of the world fisheries, stocks are being exploited at excessive levels. The contribution fish can make to the coastal state economies in the future is in doubt. Even if commercial stocks do not crash, catches will continue to dwindle.

A number of factors have increased pressures on stocks (which translates into pressure on non-target species). These include advances in technology, pre-eminently high tech factory vessels, and the expanded market for shrimp, with its high rate of discard and other environmental damage. Indeed, a general liberalisation of trade is playing a role in stock decline, by fostering the expansion of all product markets. This is a trend with undeniable benefits in an ideal world. But in circumstances in which property rights are insecure (as with under-managed fish stocks), trade liberalisation magnifies inefficiencies: production is tilted towards typically poorer regions that producers can drain without bearing the full social costs of production. These regions are subject to a quick plunder--and then abandoned.

The way to arrest this plunder is to impose the full social costs of fishing on the fishers. And "full costs" should include, as well as the costs of future diminution in commercial harvest, the costs that the activity imposes on the environment, including damage to non-target stocks and biodiversity not measured in market prices. That is why we recommend the adoption of OBY (optimum biological yield) in place of MBY or even MEY as the management target.

Imposition of full social costs would reduce the pressure on fish stocks. Reduced pressure, in turn, would allow stocks to rehabilitate, enhancing production in the long term (and be more favourable to the environment).

There are many devices available to fisheries managers that would, if deployed, advance this goal. Catch-stabilising measures would include access-reducing measures, such as seasons, vessel and gear limitations, and so on (at least for a reprieve period), as well as the establishment of marine sanctuaries, and, perhaps, the institution of tradable quotas.

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Several impediments frustrate implementation of effort-reducing, stock-enhancing management measures. The first is that the CSRP states, in common with many developing coastal nations, lack the capacity to monitor compliance with any rigorous fisheries measures they might pronounce. The second is that the long term benefits of robust stocks are heavily discounted in the face of short-term urgencies. As long as the coastal nations remain burdened with debt and a lack of alternatives, there will be strong pressure

to "sell off" future stock (and the viability of artisanal communities) in exchange for foreign exchange, aid, and tariff preferences.

This means that any effort to relieve pressure on stocks must be sensitive to the economic plight of the coastal states. Are there any ways to reduce pressure on stocks with minimal sacrifice of near-term benefits? One possibility is for the CSRP to bargain with the EU and other DWFNs through a joint selling agency (along the lines adopted by the FFA). Ideally, this would counteract some of the leverage the EU exploits by acting as sole purchasing agent in acquisition of rights on behalf of its members. The establishment of such a joint negotiating agency would certainly be a logical extension of the CSRP structure, particularly as advanced by the recent Convention Regarding the Determination of Conditions of Access to and Exploitation of Fish Resources off the Coasts of the Member States. And, indeed, under the Lomé Convention the EU is obligated to "support moves by ACP coastal States towards harmonised arrangements for access for fishing vessels." (Art. 66). Undoubtedly there are political obstacles to clear in moving from minimum terms to a joint agency. But fashioning a united front in the sale of access rights could form the basis for regional co-operation in other areas. And, indeed, if a united bargaining front is presently unachievable, a united front might take the form of agreed-upon standard conditions in access agreements, such as proposed by the European Parliament Committee on Fisheries.⁹⁰

Moreover, the response to the fisheries plight is not a matter, simply, of political advantage. The plight of the world's fisheries is nested in legal rights and duties that emanate from many conventions. Not all rights need be pressed to advantage. For instance, while the subsidisation of the DWFN fleets—one of the causes of excess fishing—might violate some nation's rights under the WTO's subsidies disciplines, no state has an obligation to pursue its claims.

But while rights can be waived, the duties that flow from international agreements cannot be shrugged off. Some of the harvest-affecting duties are international obligations that fall on the coastal states. These include the obligations of the Convention on Biological Diversity (CBD) which, as we read it, reinforces, among other duties, regulation biodiversity-harming levels and methods of fishing activity. Also included are the obligations of the UNCLOS and (subject to ratification) the Straddling Stocks Agreement, both of which codify duties on coastal states, their RMFOs, and fishing nations to co-operate in maintaining stocks at sustainable levels.

⁹⁰Peter Duncan Crampton, Rapporteur, *Report on International Fisheries Agreements*, European Parliament Committee on Fisheries, (22 April 1997). DOC_EN\RR\325\325454 A4-0149/97.

Indeed, the choice whether to fish sustainably or to risk depletion is not a question for the coastal states alone, even recognising their legal sovereignty over their resources. Insofar as resource depletion is conducted through the actions of other (non-coastal) states, the obligations of those states come into play. For example, the impact the EU fishing agreements in African waters arguably violates the duties the EU DWFNs have under the Maastricht Treaty. Specifically, article 130 is supposed to ensure "coherence", that is, that EU initiatives do not frustrate development goals in developing countries. In like vein, the Lomé agreement obliges the Community to co-operate in promoting optimum utilisation of fishery resources and to increase the involvement of the ACP states in exploitation of fishery resources in their EEZs. The ACP states are also to benefit from Community assistance in fishery development in the form of environmental monitoring and rational management, as well as co-operation in the training of ACP nationals to manage all areas of fisheries. Would it not be wise, and just, to call upon the EU to live up to its obligations?

6.1 Can harmonisation help?

In the course of addressing the problems facing the West African fisheries, we have observed suggested four ways in which Parties to the CBD and Members of the WTO could enhance complementarities and defuse conflicts between the CBD and the WTO. These involve (i) assessment of impacts on marine biodiversity, (ii) guidance on ecosystem-based approaches to fisheries management, (iii) reduction of subsidies that encourage unsustainable use of fisheries and distort trade, and)iv) the control of alien species that threaten marine ecosystems.

- (i) Projected work under the CBD on the assessment of impacts on marine and coastal biodiversity could include consideration of the impacts of trade. At its fourth meeting in 1998, the Conference of Parties (COP) called on the SBSTTA and the Secretariat to promote development of guidelines and indicators for assessment of the status of marine and coastal ecosystems by the year 2000.⁹¹ This effort could complement work within the WTO, principally in the Committee on Trade and Environment, on the effect of environmental measures on trade.
- (ii) Work under the CBD to develop guidance on ecosystem-based management of marine living resources could relate to trade if compliance with such guidelines were encouraged through the use

⁹¹ U.N. Environment Programme, Convention on Biological Diversity, Conference of the Parties, Decision IV/5, Annex, Part C (page 89) (Doc. No. UNEP/CBD/COP/4/27) (Web location <www.biodiv.org>).

of trade-related mechanisms, such as the use of eco-labelling of fisheries products as a market-based incentive for sustainable use.⁹² The development under the CBD of guidelines for management standards and for incentives for compliance, as a multilaterally based approach, could defuse fears of developing countries that trade-related conservation measures are protectionist or unfairly restrict market access. In addition, the CBD provides for financial and technological assistance to developing countries for implementation, although developed countries have yet to fulfil their obligation to provide adequate resources.

- (iii) A significant opportunity for complementary implementation also arises with respect to subsidies in the fishing sector. Subsidies for both distant water fleets and fleets in within national jurisdiction encourage overexploitation of fisheries and concomitant damage to non-target species and marine ecosystems; they also distort markets and conflict with principles of trade liberalisation. Article 11 of the Convention on Biological Diversity requires Parties to create economically sound incentives for sustainable use and conservation, and the last COP encouraged Parties to identify and consider the removal or mitigation of perverse incentives trade. The WTO agreement on subsidies provides mechanisms for challenging subsidies that affect trade, and WTO Members have discussed whether to reach a further understanding on the reduction of fisheries subsidies. Progress in reducing these subsidies would simultaneously implement both the CBD and the WTO agreement on subsidies.
- (iv) Finally, the introduction of alien species is a trade-related problem that poses a significant threat to marine ecosystems. Article 8(h) of the CBD requires Parties, as far as possible and as appropriate, to prevent the introduction of, control or eradicate alien species which threaten ecosystems, habitats or species. At the same time, the WTO's Agreement on Sanitary and Phytosanitary Measures limits the power of Members to restrict imports in order to protect against alien species on the ground that they threaten the environment or plant or animal health. While there is a potential for conflict between these provisions, with their diametrically opposed perspectives, there is also a potential for complementary efforts on

⁹² COP-4, held in 1998, called on the Secretariat to establish an interagency task force of international institutions with relevant mandates to promote the "identification and development of ecosystem approaches compatible with the sustainable use of marine and coastal living resources." *Id.* at 90. The COP also encouraged Parties to identify underlying causes of reduction of biodiversity and develop supportive legal frameworks for incentives. *Id.* at 116 (Decision IV/10).

their implementation. For instance, COP-4 of the CBD called on the Secretariat and the SBSTTA to identify gaps in existing legal instruments and guidelines aimed at preventing introduction and controlling impacts of alien species and genotypes on marine and coastal ecosystems.⁹³ By building a base for minimum standards for controlling introduction of alien species, including deliberate introductions through imports as well as inadvertent introductions of pests and stowaways, this work could complement the implementation of the SPS Agreement, which limits the regulatory power of governments in this area. Furthermore, national measures based on such multilaterally developed standards would receive deference as based on international standards under the SPS Agreement, in the event of any trade conflict.

⁹³ *Id.* at 93 (Decision IV/5). This survey is to be carried out in cooperation with relevant international organizations such as UNEP, the International Oceanographic Committee and IUCN. A global conference is proposed to be held by 2000. The intent is to lay the groundwork for a global strategy for addressing alien species and their impacts.