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### Fishery Subsidies and the WTO

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In July of 1999, as this book was going to press, momentum was building among members of the World Trade Organization (WTO) to include the issue of environmentally harmful fishery subsidies on the negotiating agenda for a new round of WTO talks. If the issue is included in the next round, it will constitute a potential watershed for the WTO, representing the first time the WTO has acted in serious pursuit of “win-win” outcomes for trade and sustainable development.

The economic and environmental illogic of many fishery subsidies should make addressing them within the WTO seem an obvious proposition. But the issue has been controversial from a variety of perspectives. Remaining questions range from lingering doubts professed in some quarters about the need for international action on fisheries subsidies at all, to more serious questions about the need for action within the context of the multilateral trade system.

This chapter provides some basic background on this rapidly evolving issue, beginning with an overview of the nature of the fishery subsidies problem, then moving through a brief critical examination of existing international disciplines on fishery subsidies, and closing with some preliminary thoughts about the potential for future WTO fishery subsidies disciplines.

## 1. The nature of the problem

Fish caught in the oceans of the world provide a vital food source to billions of people, and an essential livelihood to fishermen and fishing communities on every inhabited coastline. But the world's fisheries are in trouble. In 1996, the UN Food and Agriculture Organization (FAO) estimated that 60 per cent of the world's fisheries are overexploited or already exploited at maximum rates.<sup>1</sup> One major factor contributing to this fisheries crisis is the simple fact that there are too many fishing boats chasing too few fish. In fact, some experts have estimated that the world's fishing fleets have nearly two and a half times the fishing capacity needed to harvest fish stocks in an economically optimal and environmentally sustainable manner.<sup>2</sup> What keeps so many fishing boats afloat, even as fish stocks shrink? In many cases, the answer is huge government payments that promote excess harvesting capacity and reward unsustainable fishing practices. These subsidies, many of which are administered in open violation of existing international trade rules, constitute a profound failure of both economic and environmental policy.

### The range and scale of subsidization

The practice of providing governmental support to the fishery sector is widespread among major fishing nations. Although precise data remain elusive—obscured by a universal lack of transparency in subsidy regimes—the basic facts are not much in doubt. Governments around the world are providing billions of dollars in subsidies annually to the fishery sector, for a wide variety of purposes, and in many different forms. Although smaller in absolute amounts than, for example, subsidies to the agricultural sector, these payments are conservatively estimated to be roughly 20–25 per cent of the annual revenues of the commercial fishing industry.<sup>3</sup>

Subsidies commonly granted to the fishery sector include:<sup>4</sup>

- grants, low-cost loans, loan guarantees, or tax incentives to promote vessel construction or repair, or the acquisition or modernization of fishing gear;
- price supports for fish and fish products;

- grants, low-cost loans, or other financial benefits to support the transportation or processing of fish or fish products;
- income or wage supports, or unemployment or other social benefits for fishermen and their families;
- export promotion programmes;
- provision of discounted or free marine insurance;
- governmental promises to reimburse vessel owners for fines or impoundments imposed by foreign authorities;
- construction or maintenance of port facilities;
- construction or maintenance of housing or other community infrastructure specifically for fishermen;
- provision of fuel or of tax credits or other rebates to offset the cost of fuel;
- provision of access rights to domestic fisheries, or payment or subsidization of payments for access to foreign fisheries;<sup>5</sup>
- government campaigns to promote consumption of fish and fish products;
- grants to support research and development of fishery technology;
- grants to support fisheries management;
- vessel buy-back programmes;
- worker retraining.

Naturally, not all of these subsidies should be considered harmful or illegitimate. The key distinction is between those subsidies that promote unsustainable fishing (especially by encouraging overcapacity or excess effort) and those that promote a transition to sustainable fisheries (especially by encouraging reductions in capacity and effort, by encouraging environmentally responsible fishing techniques, or by promoting sustainable community development).<sup>6</sup> This distinction is not always easy to apply. Is an income support programme helping a depressed fishing community adjust to new limits on the available resource, or is it artificially maintaining the workforce for an oversized national fleet? Is a vessel buy-back programme truly reducing total effective capacity, or is it just a shell game that moves boats around while promoting additional investments in fishing capital? Is a gear modernization programme helping fleets adopt cleaner fishing practices, or is it just underwriting operating costs? Questions of this kind will have to be confronted in

detail by any serious scheme to reduce harmful fishery subsidies. But in assessing the adequacy of current international rules, it is enough to begin with the widely accepted fact that “capacity-enhancing” subsidies greatly outweigh “capacity-reducing” or “conservation” subsidies in the fishery sector.<sup>7</sup>

Lack of transparency in the administration of fishery subsidies has also made it difficult to discover exactly how much subsidization is going on. Different estimates have been offered by a variety of experts. One commonly cited figure—based on data published by the FAO in 1992—puts annual fishery subsidies in the range of US\$54 billion.<sup>8</sup> But this FAO figure was not a direct estimate of known subsidies. Rather, the FAO calculated the difference between the gross revenue to the worldwide commercial fishing fleets (value of landed catch) and their total estimated annual operating and capital costs. The result was a “deficit” of US\$54 billion. The portion of this deficit met through government support has been speculated to range from half to all.<sup>9</sup> Another observer has argued that the US\$54 billion figure “could be off in either direction, depending upon how one resolves uncertainties both in data and in definition.”<sup>10</sup> The WTO Secretariat has succinctly concluded: “Even if these figures are not universally accepted, they cannot be ignored.”<sup>11</sup>

A more direct effort to calculate fishery subsidies—perhaps the most comprehensive effort to date—is found in a 1998 World Bank technical paper by Mateo Milazzo, an official of the United States National Marine Fisheries Service.<sup>12</sup> Milazzo analysed public data about the budgets and practices of fisheries agencies from selected fishing countries, and concluded that worldwide fishery subsidies total between US\$14.5 and US\$20.5 billion annually.<sup>13</sup> Milazzo’s bottom line excludes subsidies aimed at reducing overcapacity, and Milazzo admits he omitted potentially significant sources of governmental support from the scope of his review. He concludes that his estimates “probably err on the low side, perhaps by a considerable margin.”<sup>14</sup>

These and other efforts to examine fishery subsidization are all necessarily general and imprecise. Exercises are now under way in various forums—including the FAO, the Organization for Economic Cooperation and Development (OECD), the Asia-Pacific Economic Cooperation Conference (APEC), and domestically within several countries—that may add substantially to the available data. For the moment, it is safe to

assume that subsidies to the fisheries sector amount to many billions—and perhaps tens of billions—of dollars per year. This is a staggering level in an industry whose total revenues are in the range of US\$70–80 billion.<sup>15</sup>

### The links to fisheries depletion and trade distortion

Subsidization on the scale described above unavoidably raises the level of industry-wide capitalization and fishing effort, with consequent pressures on the resource base.<sup>16</sup> A stark fact suggests that subsidies are playing a significant role in fisheries depletion: the world's most depleted fisheries are often those that are dominated by fleets from countries with the largest fishery subsidy programmes. Despite occasional voices to the contrary, the conclusion that subsidies help drive fishing overcapacity pervades the literature from both official and non-governmental sources.<sup>17</sup> Those who argue otherwise have generally failed to explain how such massive infusions of income could do otherwise than encourage the growth or maintenance of capacity. And the historical fact remains that subsidies to the fishery sector have gone hand in hand with a dramatic expansion of fishing capacity and with the collapse or threatened collapse of many of the world's principal commercial fisheries.<sup>18</sup>

Still, in the debate over how best to address the world's fisheries crisis, there are some who argue that subsidies should not be considered a problem in themselves. Rather, they hold, the fundamental cause of both overcapacity and overfishing is the failure of governments to impose proper limits on permissible catches of fish. According to this view, if you limit legal takes of fish, excess levels of capacity and subsidization become the financial problems of businesses and governments, but not the cause of overfishing. This argument merely begs the question, however. Even if the fundamental cause of overfishing is the failure to manage fishing effort, this hardly means that subsidies on the order of 20–25 per cent of industry revenues ought to be ignored. The scope of the fisheries crisis requires the use of every tool reasonably available to reduce unsustainable fishing effort. Fisheries management regimes will not reach their full potential overnight. And even the best management regimes will be subject to problems of compliance and long-term politi-

cal stability. Capacity-enhancing subsidies will serve only to maintain special interest constituencies that may not always favour the rapid development, smooth functioning, or longevity of effective management regimes.

Besides, a serious effort to address fisheries subsidies would necessarily include increased attention to fisheries management issues. Clarification of the economic issues surrounding subsidies would contribute to more transparent and rational approaches to management, and would help highlight the need for husbandry of marine resources. Similarly, the subsidies discussion could help bring a new level of political attention to fisheries issues more generally. Meanwhile, at the international level, agreeing new management regimes will depend in part on the ability of fishing nations to negotiate the allocation of fishing rights. A shared view of the legitimate levels of government support for fishing fleets and communities would help establish the proper context for such allocations. This last point is especially relevant where the evolution of developing-country fisheries is concerned. And finally, environmentally positive subsidies will likely be required to assist in the transition to sustainability. International cooperation on the definition, provision, and administration of those subsidies would be a useful input into discussions about improved management.

The trade impacts of fishery subsidies have also been the focus of increasing attention. Although the fishery sector is not especially large in comparison with the global economy, its economic and social importance is not slight. Fish trade represents a significant source of foreign currency earnings for many developing countries—a dependency that is increasing steadily.<sup>19</sup> Unfortunately, current empirical knowledge about the trade consequences of fishery subsidies is thin. But it has been broadly accepted that subsidies as large as those now granted to various national fishing industries must have significant impacts on the international market.<sup>20</sup> In any case, concern with the trade implications of fishery subsidies has been rising.<sup>21</sup> A recent commitment by Pacific Rim nations gathered under the auspices of APEC to address fishery subsidies as a priority trade issue is further evidence of this growing consensus. As the WTO Secretariat has put it:

Although the precise identification and quantification of subsidies in the fisheries sector has not yet been fully undertaken, consensus exists that fisheries subsidies are widespread, trade distorting and undermine the sustainable use of fish resources.<sup>22</sup>

## 2. Existing disciplines on fishery subsidies

Many subsidies to the fishery sector make such little economic or environmental sense that it is easy to wonder why governments do not simply reduce them without the need for external disciplines. But fishery subsidies have tended to prove the basic rule that government economic supports are politically much easier to initiate than to terminate. This does not mean that governments always prove unable to make hard choices. Countries such as Iceland, New Zealand, and Norway have already demonstrated that, with sufficient national will, harmful fishery subsidies can indeed be eliminated one country at a time. But the fact remains that—as in other sectors such as agriculture—fishery subsidies will likely need to be reduced in the context of concerted international action to do so. Despite the arguments of many classical economists—who would urge governments to reduce subsidies simply out of prudent national policy—governments and industry participants alike often believe that the reduction of their own subsidies will leave them at a competitive disadvantage, unless other countries do the same. “No unilateral disarmament!” is thus a war cry frequently heard.

Currently, the only international disciplines directly applicable to fishery subsidies are those contained in a new non-binding “plan of action” recently adopted by the FAO, and the binding but more general rules about subsidies maintained by the WTO system.<sup>23</sup> Each of these is discussed briefly below.

### The FAO International Plan of Action

In February 1999, the FAO’s Committee on Fisheries adopted the first international instrument specifically aimed at reducing overcapacity in the fishing industry. The International Plan of Action for the Manage-

ment of Fishing Capacity (IPOA) is a non-binding agreement under which FAO members volunteer to assess levels of capacity in their national fishing fleets, and then to come forward with plans for the management of that capacity. The IPOA singles out subsidies as a potentially negative factor and calls on countries to assess the impacts of their own subsidies and to “reduce and progressively eliminate” those that contribute to overcapacity.<sup>24</sup> The IPOA also instructs the FAO Secretariat to collect “all relevant information and data” about such subsidies.<sup>25</sup>

The FAO IPOA represents a significant step for the international community. If fully implemented, the IPOA could go a long way towards resolving the fishery subsidies problem. There are, however, several reasons most observers have been cautious in their hopes that the IPOA will fully deliver.

First, the voluntary nature of the IPOA is explicitly stated in its leading paragraphs,<sup>26</sup> and is repeatedly emphasized in the hortatory language of its key provisions. In the absence of binding obligations (and of any enforcement mechanism), it is reasonable to fear that implementation of the IPOA may suffer the very imperfect fate of so many other hortatory international agreements.

Second, although the IPOA will offer a forum for developing international consensus on the definition and measurement of fishing capacity,<sup>27</sup> it is unclear to what extent this will prove a fruitful opportunity for dealing with a number of the difficult technical and political details specific to the subsidies problem.

Third, even if the IPOA produces increased consensus about the nature of the problem, it is poorly designed to produce strong international solutions to the subsidies issue—particularly where competitive interactions among national fleets are perceived. The IPOA relies on a model of simultaneous but unilateral actions by fishing nations to manage capacity. No provision is made for ensuring the mutuality of subsidies reductions.

Fourth, the IPOA is relatively weak in dealing with the export of fishing capacity<sup>28</sup> and with the impacts of distant water fleets<sup>29</sup>—both areas in which fishery subsidies can play a particularly negative role.

Finally, rational management of the fishery subsidies issue will require attention to their trade impacts. The IPOA does not deal with this



dimension of the issue, and several governments were adamant during the IPOA negotiations that such questions be left to the exclusive jurisdiction of the WTO.

In short, with some FAO members still quite resistant to any serious conversation about subsidies—even in the relatively safe context of efforts to manage capacity—the voluntary and often vague provisions of the IPOA may simply prove too narrow and too weak to impose real disciplines on fishery subsidies in the near term. This does not mean governments or advocates should relax their interest in full implementation of the IPOA, but only that the IPOA alone may prove an insufficient instrument.

### Current WTO rules

Currently, the only binding international legal disciplines on fishery subsidies are those administered by the WTO. The multilateral trading system has long considered subsidies as potential non-tariff barriers to trade. Although initial limits on subsidies under the General Agreement on Tariffs and Trade (GATT) (1947 version) were relatively weak, the rules have undergone steady evolution, particularly since the 1970s. At present the core multilateral subsidies disciplines are set forth in the WTO's Agreement on Subsidies and Countervailing Duties ("Subsidies Agreement"), except for agricultural subsidies, which are covered by the Uruguay Round Agreement on Agriculture ("Agriculture Agreement").<sup>30</sup> Despite some obvious similarities between agricultural and fisheries subsidies, fisheries products were specifically excluded from the terms of the Agriculture Agreement.<sup>31</sup> Thus, since 1994, fishery subsidies have been subject to the general limits of the Subsidies Agreement.

#### *The right to challenge*

Unlike the Agriculture Agreement—which provides a framework for the specific control and phased reduction of agricultural subsidies—the WTO Subsidies Agreement provides only a set of general rules and an adversarial form of control. Under the Subsidies Agreement, a narrow class of subsidies is "prohibited" (so-called "red light" subsidies), while another narrow class is explicitly permitted ("non-actionable" or "green

light” subsidies). The majority of subsidies fall into a middle category of “actionable” (“amber light”) subsidies, which can be subject to challenge if they cause certain kinds of harm to the complaining party.

The “red light” and “green light” categories appear to have only limited applicability in the fishery sector. The only subsidies prohibited outright by the “red light” are those directly promoting either export performance or import avoidance (i.e., the inclusion of domestic parts or labour). Only a fraction of fishery subsidies likely fall within this prohibited category.<sup>32</sup> On the flip side, the “green light” permits subsidies for certain research activities, for general assistance to disadvantaged geographic regions, and for adapting existing facilities to new environmental regulatory requirements. Oddly, the environmental category (the “green light for green subsidies”) may be the least applicable of all. It appears to apply mainly to subsidies for retrofitting industrial plants with pollution abatement equipment. Subsidies for fishing capacity reductions (such as vessel buy-back and worker retraining programmes) would not qualify. Even subsidies for environmentally motivated fishing gear modifications may fall outside the “green for green” box, which applies only to technology adopted specifically to meet new legal requirements, and which may be limited to equipment designed to reduce “pollution” (rather than, for example, to reduce bycatch).<sup>33</sup> The non-actionable categories for research and regional development, on the other hand, may have broader application to some fishery subsidy programmes.

Thus, for most fishery subsidies, the question is whether they can be successfully challenged under the “amber light” rules. The stakes are relatively high—a successful challenge can lead to a WTO recommendation calling for the removal of the challenged subsidy or, alternatively, to the imposition of countervailing duties against the offending member. In order to prevail, a complainant must show two things: first, that a given government support meets the Agreement’s definition of a “subsidy”; and, second, that the subsidy is actionable and causes one of several kinds of harm described by the Agreement.

*Is it a “subsidy”?*

Article 1 of the Subsidies Agreement defines “subsidy” as any *benefit* conferred on an industry as a result of:

- a *direct transfer* of government funds (e.g. grants, loans, equity infusions) or potential direct transfers (e.g. loan guarantees);
- *forgone government revenues* (e.g. tax credits or rebates);
- the provision of *goods or services* other than “general infrastructure” (e.g. a fishing net, not a navigational buoy);
- payments to any *private funding mechanism* by which any of the foregoing is accomplished;
- *price or income supports* generally.

To be covered by the Subsidies Agreement, a subsidy must also be “specific to an enterprise or industry or group of enterprises” (as opposed to available to or for the benefit of a broad class of actors), as set forth in Article 2 of the Agreement.

This broad definition would appear to cover many or even most types of fishery subsidies.<sup>34</sup> However, a few important categories of fishery subsidies may fall outside this definition. For example, payments of fishery access fees by one national government to another, or the provision of port facilities, may not be captured by the WTO definition. Income support programmes and subsidies that benefit foreign fishermen (for example, payments to support the export of fishing capacity) also raise tough definitional issues. Still, the WTO definition is broad enough to encompass a substantial portion of existing subsidies.

*Does it cause a cognizable harm?*

A party complaining against an actionable subsidy must also generally show that it has suffered some kind of trade-related harm (such as international market displacement or price undercutting). The rapid depletion of the world’s fisheries obviously causes international economic injuries. However, these may not be expressed in classic distortions of international trade, for two reasons. First, the fisheries game is more of a race for access to resources than a race for access to markets. If subsidies in country X prevent fishermen from country Y ever having access to a particular breed of fish, it will be difficult to discuss the problem in terms of the underpricing of product from country Y. Secondly, the multilateral trading system has traditionally focused on creating and enforcing trade obligations that run between national governments. But, in the case of fishery subsidies, the interests run more fundamentally

between individual nations and the shared interests of the international community. Harms to such common interests are not likely to be cognizable by traditional WTO rules, even if they are precipitated in part by the kind of irrational governmental market meddling that the WTO was designed to help prevent.

So if the WTO “amber light” category were fully restricted to addressing proven “trade” harms, the applicability of the Subsidies Agreement to fishery subsidies would be greatly reduced. However, there exists (at least through the end of 1999) an exception to the general “prove a trade harm” rule—something called (if the reader will permit one more traffic signal) the “dark amber” category. The dark amber category is created by language in Article 6.1 of the Agreement that shifts the burden of proof from the complainant to the defendant if:

- the value of the subsidy exceeds 5 per cent ad valorem;
- the subsidy covers operating losses sustained by an industry or (when not a “one-time” measure) by an enterprise; or
- the subsidy is a direct or indirect forgiveness of government-held debt.

This device—which forces the defendant to prove the negative (absence of harm)—is of special relevance to the discussion of fishery subsidies, for two reasons. First, many fishery subsidies may qualify for the “dark amber” treatment. Aggregate subsidies totalling 20–25 per cent of sectoral revenues suggest that the 5 per cent ad valorem test may not be difficult to meet.<sup>35</sup> Similarly, many fishery subsidies arguably cover operating losses sustained by the fishing industry. Secondly, as discussed below, the presumptions raised by Article 6.1 are evidence of an important trend in the development of the GATT/WTO rule system that bears on whether the WTO’s mandate properly extends beyond responding to provable trade distortions.

It is worth noting that the “dark amber” language of Article 6.1 was enacted only on an experimental basis. Under Article 31 of the Subsidies Agreement, the provisions of Article 6.1 apply for only five years after the entry into force of the WTO Agreement (i.e. until 31 December 1999), unless they are extended by the WTO members.<sup>36</sup>

Table 6.1 gives a very rough first cut at how various kinds of subsidies to the fishery sector might be treated under WTO rules.<sup>37</sup> Apart from a

**Table 6.1. Whether certain classes of fishery subsidies would be “actionable” under the WTO Subsidies Agreement**

<i>“Unlikely”</i>	<i>“Uncertain/possibly”</i>	<i>“Likely”</i>
Payments for port facilities	Support for general shipbuilding (where only effect on fishermen is challenged)	Grants/loans/guarantees to fishermen for: —vessel/gear construction —vessel/gear purchase —vessel/gear repair —vessel/gear decommission —fisheries management
Reduced fees for access to domestic waters (for some foreign nationals, in comparison with others) <sup>a</sup>	Support for fish processing industry (where only effect on fishermen is challenged)	
Granting trade benefits to foreign coastal states in return for access rights for grantor’s nationals	Purchase of access rights to foreign coastal waters	Price supports for fish products
Relaxed regulatory requirements (other than forgoing fees)	or  Reduced fees for access to domestic waters (for own nationals, in comparison to fees for foreign nationals) <sup>b</sup>  Income supports/worker retraining for fisherman leaving industry	Wage supports for fishermen (if “specific”)  Discounted marine insurance, or a policy to absorb liabilities  Grants or tax breaks to cover fuel costs (if “specific” to fishery sector)

*Notes:*

<sup>a</sup>This is the case of a foreign government in effect subsidizing nationals of another country. The Subsidies Agreement does not contemplate actions against such subsidies, although nothing on the face of Article 1 rules out such an interpretation.

<sup>b</sup>The purchasing or granting of access rights is listed here as merely “possibly” actionable in deference to the analyses of both Stone and Porter. I would otherwise have placed these important classes of fishery subsidy in the “likely” to be actionable column. Gareth Porter (*Fishing Subsidies, Overfishing and Trade*, UNEP/WWF workshop on the role of trade policies in the fishing sector, Geneva, 4–5 June 1997, 37) assumes that a “transfer of funds” or a “revenue forgone” within the meaning of Article 1.1(a)(1)(i)–(ii) requires a transfer to or non-collection from the producer whom the subsidy allegedly benefits. He concludes that such subsidies are not covered by the Subsidies Agreement. Christopher Stone (“Too Many Fishing Boats, Too Few Fish: Can Trade Laws Trim Subsidies and Restore the Balance in Global Fisheries?” *Ecology Law Quarterly* 24(3), 1997, 525) appears to make the same assumption, but considers that the subsidy might still qualify as a “good or service” provided to the producer within the meaning of Article 1.1(a)(1)(iii). However, there is nothing on the face of either Articles 1 or 2 requiring that the transfer or forgone revenue be granted to the producer, and GATT/WTO jurisprudence sometimes recognizes actions against subsidies paid to parties other than the ultimate beneficiary (e.g. in “upstream” subsidies).

subsidy's qualifications for "green light" or "red light" treatment, the main sticking points appear likely to be whether a subsidy is specific,<sup>38</sup> whether the benefit is a "good" or a "service,"<sup>39</sup> and whether the "benefit" conferred is to the fishermen.

In sum, the Subsidies Agreement appears to create significant opportunities for challenges to fishery subsidies, although substantial questions about the legal limits on such challenges remain. At the same time, it is clear that several classes of important fishery subsidies appear "unlikely" to be disciplined under these rules, while some environmentally beneficial subsidies remain subject to attack. In any case, the effectiveness of disciplines under the foregoing rules depends on the willingness—so far unproven—of WTO members to litigate them.

#### *The notification obligation*

Apart from the direct constraints on subsidies discussed above, the WTO Subsidies Agreement has one other major requirement with potential application to fishery subsidies: under Article 25, each WTO member must notify the WTO formally of every subsidy granted by it, whether the subsidy is prohibited, actionable, or non-actionable.

This broad notification requirement is much more than a clerical procedure. It is a fundamental substantive obligation, which the inaugural chair of the WTO Subsidies Committee called "of critical importance to the effective operation of the Agreement."<sup>40</sup> Not only is transparency in national subsidy policies necessary to allow affected WTO members to know about the subsidies they may wish to challenge, it also helps impose self-discipline on subsidy policies themselves. Market-distorting subsidies are often maintained (sometimes long after their originally intended life) as a result of political pressures raised by local constituencies. In the face of these pressures, mandatory transparency in national policy-making can help generate a context for more rational outcomes. At present, Article 25 notifications constitute one of the richest sources of public information about particular subsidies granted to the fishery sector, and to this extent the notification requirement has begun to prove its potential worth.

In light of the importance of Article 25, it is especially disturbing to note that compliance with it remains profoundly unsatisfactory. A juxtaposition of Article 25 notifications for the year 1996 with the data

reported in the 1998 World Bank technical paper by Mateo Milazzo suggests that only a fraction of current fishery subsidies have been duly notified. Milazzo's paper provides a good frame of reference because his numbers are quite conservative and because—with one exception (what he calls "resource rent" subsidies)—he includes only subsidies that meet the definitions of the Subsidies Agreement. For the period including 1996, Milazzo calculates subsidies of the kind that should be reported to the WTO to be approximately US\$10.0–12.5 billion.<sup>41</sup> But a review of WTO Article 25 notifications for the same period reveals a total of only about US\$792 million in monetized subsidies to the fishery sector.<sup>42</sup>

Putting these figures together, the best evidence currently available suggests that something on the order of 7–8 per cent of global fishery subsidies granted in 1996 that should have been notified to the WTO actually were notified. Put another way, less than 1 fishery subsidy dollar in 10 was reported. If Milazzo's very conservative numbers are low by even 12 per cent, the number would be less than 1 in 20.

A few country cases also illustrate the problem. Japan has one of the world's most heavily subsidized fishing fleets—Milazzo finds a minimum of US\$885 million annually in Japanese subsidies<sup>43</sup>—and a history of heavy governmental participation in industrial policies. Yet, for the period including 1996, Japan reported only two particular subsidies to its fishing industry: one modest grant to support "pre-commercial" research and development for ship construction (totalling approximately US\$7 million in 1996); and one law granting vessel owners an additional 20 per cent depreciation on their boats for tax purposes (Japan's notification offers no estimate of the taxes forgone).<sup>44</sup> For the United States, Milazzo estimates up to US\$69 million annually in some years<sup>45</sup>—a figure that may be low by a substantial amount—and the United States Congress thinks fishery subsidies are high enough to have warranted a federally appointed task force to investigate them. But the United States notified only a single fishery subsidy for 1996 (a tax exemption on fuel), for which it reported no amounts.<sup>46</sup> The European Union (EU), which appears to be more fully in compliance with Article 25 than most WTO members, still appears to have failed to notify hundreds of millions of dollars in annual fishery subsidies.<sup>47</sup>

Additionally, the majority of WTO notifications that have been submitted provide only the barest of responses to the WTO's standard

questionnaire. In most cases, it is essentially impossible to know what actual use was made of the subsidy, under what precise legal authority it was granted, or what likely market impact (not to mention impact on fisheries) the grant may have. Here again, EU member states have generally done better than average, but are still far from satisfactory. The information given by the EU for subsidies granted at the EU level itself is remarkably scant.

On a worldwide basis, all of this is evidence of a stunning disregard for the Subsidies Agreement's transparency requirements. The bottom line is that the vast majority of current fishery subsidies are maintained in outright violation of one of the WTO's central rules for disciplining them.

### Gaps in the current system

The discussion above suggests that current WTO rules could provide some significant disciplines on harmful fishery subsidies. But even if the current rules were more fully implemented, they would not provide a complete response to the fishery subsidies problem. Several shortcomings of the status quo suggest the need for new norms and new mechanisms for their implementation:<sup>48</sup>

- *The current definition of "subsidy" is too narrow.* As noted above, the WTO Subsidies Agreement appears to exclude several classes of subsidy that may make an important contribution to overcapacity and excess fishing effort, such as payments for access to foreign fisheries, infrastructure supports, and capacity exports.
- *Current distinctions between legitimate and illegitimate subsidies are inapt.* Current definitions focus too closely on narrow definitions that equate economic harms only with trade distortions. New definitions need to be supplied for classifying fishery subsidies in terms of effect on capacity, effort, and sustainability.
- *The current system lacks an affirmative obligation to discipline harmful subsidies.* WTO members at present are required only to halt the narrow class of "prohibited" or "red light" subsidies.
- *The current system lacks a mechanism for phasing out harmful subsidies.* Given the political difficulties of removing some of the most harmful



fishery subsidies, governments should consider adopting planned phase-outs of particular subsidies (e.g. with national schedules identifying subsidies in some detail) or classes of subsidies (no schedules, but fairly detailed obligations, with target dates).

- *The current system relies too heavily on national rights and adversarial process.* As noted earlier, the current system tends to ignore harms to the commons, and is implemented principally through an adversarial process between individual nations. Norms recognizing harms to the commons, and mechanisms for organic action (joint monitoring and enforcement), should be thoroughly explored.
- *Current notification and transparency rules are inadequate.* Transparency rules should require information about the impacts of particular fishery subsidies on fishing capacity and effort. Transparency rules should also extend certain rights of participation to foreigners in domestic rule-making processes (cf. the WTO Agreement on Technical Barriers to Trade). Failure to comply with transparency requirements should be punishable through the disciplinary mechanisms, including sanctions.

### 3. A call for WTO action

Two basic facts emerge from the foregoing: fishery subsidies are a significant contributing cause of global overfishing; and binding international norms are currently not adequate to reform them. The urgency of the worldwide fisheries crisis makes this an unacceptable situation. With proposals for WTO action on fishery subsidies now receiving preliminary consideration by the international community, it may be helpful to review some of the arguments in favour of a stronger WTO role.

#### Is the WTO a proper forum for new fishery subsidies rules?

It is difficult to imagine a solution to the fishery subsidies problem that does not include at least some significant role for the WTO. At a minimum, that role should include full implementation of existing notification obligations, judicious handling of any fishery subsidy cases

brought before it under the Subsidies Agreement, and some level of participation in negotiations over new rules and mechanisms that may develop outside the WTO.

Indeed, even if new fishery subsidy rules are located wholly outside the WTO, certain adjustments to WTO rules and practice will be needed. The current tensions between the WTO and multilateral environmental agreements would likely be brought to the fore by an environmental regime focused on subsidies, especially if such a regime were not universally adopted, and had recourse to trade measures as a tool of enforcement. A healthy fishery subsidies regime outside the WTO, therefore, would require clarification of the WTO rules. The formation of such a regime would be an excellent opportunity for a first experiment in forging institutional links between the WTO and a multilateral environmental agreement system—to avoid redundancy, to cooperate as useful, and to give careful definition to the mutual limits of their dispute resolution mechanisms.

But the broader question is whether such a minimal WTO role would be optimal. It is true that the concerns driving international attention to fishery subsidies are presently focused more on the environmental dimensions of the issue than on trade. Moreover, many of the international policy and market failures associated with overfishing (including irrational subsidies) are of a kind appropriately addressed through environmental treaties. Even so, there are good reasons to contemplate a more direct role for the WTO on the fishery subsidies issue. First, fishery subsidies do cause trade distortions, and so the WTO may already have substantial work to do on the issue. Secondly, some aspects of a new fishery subsidy regime would be similar to familiar WTO turf. The WTO has experience with handling subsidies-related disputes and with negotiating subsidies disciplines (e.g. the Agriculture Agreement). The operations of the WTO Subsidies Committee (including oversight of the notification process) could also provide the seed of a structure for a fuller notification and monitoring system on fishery subsidies. Finally, the WTO system offers a ready-made process for binding dispute resolution and a plausible context for negotiations to forge new fishery subsidies rules.

All of these points, however, beg a fundamental question: would broader involvement in the fishery subsidies issue entangle the WTO in

environmental matters beyond its appropriate mandate? This question can be broken into two parts. First, would deeper involvement in the issue inevitably require the WTO to make judgements of environmental policy? Secondly, would it be appropriate for the WTO to take cognizance of issues other than of environmental policy that lie beyond a traditional concern with “trade” distortions?

There is wide agreement in both the environmental and trade communities that the WTO should not be engaged in making environmental policy (although there is, of course, some difference of views regarding whether the WTO might already be so engaged). But would new fishery subsidies rules necessarily invite the WTO to stray beyond its competence? The answer depends on what boundaries are set to the WTO’s involvement in the issue, and on the precise nature of the legal questions with which the WTO might have to grapple. For example, whether a subsidy detracts from sustainability obviously calls for an environmental judgement. But whether a subsidy causes “excess fishing capacity” seems more like the kind of straightforward (i.e. impossibly complex) economic issue with which trade institutions must deal every day. Given proper definitions of “capacity” and “effort,” and of how much capacity is “over” and how much effort “excess,” the question begins to sound more like one the WTO is well equipped to handle.

Two problems, however, suggest that this platonic separation between fisheries economics and environmental policy may be difficult to achieve in practice. First, as will doubtless become apparent during implementation of the FAO IPOA on fishing capacity, measuring “overcapacity” will likely require reference to facts about the condition of particular fisheries or about the optimal measures for managing them. Secondly, even where definitions can be held independent of environmental judgements, the complex effects of policies may frustrate that independence. What happens, for example, if a subsidy designed to promote technological alternatives to driftnets turns out to enhance capacity in an already overcrowded fishery? Whether, on balance, such a subsidy is good or bad policy would be a consummately environmental judgement. As discussed below, issues of this kind strongly suggest that the WTO could not—or certainly should not—craft fishery subsidies disciplines that work in isolation from intergovernmental bodies expert in fisheries management (such as the FAO).

The second question posed above—regarding the scope of the WTO's trade-oriented mission—arises not because of the “environmental” character of the fishery subsidies problem, but because, as previously noted, redressing many of the economic harms caused by fisheries subsidies would require moving beyond a preoccupation with classic distortions of international trade. Can or should the WTO head down this path?

The short answer is that it already has. The evolutionary direction of the multilateral trading system suggests that the system has been growing steadily away from being a simple arbiter of national rights, towards being a guardian of a well-functioning international market *per se*. Perhaps the best example of this trend is the Uruguay Round Agreement on Trade-Related Aspects of Intellectual Property Rights (the TRIPS Agreement), which creates obligations running far deeper than necessary simply to avoid measurable injuries to individual trade interests.<sup>49</sup> Article 6.1 of the WTO Subsidies Agreement (the “dark amber,” burden-shifting category discussed above) is also an example of this trend insofar as it seeks to discipline certain subsidies in the absence of a provable harm to an individual nation's trade interests. The Preamble to the WTO Charter itself similarly reflects this evolution from “arbiter” to “guardian,”<sup>50</sup> and specifically notes the communal interest in “allowing for the optimal use of the world's resources in accordance with the objective of sustainable development.” If it is possible to insulate the WTO from entanglement in environmental policy-making, its evolutionary path suggests it may not be out of character for the WTO to address the kind of economic injuries associated with fishery subsidies.

In sum, the significant advantages to locating at least some new fishery subsidy rules within the WTO system—along with the expertise and evolving mission of the WTO—suggest that a stronger WTO role makes sense. But real dangers and pitfalls lurk, and must be successfully avoided. Some preliminary thoughts on how the form and content of new WTO rules might accomplish this conclude this chapter.

### Parameters to the form and content of new WTO rules

If the WTO is to craft new rules to discipline fishery subsidies, three questions seem especially relevant:

- What should be the objective of the new rules? How far from a focus on pure “trade distortions” should they stray?
- What legal form should the new rules take? Where should new rules (and, perhaps more importantly, negotiations over new rules) be located within the WTO system?
- Should new institutional mechanisms be created alongside new fishery subsidies rules? To what degree should other intergovernmental organizations with relevant competence (e.g. FAO, UNEP) play a role in these mechanisms?

No definitive views on these interrelated questions will be offered here. However, a few preliminary thoughts—providing more questions than answers—may help provoke constructive debate.

First, there would appear to be a direct relationship between the degree to which new WTO rules seek to redress harms falling beyond classic trade distortions and the degree of institutional integration given to the mechanisms adopted for implementing the new rules. Simply put, the further the new rules move away from a focus on traditional trade distortions, the greater the need for institutional integration with environmental and development intergovernmental organizations. But where the best balance should be struck is harder to say. For example, should the rules focus on “subsidies that contribute to overcapacity” or simply on “subsidies that enhance capacity” (without judgements of what is “over” or not)? What kinds of judgements would each of these formulas require? What would be the implications for the form of the decision-making mechanism? Similarly, what difference would it make whether the new rules included an actual schedule of subsidies phase-outs, or only a new categorization of prohibited subsidies? From an advocate’s perspective, specific and time-bound subsidy reductions sound most likely to be effective. This option may also tend to reduce the need for downstream judgements of a hybrid character, since its implementation would theoretically require less textual interpretation.

Second, the options for the legal form of the new rules (which may also be tantamount to the institutional format of the negotiations over them) include, at a minimum: (i) modifications to the Subsidies Agreement, (ii) incorporation of fishery subsidies into an expanded Agreement on Agriculture, or (iii) negotiation of a new WTO sectoral agreement. Given the

nature of the issues, the negotiation of a new WTO sectoral agreement appears the most attractive. A simple effort to amend the Subsidies Agreement would likely remain too focused on correcting only traditional and provable trade distortions. The notion of integrating fishery subsidies into the WTO Agriculture Agreement would tend to confuse what are in some ways very different technical issues, and clearly would run a high risk of ensnaring fishery subsidies disciplines in the politics of the agricultural subsidies issue.

Finally, none of the foregoing is meant to suggest the WTO take charge of fishery subsidies on its own. Just as a regime located outside the WTO would require active participation by the trade system, a fishery subsidies regime within the WTO would have to be crafted and administered with the direct participation of key environmental bodies. The relationship between any new WTO rules and the recently concluded FAO IPOA on fishing capacity, for example, would have to be specifically considered. But it would be a squandered opportunity to view new WTO rules as simply providing the “trade” complement to the IPOA. More imaginative and significant solutions might include establishing direct legal relationships between the regimes, such as recognition by the WTO of key definitions or standards established within the FAO process.

In the end, the goal should be for the WTO to play a meaningful and effective role in addressing the fishery subsidies problem. This will necessarily require the WTO to move, in effect, beyond a narrow focus on trade distortions (classically understood), and beyond the WTO’s current tendency to eschew real working relationships with environmental intergovernmental organizations. Both of these will entail certain institutional risks—risks of the unknown if nothing else. But those risks should be easily manageable, and the potential benefits for the world’s fisheries, as well as for the maturation of our system of global governance, make it a risk well worth taking.

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## Notes

1. FAO Fisheries Department, *The State of World Fisheries and Aquaculture (SOFIA) - 1996 Summary*, Rome: FAO, 1996.
2. See, e.g., Gareth Porter, *Estimating Overcapacity in the Global Fishing Fleet*, Gland, Switzerland: WWF, 1998.
3. Based on estimated total annual subsidies of US\$15–20 billion and annual revenue (based on FAO figures for “first sale” of landed fish) of US\$80 billion. See Mateo Milazzo, *Subsidies in World Fisheries: A Reexamination*, World Bank Technical Paper No. 406, April 1998, pp. 16 and 74.
4. See, generally, FAO Fisheries Department, “Marine Fisheries and the Law of the Sea: A Decade of Change,” Special chapter (revised) of *The State of Food and Agriculture 1992*, FAO Fisheries Circular No. 853, Rome: FAO, 1993, p. 23; Christopher Stone, “Too Many Fishing Boats, Too Few Fish: Can Trade Laws Trim Subsidies and Restore the Balance in Global Fisheries?” *Ecology Law Quarterly* 24(3), 1997, 515; Gareth Porter, *Fishing Subsidies, Overfishing and Trade*, UNEP/WWF workshop on the role of trade policies in the fishing sector, Geneva, 4–5 June 1997, pp. 15–20; Milazzo, *Subsidies in World Fisheries*, op. cit., 18–35; WTO Committee on Trade and Environment (CTE), “Note by the Secretariat,” in *GATT/WTO Rules on Subsidies and Aids Granted in the Fishing Industry*, WT/CTE/W/80, 9 March 1998, paras. 30–33 (including list of subsidies) and Annex II, para. 4. The types of subsidies listed here are often conferred in addition to tariff and other border measures designed to protect domestic fishing industries from import competition.
5. The provision of fishery access rights constitutes a subsidy if access fees are set lower than necessary to cover the costs of resource extraction not otherwise borne by the fishermen. See, FAO Fisheries Department, “Marine Fisheries,” op. cit., 23; Milazzo, *Subsidies in World Fisheries*, op. cit., 56–57; Stone, “Too Many Fishing Boats,” op. cit., 526. These subsidies can be provided through low fees charged by a domestic government to its own nationals, or by a coastal state government to foreign nationals, or through payment of access fees by governments to coastal states on behalf of their nationals. For an in-depth study of how reduced access fees have functioned as subsidies to European fishing fleets operating off the coasts of Africa, see Gareth Porter, “Euro-African Fishing Agreements: Subsidizing Overfishing in African Waters,” in *Subsidies and Depletion of World Fisheries: Case Studies*, Gland, Switzerland: WWF, 1997.

6. For more sophisticated efforts to divide fishery subsidies into distinct analytic categories, see, e.g., FAO Fisheries Department, "Marine Fisheries," op. cit., 23–24; Stone, "Too Many Fishing Boats," op. cit., 523–529; Milazzo, *Subsidies in World Fisheries*, op. cit., 9–14.
7. See, e.g., Milazzo, *Subsidies in World Fisheries*, op. cit., 74 (estimating that "environmental" fishery subsidies are roughly 5 per cent of the total).
8. FAO Fisheries Department, "Marine Fisheries," op. cit., 32, 50–53. The figures cited refer to the period circa 1988–1989.
9. See, e.g., Porter, *Fishing Subsidies*, op. cit., 21 ("more than half"); Hope Shand, *Human Nature: Agricultural Biodiversity and Farm-based Food Security*, an independent study prepared for the FAO (<http://www.fao.org/sd/edpir>), Winnipeg: Rural Advancement Foundation International, 1977, fn 27 and accompanying text (citing full US\$54 billion as representing subsidies).
10. Stone, "Too Many Fishing Boats," op. cit., 518. Stone accepts the FAO's formulation that "most" of the US\$54 billion deficit is likely covered by subsidies: "Too Many Fishing Boats," op. cit., 517 and notes 48–49. Porter, *Fishing Subsidies*, op. cit., 21, similarly finds the FAO numbers may be off in either direction, but concludes that worldwide fishery subsidies are likely in the US\$16–20 billion range.
11. WTO CTE, "Note by the Secretariat," op. cit., Annex II, para. 5.
12. Milazzo, *Subsidies in World Fisheries*, op. cit.
13. *Ibid.*, 73.
14. Specifically, in most cases Milazzo reviewed only government budgets for departments responsible for fisheries—ignoring other government agencies that might provide subsidies to the fishery sector—and, with occasional exceptions, did not include subsidies provided by governmental entities at the subnational (or sub-EU) level. Milazzo also reports that he exercised "prudence and caution" in his overall approach (*ibid.*).
15. *Ibid.*, 16 and 74 (citing FAO figures).
16. Porter (*Fishing Subsidies*, op. cit., 7–9) has surveyed a number of ways in which subsidizing the extraction of natural resources can degrade the environment, including through: (1) overcapitalizing the productive sector; (2) altering incentives away from environmentally friendly technologies; (3) misallocating resources by underpricing natural inputs; (4) making it profitable to harvest even at very low or negative unsubsidized marginal returns; (5) encouraging overconsumption; and (6) reducing public revenues available for proper management of a resource (especially to the extent that revenues generated by the resource are a significant source of funding for its management).
17. See, e.g., WTO CTE, "Note by the Secretariat," op. cit., Annex II, para. 3 (quoting the FAO's conclusion that "as the opportunities for an increased catch from fishery resources have declined considerably, a continuation of the high subsidies can only lead to greater and greater economic distress as well as further depletion of stocks"); WTO Committee on Trade and Environment, *Environmental and Trade Benefits of Removing Subsidies in the Fisheries Sector (Submission by the United States)*, WT/CTE/W/51, 19 May 1997, paras. 8–9 ("Subsidies tend to exacerbate the over fishing [*sic*] and overcapitalization common in the world's commercial fisheries . . . most subsidies in fisheries have a negative impact from a conservation standpoint") (see also paras. 18–19); WTO Committee on Trade and Environment, Item 6: *The*



*Fisheries Sector (Submission by New Zealand)*, WT/CTE/W/52, 21 May 1997, para. 7 (“By providing additional revenue or reducing costs, the returns from fisheries are inflated beyond normal economic levels of exploitation. In the case of a fisheries resources [*sic*], the normal economic rate of exploitation will often be above the long term sustainable biological rates of yield”); Asian Development Bank, *Draft Working Paper on the Bank’s Policy on Fisheries*, 18 January 1996, para. 55 (“Incentives in the form of subsidies and protection can lead to overexploitation of fishery resources, lower harvest, and economic inefficiency”); United Nations Commission on Sustainable Development, *Protection of the Oceans, All Kinds of Seas, Including Enclosed and Semi-enclosed Seas, and Coastal Areas and the Protection, Rational Use and Development of their Living Resources*, Report of the Secretary-General, E/CN.17/1996/3, 12 February 1996, para. 21(c) (“Governments are urged to reduce subsidies to the fishing industry and abolish incentives leading to over-fishing”).

18. See Milazzo, *Subsidies in World Fisheries*, op. cit., 4–8; Ronald P. Steenblik and Paul Wallis, *The OECD’s Program of Work in the Area of Fishery Policies*, Paris: OECD, 1998, Sec. 2.2.

19. FAO Fisheries Department, *The State of World Fisheries and Aquaculture (1996)*, Rome: FAO, 1997, 7. Nearly a quarter of the developing countries that rely on single-commodity exports depend on seafood for 40–80 per cent of their export earnings; WTO CTE, *Environmental and Trade Benefits . . . (Submission by the United States)*, op. cit., para. 15.

20. Milazzo, *Subsidies in World Fisheries*, op. cit., 74–75, notes the equivalence of fishery subsidies, in relative terms, to agricultural subsidies that are commonly decried as serious market distortions and barriers to trade.

21. See, e.g., WTO CTE, *Environmental and Trade Benefits . . . (Submission by the United States)*, op. cit., paras. 13 and 18; *The Fisheries Sector (Submission by New Zealand)*, op. cit., paras. 7, 10–12.

22. WTO Committee on Trade and Environment, *Environmental Benefits of Removing Trade Restrictions and Distortions (Note by the Secretariat)*, WT/CTE/W/67, 7 November 1997, para. 93.

23. Various international environmental instruments may also have a bearing on the legitimacy of environmentally harmful fishery subsidies. See, e.g., the Convention on Biological Diversity, the UN Convention on the Law of the Sea (including the related Agreement on the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks), the FAO Code of Conduct for Responsible Fisheries, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and Agenda 21. Although a number of these speak directly to the overcapacity issue, none contains specific binding obligations to reduce environmentally harmful fishery subsidies, and this chapter will not deal further with them. They may, however, contribute to a body of emerging international environmental norms constraining national fisheries policies generally, including the use of subsidies. In addition to these international rules, national “countervailing duty” laws provide another avenue for disciplining fishery subsidies. Since these “CVD” laws rely on a controversial and adversarial approach to subsidy reduction that is not likely to prove sufficient to deal with the fishery subsidies problem, this chapter does not consider them further.

24. FAO, The International Plan of Action for the Management of Fishing Capacity Adopted by the 23rd Session of the FAO Committee on Fisheries, Rome, 15–19 February 1999, paras. 25 & 26.

25. Ibid., para. 45.

26. Ibid., para. 4.

27. The IPOA calls for a “technical consultation” in 1999 to examine this theme, and to kick off development of “technical guidelines for data collection and analysis.” Ibid., para. 12.

28. Para. 37 of the IPOA calls only for capacity exports to be done with the express consent of the importing country, and so does nothing to reduce the significant international pressures to import capacity that subsidies to capacity exports can engender.

29. The mechanisms under the IPOA for the management of capacity in high seas fisheries are far less clear than those provided for the management of capacity within domestic fisheries. See, e.g., paras. 31, 38, and 39.

30. Also applicable to subsidies is Article XVI of GATT. Since, for present purposes, the obligations of the Subsidies Agreement are both broader and stricter, the legal relevance of GATT Article XVI will not be analysed here.

31. Uruguay Round Agreement on Agriculture, Annex I (Product Coverage), 1.(i) (excluding “fish and fish products”). One observer has reported that the exclusion was intended to allow major fish importing nations to maintain tariff-quotas on fish imports. Rory McCleod, *Market Access Issues for the New Zealand Seafood Trade*, New Zealand Fishing Industry Board, 1996, 73 (cited in Porter, *Fishing Subsidies*, op. cit., 36).

32. See Porter, *Fishing Subsidies*, op. cit., 37 (such subsidies are “not significant in the fisheries sector”). But see Stone, “Too Many Fishing Boats,” op. cit., 529 and notes 109–110 (“such practices have certainly taken place in the fisheries context”). Article 27 of the Subsidies Agreement exempts developing countries from Article 3 prohibitions, although with time limits on the exemption in some cases. Some developing countries have notified otherwise prohibited fishery subsidies in accordance with that rule. See, e.g., G/SCM/N/6, Notification of Singapore, 8 May 1995 (tax relief for fish exports, conditioned on certain minimum export sales).

33. WTO, Agreement on Subsidies and Countervailing Duties, Article 8.2(c)(iv), refers to the “reduction of nuisances and pollution.” Bycatch reduction would strain this definition, and clearly was not in the minds of the drafters. Still, the general spirit of the “green for green” box should allow such an expansion of its meaning. Otherwise, this might be better called the “green for brown” box.

34. On the coverage of Articles 5–6 in the fishery context, see, generally, Stone, “Too Many Fishing Boats,” op. cit., 523–537; Porter, *Fishing Subsidies*, op. cit., 35–39.

35. The Subsidies Agreement provides that multiple subsidy programmes can be aggregated in calculating the overall rate of subsidization to a given product. Subsidies Agreement, Annex IV, 6. Porter and Stone agree that the 5 per cent ad valorem rule is the most interesting of the Article 6.1 clauses (Porter, *Fishing Subsidies*, op. cit., 39; Stone, “Too Many Fishing Boats,” op. cit., 530).

36. The Article 31 sunset provision also applies to the “green light” subsidies category.

37. The categorizations in table 6.1 are roughly based on Stone, “Too Many Fishing Boats,” op. cit., and Porter, *Fishing Subsidies*, op. cit., as well as on my own knowledge. No rigorous defence of them will be provided.

38. E.g. if a fuel subsidy is granted to more than just the fishery sector (see Porter, *Fishing Subsidies*, op. cit., 37 and note 148); or if a port facility is for use by more than just fishermen (see Stone, "Too Many Fishing Boats," op. cit., 524, who also considers that such facilities might be "infrastructure" within the meaning of Article 1.1(a)(1)(iii)).

39. Stone raises this question with regard to payment of access fees ("Too Many Fishing Boats," op. cit., 525).

40. WTO Committee on Subsidies and Countervailing Measures, "Minutes of the Meeting Held on 22 February 1995," G/SCMM/1, 5 May 1995, para. L.

41. This figure reflects what Milazzo reports as a global total for non "resource rent" subsidies, adjusted by deducting US\$1 billion to account for the fact that Russia and China are not WTO members. This US\$1 billion is my conservative overestimate, based on Milazzo's figures for the European Union and Japan (the two largest subsidizers).

42. This figure was derived by reviewing all of the notifications collected and reported in WTO CTE, "Note by the Secretariat," op. cit. In the case of the EEC Notification, information in a more recent comprehensive notification (G/SCM/N/25/EEC, 12 March 1998) was also reviewed. Several of these notifications failed to provide any monetized amount for the subsidy; see, e.g., *Notification by the Philippines*, G/SCM/N/3/PHL, 15 April 1996; *Notification by Japan*, G/SCM/N/25/JPN, 17 November 1997, 32 ("Additional Depreciation on Fishing Boats"); *Notification of the United States*, G/SCM/N/16/USA, 26 September 1997 ("Commercial Fishing Exemption from Deficit Reduction Rate Component of Excise Tax on Motor Fuels"). The inadequacy of these notices makes it appropriate not to count them in the total. For consistency with Milazzo, the total does include a portion of subsidies identified for general shipbuilding in the relevant period. Again relying on notices listed in WTO CTE, "Note by the Secretariat," op. cit., there were roughly US\$2.7 billion of such subsidies notified for 1996. Following Milazzo, *Subsidies in World Fisheries*, op. cit., 52, 10 per cent (US\$27 million) have been counted towards the total for subsidies to the fishery sector.

43. Milazzo, *Subsidies in World Fisheries*, op. cit., 19, 39, 68. These figures do not include significant "unbudgeted" or "cross-sectoral" subsidies, for which precise numbers are hard to extract from Milazzo's analysis.

44. *Notification by Japan*, op. cit., 22, 32.

45. Milazzo, *Subsidies in World Fisheries*, op. cit., 25, 30, and 41.

46. *Notification of the United States*, op. cit.

47. Milazzo reports at least US\$895 million in EU subsidies at the EEC level, not including two large categories of subsidy that Milazzo finds difficult to quantify: *Subsidies in World Fisheries*, op. cit., 22, 38, 67. The EU Notification for the period 1996, above, totals approximately US\$592 million.

48. In referring to the "shortcomings" of the present system, it is not intended to criticize the drafters of the WTO accords for failing to do what they manifestly did not consider doing. These "shortcomings" arise from a comparison of the WTO rules with what is needed in the future, not with what might have been wished in the past. The discussion that follows draws in part on Stone, "Too Many Fishing Boats," op. cit., 523 et seq.; Milazzo, *Subsidies in World Fisheries*, op. cit., 75–81; and Porter, *Fishing Subsidies*, op. cit., 40–44.

49. The TRIPS Agreement creates broad obligations to maintain certain aspects of an open and well-functioning intellectual property rights regime at the national level. The terms of the TRIPS Agreement can be enforced for “nullification or impairment” arising from breach of these obligations—claims of a kind that receive presumptions of injury under traditional GATT law (much like those created under Subsidies Agreement Article 6.1); see above. It is interesting to note that TRIPS Article 64.2 disallows cases under the broader “non-breach” type of nullification or impairment for the first five years of the Agreement—again paralleling the experimental character of Subsidies Agreement Article 6.1.

50. The Preamble’s repeated references to the multilateral trading “system” are interesting in this regard.