



## **Sustainability Criteria for Fisheries Subsidies: Options for the WTO and Beyond**

---

Working Draft of a Paper in Progress

For presentation at the UNEP-WWF Symposium on "Disciplining Fisheries Subsidies:  
Incorporating Sustainability at the WTO & Beyond"

1-2 March 2007

Palais des Nations, Geneva, Switzerland

*THIS IS A WORKING DRAFT ONLY – NOT FOR DISTRIBUTION OR CITATION*

## TABLE OF CONTENTS

<b>Context and Objectives</b> .....	<b>1</b>
<b>I. General Remarks</b> .....	<b>2</b>
(a) Management and Subsidies: Linked Issues .....	2
(b) Meta-Criteria: Choosing Good Indicators .....	3
(c) Top-Up or Bottom-Down? .....	3
(d) The Special Case of Artisanal Fisheries .....	4
<b>II. Sustainability Criteria for Fisheries Subsidies</b> .....	<b>4</b>
(a) Stock-related Criteria.....	4
The Insufficiency of Stock-Related Criteria.....	4
MSY: Reference Point or Target? .....	4
Various Approaches to Stock Assessment.....	6
The Current Extent of Assessment Practice.....	6
Can the WTO Use FAO Stock Reviews?.....	8
What Kinds of Stock Assessments Could WTO Criteria Require? ...	8
Some Specific Options for Stock-Related Criteria.....	9
(b) Capacity-related Criteria.....	11
The Definition of Capacity .....	11
Assessing Capacity: An Unmet International Commitment.....	12
Various Approaches to Capacity Assessment.....	13
What Kinds of Capacity Assessments Could WTO	
Criteria Require? .....	14
Capacity, “Overfishing”, and the Need for Strong Precaution .....	14
Some Specific Options for Capacity-Related Criteria.....	14
(c) Management-related Criteria .....	15
Existing Efforts to Assess Management Regimes.....	16
Two Broad Approaches.....	16
Going for the Basics: Elements of Responsible Management.....	17
A Fundamental Need: Focus on MCS Infrastructure.....	18
Some Specific Options for Management-Related Criteria.....	19
(d) International Fisheries .....	19
<b>III. The Special Case of “Artisanal” Fisheries</b> .....	<b>20</b>
<b>IV. Institutional Mechanisms</b> .....	<b>21</b>
(a) What Kinds of Questions?.....	21
(b) What Kinds of Answers? .....	22
(c) What Kinds of Mechanisms?.....	22
<b>V. Conclusion</b> .....	<b>23</b>

## **THIS DOCUMENT**

This draft paper has been jointly commissioned by UNEP and WWF. Its objective is to contribute to the ongoing debate at the WTO over technical sustainability-related aspects of proposed new rules on fisheries subsidies, as well as to serve national governments in the formulation of their domestic fisheries and subsidies policies.

**THIS IS A WORKING DRAFT AND IS NOT FOR CITATION  
OR FURTHER DISTRIBUTION.**

This draft has not yet been subject to peer review, and should be considered a work-in-progress. It is made available to participants in the UNEP-WWF Symposium on *Disciplining Fisheries Subsidies: Incorporating Sustainability at the WTO and Beyond* (Geneva, 1-2 March 2007) for the purpose of stimulating dialogue among participants and of receiving feedback. It is anticipated that a substantially revised version will emerge, for joint release by UNEP and WWF. Full referencing will be accomplished before publication.

This draft was prepared by David Schorr and includes ideas contributed by John Caddy, Charlotte de Fontaubert, Aimee Gonzales, Anja von Moltke and Louise Gallagher. Neither this draft nor the ultimate publication is intended to reflect the views or positions of UNEP or WWF.

Comments on this draft should be addressed to:

Anja von Moltke  
Economics Affairs Officer  
UNEP Environment and Trade Branch  
Tel: +41 (22) 917 8137  
[anja.moltke@unep.ch](mailto:anja.moltke@unep.ch)

Aimee Gonzales  
Senior Trade Policy Officer  
WWF-International  
Tel: +41 (22) 364 9002  
[agonzales@wwfint.org](mailto:agonzales@wwfint.org)

# **Sustainability Criteria for Fisheries Subsidies: Options for the WTO and Beyond**

---

## **Context and Objectives**

Ten years after UNEP and WWF cosponsored the first international symposium to examine the relationship between subsidies and overfishing, governments are moving towards the adoption of new international rules intended to address the problem. As part of the Doha Round trade negotiations, WTO members have agreed in principle to adopt a ban on subsidies that contribute to overcapacity and overfishing. And now the final phase of the Round, much delayed by difficulties over other elements of the Doha package, seems once again close at hand.

Perhaps the most fundamental question facing negotiators on fisheries subsidies will be the scope of the ban to be adopted. Many significant issues regarding the kinds of subsidies to be prohibited remain unanswered. This paper, however, addresses a separate but related question: how can governments deal with subsidies that fall outside the scope of a new ban, particularly to ensure that they avoid contributing to overcapacity and overfishing?

This will be a significant question because even the broadest prohibition that could plausibly emerge from the WTO talks would be certain to leave significant classes of fisheries subsidies beyond its reach. Some WTO members have, for example, argued in favor of exempting subsidies to land-based fisheries infrastructure or post-harvest processing and marketing, along with social safety nets, worker safety and training, and environmentally positive subsidies. Moreover, the new ban is nearly certain to be relaxed for developing countries, in accordance with the principal of “special and differential treatment”.

Of the subsidies likely to fall outside the scope of a new prohibition, a significant number will continue to have the potential to contribute to overcapacity or overfishing. Accordingly, a number of governments have called for WTO rules that will condition the right to employ these “permitted” fisheries subsidies (or at least some of them) on facts or behaviours that relate to the sustainability of the fisheries context. Such “sustainability criteria” could be an important factor in the eventual strength of new WTO fisheries subsidies rules.

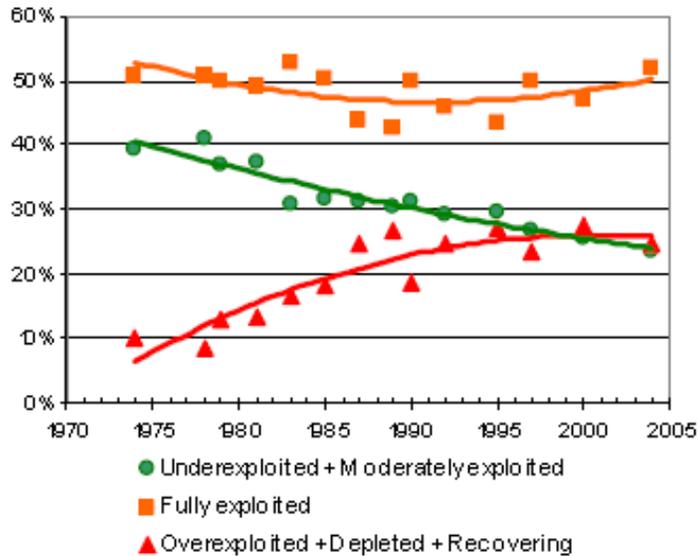
If they are to work, however, sustainability criteria will have to be simultaneously effective and consistent with the narrow mandate of the WTO. This challenge is significant in both its technical and political dimensions. The aim of this paper is to stimulate discussion and dialogue by elucidating at least the technical aspects of the issue and by setting out both an analytic approach and specific options for stakeholders to consider.

# I. General Remarks

## (a) Management and Subsidies: Linked Issues

The disturbing facts of the global fisheries crisis are familiar. As reflected in the analyses of the U.N. Food and Agriculture Organization (FAO), a steady trend towards worldwide depletion of fisheries resources has been underway for decades.

Global trends in world stocks state of exploitation: 1974-2004<sup>1</sup>



With fully or overexploited fisheries now at 74% worldwide, with total production apparently "maxed out" at levels achieved in the 1990s, with demand for fish protein continuing to rise sharply (especially in developing countries), and with climate change, toxic pollutants, alien species and other environmental pressures adding unprecedented stress to marine ecosystems, the fisheries crisis is one of the defining environmental challenges of our time.

Amidst failure of many governments to manage their fisheries responsibly, harmful subsidies are a secondary but still significant contributing factor. Yet inadequate management and harmful subsidies have an intertwined relationship: bad management compounds the dangers of subsidies; and inappropriate subsidies contribute to bad management. In the early days of debate, some governments adopted half of this equation to argue against WTO negotiations on fisheries subsidies. The problem, they said, was not subsidies but inadequate management. With proper management, subsidies would only alter profits, not deplete resources.

This argument was ultimately unpersuasive to the WTO membership as a whole, and the consensus has now been clearly stated—including by heads of state at the Johannesburg World Summit on Sustainable Development—that management alone cannot solve the fisheries subsidies problem.

But it is equally true that the subsidies problem cannot be fixed without attention to management. Unless all subsidies to the fisheries sector are to be broadly and absolutely disallowed—a solution that a few stakeholders seem consider wise and none

<sup>1</sup> FAO, *Review of the state of world marine fishery resources*, FAO Fisheries Technical Paper. No. 457 (Rome, 2005) at p. 11.

seem to consider plausible--the fact will remain that the more poorly managed a fishery, the more likely subsidies will drive resource depletion. This negative correlation has been the subject of a number of studies, including a paper brought forth by UNEP in 2004.<sup>2</sup>

### (b) Meta-Criteria: Choosing Good Indicators

In drafting sustainability criteria for fisheries subsidies it is important to clarify the objectives. This paper seeks criteria with the following characteristics:

1. **Predictive Power** – Criteria should be strong predictors of positive or negative conditions relevant to judgments about the likelihood capacity- or effort-enhancing subsidies will contribute to overcapacity or overfishing (recalling again that no global criteria can reduce this risk to zero);
2. **Acceptability** – Criteria should be based on broadly accepted principles rooted in prevailing international norms;
3. **Plausibility** – Criteria should require behavior that is plausible for all stakeholders;
4. **Consistency** – Criteria should be at least roughly consistent in practice (for example, criteria for judging acceptable stock health should not depend on assessment practices far beyond those required by criteria for minimally acceptable management infrastructure); and
5. **Institutional Appropriateness** – Criteria should require data and judgments that are appropriate to the WTO institutional context in which the criteria will be applied.

### (c) Top-Up or Bottom-Down?

In choosing sustainability criteria for fisheries subsidies, a non-trivial question is whether the criteria ought to aim at defining fisheries where subsidies might be rationally considered (*i.e.*, are in the “least dangerous” condition for subsidization) or, conversely, at defining fisheries where conditions are sufficiently poor that capacity- or effort-enhancing subsidies should clearly be avoided.

From the perspective of sound (*i.e.*, suitably precautionary) fisheries policy, it would be better to require a “top-up” approach by setting criteria that identify the minimum conditions of fishery health necessary to support possible subsidization. The eroded condition of the world’s fisheries, and the very mixed track record of fisheries subsidies so far, would favor this approach on the grounds that the safest rule for capacity- or effort-enhancing subsidies (if they are to be allowed at all) would be “if in doubt, leave them out.”

On the other hand, the nature of the criteria to be discussed--particularly in consideration of the WTO’s limited mandate--will sometimes make it much easier to design “bottom-down” criteria that define fisheries that are “patently at risk”.

In this paper, to help avoid confusion, all of the specific options for criteria will be stated in the affirmative, such that a positive response is desirable. However, in some cases even a positively phrased criterion will really have the character of a bottom-down test.

---

<sup>2</sup> Porter, *A Matrix Approach to analyzing the resource impacts of fisheries subsidies* (UNEP, 2004)

### **(d) The Special Case of Artisanal Fisheries**

As has been evident throughout the fisheries subsidies talks, many governments and other stakeholders feel that “small-scale” or “artisanal” fisheries present a special case for subsidies policy. Some governments have proposed to exempt small-scale fisheries (or even simply small vessels) from new disciplines entirely. Others are seeking exemptions only for a narrowly defined class of “artisanal” fisheries. This paper will not enter too deeply into this debate, but for the sake of a thorough analysis will assume that subsidies to small-scale and artisanal fisheries could fall within the scope of new WTO fisheries subsidies disciplines. Considerations regarding the application of the criteria discussed below to artisanal fisheries is the subject of Section III.

## **II. Sustainability Criteria for Fisheries Subsidies**

Most analyses suggest that subsidies are likely to contribute to overcapacity or overfishing unless:

- the affected stocks are well below sustainable levels of exploitation;
- the affected fleets are well below sustainable levels of capacity; and
- the affected fisheries are subject to effective management.

The absence of any one of these conditions puts a fishery at significant risk from capacity- or effort-enhancing subsidies. Accordingly, the theoretical underpinning of sustainability criteria in each of these three dimensions, along with concrete options for criteria, are set out in order below.

### **(a) Stock-related Criteria**

#### **The Insufficiency of Stock-Related Criteria**

Of the three sets of criteria for fisheries subsidies to be discussed, those related to stock conditions are in some sense the weakest guarantors of sustainability. Unlike low fleet capacity or effective management, the presence of a robust stock is not in itself evidence that a fishery is free from the threat of depletion. There is ample evidence of how quickly an abundant stock can become overexploited if it is subject to the pressures of overcapacity and inadequate management. Nevertheless, governments may wish to consider stock-related criteria for inclusion in WTO rules, since evidence of poor stock health (or the absence of evidence of good stock health) could be viewed as a decisive factor.

#### **MSY: Reference Point or Target?**

A leading benchmark in efforts to define fishery health is the concept of “maximum sustainable yield” or “MSY”. Both the UN Convention on the Law of the Sea and the UN Code of Conduct for Responsible Fisheries identify MSY as the overarching objective of fisheries management, as do a number of other international instruments. According to the FAO, MSY can be defined as:

The highest theoretical equilibrium yield that can be continuously taken (on average) from a stock under existing (average) environmental conditions without affecting significantly the reproduction process.<sup>3</sup>

---

<sup>3</sup> FAO Fishery Glossary (on line).

As suggested in the FAO's terminology for describing stock conditions (Figure 1) MSY also appears to be the basic measure used by the FAO in reporting on the status of world fisheries.

**Figure 1 – FAO Terminology for Describing Stock Conditions<sup>4</sup>**

**Underexploited** = Undeveloped or new fishery. Believed to have a significant potential for expansion in total production;

**Moderately Exploited** = Exploited with a low level of fishing effort. Believed to have some limited potential for expansion in total production;

**Fully Exploited** = Operating at or close to an optimal yield level, with no expected room for further expansion;

**Overexploited** = Exploited above a level which is believed to be sustainable in the long term, with no potential room for further expansion and a higher risk of stock depletion/collapse;

**Depleted** = Catches are well below historical levels, irrespective of the amount of fishing effort exerted;

**Recovering** = Catches are again increasing after having been depleted or a collapse from a previous high.

The concept of MSY has already been introduced into the WTO negotiations, and given its broad international acceptance, there is little likelihood the concept itself will prove controversial as an important reference point for fisheries managers.

It is interesting to note, however, that as management practice has evolved since MSY was enshrined in the Law of the Sea and the U.N. Code of Conduct for Responsible Fisheries, MSY has been increasingly viewed as a risky upper limit rather than as the best target for sustainable fishing yields. Advancing science has done little to reduce the inherent uncertainties in calculating MSY (due to both exogenous factors, such as natural stock cycles, and endogenous factors, such as the imprecision of assessment techniques). In fact, as knowledge of fisheries biology has grown, so has an appreciation of the complex linkages among species (and between species and habitats) in marine ecosystems. The emerging trend towards “ecosystem-based management” has raised new challenges for managers, while highlighting the need for strong precaution when establishing target catch levels.

This growing emphasis on precaution seems especially applicable when governments intend to introduce capacity- or effort-enhancing subsidies. Even where strict controls on capacity and effort may be in place (as discussed below), the risks of regulatory failure—or of just plain error—remain real.

Considering these facts, a precautionary approach would be to adopt stock-related criteria that permit capacity - or effort-enhancing - subsidies only on stocks with biomass substantially below MSY equilibrium. In terms of the FAO vocabulary presented above, this would imply a focus on stocks that are “underexploited”.

---

<sup>4</sup> FAO, *Review of the state of world marine fishery resources*, FAO Fisheries Technical Paper. No. 457 (Rome, 2005) at p. 213.

## Various Approaches to Stock Assessment

In order to evaluate the possible stock-related criteria discussed below—especially with regard to their predictive power and their plausibility, as defined in Section I(b)—it is helpful to provide a rudimentary explanation of stock assessment techniques (with apologies to those schooled in fisheries science, who will find this summary oversimplified, and may find it debatable altogether).

Stock assessments can be roughly placed into four broad categories according to the techniques they apply and the kind of data they require. They are listed in **Table 1** in declining order of data-intensiveness (and thus also of cost).

## The Current Extent of Assessment Practice

Despite the requirements of numerous international instruments, fisheries assessment is still far from a universal practice. According to the FAO's most recent review of the state of world fisheries, approximately 80% of reported global marine catches came from stocks for which at least some information about "general catch trends" was available.<sup>5</sup>

Assessments aimed at informing fisheries management are most frequently carried out by governments or government institutes, sometimes with the involvement of non-governmental actors, such as academic institutes or private consultants. At the supra-national level, some regional fisheries management organizations (RFMOs) sponsor fisheries assessments, as do other inter-governmental bodies dedicated exclusively to developing fisheries-related data and/or advice. Still, it is more common for these bodies to rely on national assessment information.

In this institutional context, the FAO bears special mention. The FAO is the preeminent international entity with a global remit in the field of fisheries management. As a U.N. body composed of its member states, the FAO itself does not have direct managerial authority. It does, however, provide administrative services to a number of regional fisheries bodies constituted under its auspices, several of which provide scientific advice on fisheries conditions, and two of which have a qualified legal capacity to impose management measures on their member states.<sup>6</sup> Through these regional bodies, as well as through research programmes carried out at the initiative of the FAO Secretariat itself, the FAO is directly involved in activities that constitute or contribute to management-related fisheries assessments. But these activities produce only a small portion of the information collected and analyzed by the FAO, most of which is gathered from external governmental and non-governmental sources.

---

<sup>5</sup> Id. at 6. While this 80% figure likely provides a good indication of the extent of assessments conducted on stocks whose harvests enter international commerce, it is almost certainly an overstatement of the percentage of fisheries subject to assessment globally. The 2006 FAO review covered 584 "stock or species groups being monitored on which at least general catch trends are reported." Estimates of the total number of marine stocks being fished worldwide range up to [1500]. Many of these unmonitored fisheries are small and localized. Their actual catch levels are difficult to ascertain, [although they are generally considered significant.

<sup>6</sup> In both cases, member states may object to the measures adopted, which can lead to removal of the binding character of the measures on other member states. See, *Agreement for the Establishment of the Indian Ocean Tuna Commission*, Art. IX; *Agreement for the Establishment of the General Fisheries Commission for the Mediterranean*, Art. V.

**Table 1 – Various Approaches to Stock Assessment**

Name	Method	Data	Result
Scientific Surveys	Primary research, usually by specially equipped scientific vessels, sometimes over multiple years. May include “scientific fishing” <sup>7</sup> as well as technologies such as acoustic surveys and satellite tagging. May also include dissection of fish to study diets and reproductive biology.	“Fishery-independent” data of many types, collected by or under the control of fisheries scientists.	Direct calculations of biomass and target biomass levels.
Analytical Methods	Analysis of size, age, and species composition of catches via biological theories or assumptions about growth, reproduction, and predator/prey characteristics of target species.	“Fishery-dependent” data ( <i>i.e.</i> , from commercial fishing) on size, age, & species composition of catches (data must be taken at sea, since discards must be included).	Indirect estimates of biomass and/or trends in stock conditions.
Production Modeling	Analysis of fishing effort and/or catch trends via sophisticated statistical models (also based on biological theories or assumptions) that relate these trends to stock conditions.	“Fishery-dependent” catch and/or effort data (need not be collected at sea, but reliability lower when data taken on landing only)	Indirect estimates of biomass and/or trends in stock conditions.
Economic Analyses	Analysis of costs, revenues, and product prices.	Economic data at various levels of detail (industry-wide to enterprise-specific).	Qualitative estimates of stock conditions and trends.
Informal Rapid Assessments	Local surveys, interviews, and observations coupled with expert knowledge of the dynamics and history of specific fisheries. Analysis may be partly or mainly non-quantitative.	Various; often anecdotal; does not include comprehensive data on catches or effort.	Informed expert opinion about basic stock conditions and trends.

<sup>7</sup> Scientific fishing in the most rigorous sense implies fishing with a predetermined spatial and temporal pattern combined with a careful identification and measurement of catches. Often, the gear used for scientific fishing may be different from that used for commercial fishing, for example through the use of nets with smaller holes purposefully intended to collect juvenile fish so that the age structure of a stock can be directly studied. Strictly scientific fishing is not generally combined with commercial operations. However, commercial vessels are sometimes said to engage in “scientific” fishing when their activities are subject to temporal and spatial limits, the catch carefully documented, and the data made available for use in a pre-designed study.

### **Can the WTO Use FAO Stock Reviews?**

One question that has arisen in the WTO talks regarding possible stock-related criteria is whether reviews of stock conditions regularly published by the FAO can be used in WTO rules as a kind of sustainability criterion. Considering that the FAO is the single largest repository of information about worldwide stock conditions, it is an idea that many have found appealing.

But it is also an idea laden with difficulties—or at least with perceived difficulties. The problem is that the FAO information does not always have a legal or political status that is consistent with being applied this way.

Still, there may be ways to make appropriate use of “prior independent judgments” by the FAO in two ways:

First, assessments such as those issued by the FAO might be applicable in the context of new WTO rules if they are given legal consequences that are appropriate to their status—i.e., by making them relevant factors to be considered without making them binding—or, in legal jargon, by making them “probative” rather than “dispositive”.

Second, the past practice of both the WTO and of relevant IGOs such as the FAO suggest the possibility of creating new mechanisms to involve appropriately the FAO or other international experts and authorities in the administration of new WTO fisheries subsidies rules.

These ideas are further developed in Section IV.

### **What Kinds of Stock Assessments Could WTO Criteria Require?**

Stock-related sustainability criteria will deliver the best results if they take a balanced account of both the realities of assessment practice and the aspirations embodied in international norms. The “meta-criteria” set out in Section I(b) help determine what this means: stock-related criteria should have enough predictive power to help eliminate the likelihood of subsidized overcapacity or overfishing while requiring only such behavior as is plausible for all stakeholders. The challenge, then, is to find what is both plausible and powerful.

The most powerful assessment practices combine some scientific surveying with at least one of the next two techniques (analytic methods and production modeling). But many governments lack the financial and/or human capacities necessary to conduct scientific surveys on all of their fisheries. In fact, on a global basis, regular scientific surveying remains the exception rather than the rule. From the perspective of WTO rules, criteria depending on scientific surveys are not plausible.

On the other hand, assessments that depend only on economic analyses cannot provide more than general or even supplementary indications of likely stock conditions or trends. Except where economic information points strongly to an advanced state of depletion, these assessments alone would usually be considered to lack strong predictive power.

Rapid informal assessments, for their part, are generally considered a sufficient basis for policy only in small scale fisheries in impoverished developing country settings, where data needed for more quantitative approaches is simply unavailable. These are further discussed further in Section III below.

The remaining two assessment types – analytic methods and production modeling – provide the bulk of quantitative assessments carried out today. Moreover, they depend on data much of which is considered basic in the documentation of fishing activities. Production modeling in particular, with its heavy dependence on catch data, seems

eminently “plausible” as it involves data whose collection is essentially mandated by prevailing international norms.

The previous paragraphs might be fairly criticized as giving more to weight plausibility than to predictive power. Assessments that rely exclusively on catch data can be misleading, particularly where data is available for a period of only a few years. Especially in a new or developing fishery, catches may rise consistently until well past the point of MSY. This suggests that stock-related criteria may generally be more useful in “bottom-down” rather than “top-up” criteria.

### **Some Specific Options for Stock-Related Criteria**

Based on the foregoing discussion, there are a number of possible stock-related criteria that WTO negotiators may wish to consider. These are laid out in two tables: **Table 2** (“**basic bright lines**”) includes criteria whose combination of simplicity and objectivity make them suitable for use in WTO rules, even in the absence of new institutional mechanisms for involving external fisheries authorities;

**Table 3 (“interdisciplinary criteria”)** includes criteria that are still relatively straightforward and objective, but that involve questions about fisheries conditions on which consultation with fisheries experts or authorities would be advisable.

These options, like the others presented in subsequent sections, are stated as positively; if answered in the negative, subsidies would not be permitted (or would be subject to a rebuttable presumption of non-qualification, or some other detriment to its qualification for “permitted” status). An affirmative answer is thus a necessary but not sufficient condition.

**Table 2 – Options for Stock-related Criteria ("Basic Bright Lines")**

Criteria	Notes
A science-based stock assessment based on at least [X] years of catch data prior to the onset of subsidization has been conducted, and the results reported to the FAO.	<ul style="list-style-type: none"> <li>• The most basic of the basic: has an assessment been done at all?</li> <li>• Defines “assessment” functionally as requiring catch data—the lowest level of data associated with quantitative approaches to assessment;</li> <li>• Reporting to the FAO is required as a transparency measure and to encourage quality control.</li> </ul>
FAO stock review status, if available, is “underexploited”.	<ul style="list-style-type: none"> <li>• Possibly in appropriate to use as a dispositive criterion, but could be used as a factor to consider or as a burden shifting condition.</li> </ul>
No competent authority has declared a stock “fully exploited” “overexploited” or the equivalent	<ul style="list-style-type: none"> <li>• If a competent authority, including a national authority with jurisdiction, declares a stock fully or overexploited, there is no room for capacity- or effort-enhancing subsidies.</li> </ul>
Data for stock assessments (and assessments themselves) are available to the public	<ul style="list-style-type: none"> <li>• Emphasizes importance of transparency</li> </ul>

**Table 3 – Options for Stock-related Criteria ("Interdisciplinary")**

Criteria	Notes
Landings [over the past three years] are not less than [50%] of the average that applied for the best three years on record.	These possible criteria all describe basic thresholds below which overexploitation is considered very likely to be occurring.
Landings have not declined by more than [X%] over the last Y years.	
Average catch rates for a standard commercial vessel category have not declined by more than [10%] over the last [5] years.	
Average catch rates for a standard research vessel (or a standard chartered commercial vessel) over a fixed series of stations have not declined by more than [20%] over the last [5] years.	
Prices for the product have not grown by more than [20%] over last [5] years (allowing for inflation). The price on international markets or the price on domestic markets has not risen by more than [20%] over the last [5] years.	

**(b) Capacity-related Criteria**

International norms of responsible fishing require governments to assess and control the capacity of their fishing fleets. Moreover, overcapacity is often a critical link between subsidies and overfishing, as recognized in the explicit mention of overcapacity in the mandate issued by trade ministers at the Sixth WTO Ministerial Meeting in Hong Kong. Thus, there are strong grounds to emphasize capacity-related issues in sustainability criteria for fisheries subsidies. But there are also certain technical difficulties that relate to the definition of "capacity" and to the variety of methods used to assess it.<sup>8</sup> An authoritative discussion of the issues surrounding the definition and measurement of capacity can be found in a 2004 FAO publication by J.M. Ward, et al.<sup>9</sup> which provides the principal basis for the following synopsis.

**The Definition of Capacity**

After significant review and debate, the FAO recently concluded that fishing capacity can best be defined as:

[T]he amount of fish (or fishing effort) that can be produced over a period of time (e.g. a year or a fishing season) by a vessel or a fleet if fully utilized and for a given

<sup>8</sup> These considerations are also highly relevant to aspects of the WTO debate over the scope of an eventual prohibition on certain fisheries subsidies, where various notions of "capacity" are very much at issue.

<sup>9</sup> Ward et al. (2004), *Measuring and assessing capacity in fisheries*, FAO Fisheries Technical Paper. No. 433/1. Rome, FAO 2004.

resource condition. Full utilization in this context means normal but unrestricted use, rather than some physical or engineering maximum.<sup>10</sup>

The FAO's definition combines two basic approaches to defining fishing capacity: "input-based" and "output-based." **Input-based** measures of capacity look at the factors of production used to harvest fish, such as the number of vessels active in a fishery or the level of effort they apply (days at sea, number of traps deployed, etc.). **Output-based** measures describe capacity in terms of potential levels of production--*i.e.*, in quantities of fish. While input-based measures are often found in the vocabulary of fisheries regulators, output-based measures may make more intuitive sense to the layperson. In talking about an automobile factory, for instance, it would be more common to speak of capacity as the number of cars it can produce per day, rather than the number of conveyor belts or factory workers employed in the production.

Ward et al. review various uses of input-based and output-based definitions, concluding that the approaches are "not necessarily incompatible" and possibly complementary. In practice, the definition adopted by the FAO--and the advice promulgated by Ward et al. and other FAO publications--suggests that neither approach can really be done without. The same is likely true in the context of WTO rules, whether in defining the breadth of a prohibition or in setting sustainability criteria for permitted subsidies.

### **Assessing Capacity: An Unmet International Commitment**

Very few fisheries appear to have been the object of formal capacity assessments, and in this sense the practice of capacity assessment lags far behind the still underutilized practice of stock assessment. This circumstance persists despite repeated commitments made by governments in both binding and voluntary international instruments. The U.N. Convention on the Law of the Sea (UNCLOS), for example, requires coastal states to determine the capacity of their fleets to harvest their EEZ fisheries.<sup>11</sup> The first objective that the Code of Conduct identifies for the sustainable management of fisheries is to avoid excess fishing capacity.<sup>12</sup> The FAO, for its part, has called the regular assessment of capacity "essential".<sup>13</sup>

Most specifically, in 1999 FAO members adopted an **International Plan of Action for the Management of Fishing Capacity** (IPOA-Capacity) that calls on governments to undertake a series of steps to assess their major national fishing fleets by the end of 2000 and to develop preliminary capacity management plans by 2002. Full completion of the assessment, diagnosis, and management planning of fleet capacity was to have been completed by the end of 2005. Similarly, the IPOA calls on regional fisheries organizations to undertake similar steps for the assessment and management of capacity within their zones of responsibility, on the same timetable as national governments.

To date, only a single "national plan of action" has been submitted to the FAO and posted on its website.<sup>14</sup> This low level of formal compliance with the IPOA-Capacity may in part reflect rational priority-setting on the part of overworked and under-funded national fisheries administrations. Moreover, it may be that *de facto* attention to capacity management is increasing more than is reflected in formal capacity assessments or management plans. Nevertheless, where subsidies come into play, there are strong and

---

<sup>10</sup> Id at §1.1, citing FAO 2000, Report of the Technical Consultation on the Measurement of Fishing Capacity. FAO Fisheries Report No. 615 (FIPP/R615(En)).

<sup>11</sup> UNCLOS article 62.2

<sup>12</sup> Code of Conduct, Art. 7.2 .2 (a)

<sup>13</sup> (FAO 2003d at § 1.4)

<sup>14</sup> See NPOA-Capacity of the United States, at [www.fao.org](http://www.fao.org).

obvious arguments for raising both the priority and formality accorded to capacity assessment and management.

### Various Approaches to Capacity Assessment

Capacity assessments can be grouped into three basic types that correspond roughly to varying levels of data availability. The most direct, precise, and elaborate are various kinds of "**quantitative**" assessments. These techniques all aim in one way or another to describe the relationship between characteristics of fishing inputs and the resulting level of outputs. Impossibly simplified, a quantitative assessment depends on deriving a formula that says something like:

$$1 \text{ vessel} = 10,000 \text{ tonnes of fish per year}$$

Unfortunately, however, accurately stating the relationship between fishing inputs and outputs is rarely so simple. There are multiple relevant inputs (vessel size, vessel shape, engine power, gear type, quantity of gear, fishing technique, etc.), each of which can have very different relevance and weight in different fisheries. Moreover, fishing firms can vary substantially in their efficiency, and random factors (e.g., weather) may need to be considered.

These facts result in both theoretical and practical complications. Theoretically, the equations used for quantitative capacity assessment can be enormously complex. Practically, it is impossible to know input-output relationships (such as the relative importance of vessel size or engine power) without extensive empirical observations.

As such, done completely, a quantitative capacity assessment is a theoretically complex and data-intense business. It is no wonder that, despite their obvious value, only a relative few have been undertaken.

The good news is that useful information about fishing capacity can be derived from so-called "**qualitative**" assessments. Although based on scientific methods, these assessments do not depend on measuring and correlating specific mixes of inputs with output levels. Instead, they look at basic bio-economic conditions in a fishery in order to reach gross judgments about whether a state of overcapacity exists. According to the FAO treatise, qualitative indicators that suggest overcapacity exists where:

- a stock is depleted
- catches exceed target reference points
- quotas are used up prior to the end of the fishing season, or where the fishing season has been progressively reduced from year to year
- there is a trend towards unused (or "latent") fishing permits; or
- there is declining catch or value per unit effort

For purposes of identifying fisheries that are already "overcapacity" (*i.e.*, "bottom-down" criteria), qualitative assessments have real power. Moreover, some qualitative indicators can support quantitative estimates of overcapacity (e.g., the ratio of unused or latent fishing permits to total permits. It should also be noted that much of the data used for qualitative assessments is the same as is necessary to assess the biological health of a fishery—*i.e.*, data about levels of fishing effort and catches.

As with stock assessments, where data about a fishery is very limited or non-existent, managers can turn to informal methods that result in what the FAO calls "the subjective assessment of individuals who are in a position to provide an informed judgment."<sup>15</sup>

---

<sup>15</sup> Ward et al. at § 3.3.2

### **What Kinds of Capacity Assessments Could WTO Criteria Require?**

Since formal capacity assessment remains an undeveloped practice, WTO criteria will likely need to take a different approach than with regard to stock assessments. The more salient questions may be about whether a capacity assessment has been conducted than about the specific methods used. But as the focus on methods is reduced, perhaps criteria should focus more on the quality of capacity-related data that goes into the assessment process. Moreover, greater emphasis may need to be placed on qualitative indicators of capacity levels.

### **Capacity, “Overfishing”, and the Need for Strong Precaution**

Capacity is a critical variable in any fishery and the most important link between subsidies and overfishing. Even an underexploited fishery is in significant danger if it is the target of overcapacity fleets.

Where subsidies are involved, even a fishery that is approaching full capacity is fraught with risk. “Full capacity” is a precarious condition in several ways, due to:

- the difficulty of knowing reliably and precisely how much capacity is “full” or how much capacity is actually in a fishery;
- the consistent trend in fisheries for technological advances to increase effective capacity, often without much visible change in the configuration of a fleet;
- the difficulties of effectively controlling capacity growth in many fisheries, and especially in fisheries where illegal fishing is a significant factor; and
- the often significant and unpredictable impact of exogenous causes of fish mortality, including both natural ecosystem cycles and anthropogenic insults such as toxic pollution and climate change.

What all this implies is that capacity- or effort-enhancing subsidies to any fishery that is not substantially under capacity is inherently very risky, and that capacity-related sustainability criteria need to be strongly cautionary if they are to include a margin of safety for the reasons listed above.

### **Some Specific Options for Capacity-Related Criteria**

As with the options laid out for stock-related criteria in Section II0, these capacity related criteria are divided into two categories to reflect the difference between “basic bright line” criteria that seem WTO-appropriate as they are and “interdisciplinary” criteria that seem likely to require consultation with fisheries experts or authoritative institutions.

**Table 4 – Capacity-Related Criteria ("Basic Bright Lines")**

Criteria	Notes
A science-based capacity assessment has been made within [2] years of subsidization, and capacity has been found to be less than [X%] of full capacity.	<ul style="list-style-type: none"> <li>• The most basic of the basic: has an assessment been done at all?</li> <li>• Does not define methods or data needed, but requires a scientific basis to the assessment</li> </ul>
A current capacity management plan is in place consistent with the provisions of the IPOA-Capacity, and the plan has been submitted to the FAO secretariat.	<ul style="list-style-type: none"> <li>• Makes formal implementation of the IPOA capacity, as evidenced in a capacity management plan, a pre-requisite to permitted capacity- or effort-enhancing subsidies.</li> </ul>

**Table 5– Capacity-Related Criteria ("Interdisciplinary")**

Criteria	Notes
Active fleet capacity is not more than [20%] higher than active capacity was during the historic highs in catches from the target fishery.	These are standard qualitative indicators of overcapacity, stated affirmatively for consistency with other tables.
Quotas are not used up prior to the end of the fishing season.	
The length of the fishing season has been stable, and not reduced from year to year.	
There are no unused (or "latent") fishing permits.	
Catch or value per unit effort is stable or rising.	

### (c) Management-related Criteria

The international obligation to manage marine fisheries is now well established, as is the high degree of danger posed by capacity- or effort-enhancing subsidies in any fishery that is inadequately managed. But judging the sufficiency of "management" is a very different exercise from estimating biomass or fleet capacity. "Good management" cannot be quantified, and saying what it is in any given case can—and usually does—raise substantial controversy.

The practical reality is this: sustainability criteria that meet the meta-criteria set out in Section I(b) probably cannot aim to identify a fishery that is well managed, particularly if "well managed" means successfully managed for long-term sustainability. Although the

fundamental premise set out at the start of Section II states that subsidies should be considered likely to lead to overcapacity or overfishing in any fishery that is not effectively managed, WTO-appropriate criteria that reliably identify such a condition seem to be difficult to attain.

### **Existing Efforts to Assess Management Regimes**

Unlike with stock health and fleet capacity, there is no international obligation on governments to assess the quality of their fisheries management regimes. There is not even an organized process—such as exists at the WTO with regard to national trade policies—for the periodic international review of national fisheries policies. In fact, at the moment there appears to be only one globally-focused institution that regularly attempts formal evaluations of fisheries management regimes—the Marine Stewardship Council.

This does not mean, of course, that the tools for assessing management are undeveloped or that assessments of management regimes do not take place. The FAO among others has invested substantial energy into developing instruments for assessing the adequacy of management, only one example of which is a 1996 checklist for management issues associated with implementation of the Code of Conduct.<sup>16</sup> Moreover, the FAO and many other institutions are regularly engaged in studying and writing about the effectiveness of specific management regimes all around the world.

In short, methods to assess management regimes are available. The question is the extent to which they can be standardized and translated into criteria appropriate for use at the WTO.

### **Two Broad Approaches**

Even if it is accepted that management criteria can aim no (or not much) higher than identifying fisheries that meet minimum basic standards for responsible management, there is still a wide variety of ways new fisheries subsidies disciplines could accomplish this. Before turning to approaches that are analogous to the ones already discussed for stock-related and capacity-related criteria, two broader options deserve attention.

The first—which will be called the **“Simple Reference to International Norms”** approach—has already been proposed at the WTO negotiating table. The proposal is that all or nearly all of the management-related conditions to be placed on permitted subsidies could be summed up in a single clause requiring subsidizing countries to have in place “a national fisheries management system in line with the FAO Code of Conduct for Responsible Fisheries, 1995.”

This approach has inherent strengths. The Code of Conduct represents a substantial and growing body of international norms for responsible fishing. The Code itself enjoys a breadth of support and an absence of dissent that is rare even for a “voluntary” agreement. And many of its core elements are replicated in binding international instruments, including the Law of the Sea, the U.N. Stocks Convention, and the U.N. Compliance Agreement, to name a few. Using the Code in WTO sustainability criteria would thus appear to fulfill many of the “meta-criteria” set out in Section I(b). Incorporating the requirements of the Code would also obviously set a fairly high bar for the management-related prerequisites to the use of permitted fisheries subsidies.

The difficulty, of course, is the amount of interpretation a simple reference to the Code’s requirements would entail in the course of WTO rule implementation. While the core elements of the Code may be easy to identify, they are not necessarily simple to apply.

---

<sup>16</sup> Caddy, J.F., *A checklist for fisheries resource management issues seen from the perspective of the FAO Code of Conduct for Responsible Fisheries*, FAO Fisheries Circular. No. 917. Rome, FAO. 1996.

It might be suggested that this interpretive challenge is manageable, and in any event would be more manageable for a dispute panel—which need only consider the narrow circumstances of a single case—than for WTO negotiators seeking to frame *ex ante* criteria for an entire system. But if criteria that involve judging basic catch trends are considered sufficiently “interdisciplinary” to require structured consultations with external experts and authorities, then the questions a WTO panel would face in defining “in line with the Code of Conduct” are substantially more so.

In short, the idea of replacing more detailed management-related criteria with a simple reference to the Code of Conduct seems like a potentially productive option, but only if it is combined with new institutional mechanisms such as those discussed in Section IV below.

A second broad option—which in some sense would provide a manner of implementing the first idea just discussed—might be called the “**holistic questionnaire approach.**” This approach would also begin with a broad statement of a basic rule (whether through simple reference to international norms or through broad normative language on the face of new rules). But it would go on to depend on a detailed questionnaire to guide adjudicators in judging whether the broad standard of the rule had been met. Such a questionnaire might build, for example, on the 1996 FAO Checklist for Implementation of the Code of Conduct mentioned earlier.

This approach also has some attractive qualities—the principal one being its combination of breadth with the predictability that would come from knowing the details of the rules before the game starts. It would also parallel similar efforts underway in the FAO and elsewhere to continue promoting adherence to the Code and its progeny. But it seems clear that the contents of such a questionnaire would not be an appropriate subject for negotiation among WTO trade delegations. It might, however, be a plausible subject for an institutional mechanism, as described in Section IV(c).

#### **Going for the Basics: Elements of Responsible Management**

The broad approaches discussed in the previous subsection may offer either an alternative or a supplement to a more basic approach such as was applied in the discussion of stock-related and capacity-related criteria. Either way, a review of criteria associated with the basic approach might be worthwhile.

Despite the complexities of fisheries management in practice, its rudiments are simple and few. The basic requirements of sustainable fisheries management include:<sup>17</sup>

- Assessment (counting and functional analysis) of fish stocks and fishing fleets;
- Establishment of appropriate limits on fishing and fishing capacity (sometimes referred to as “control”)
- Surveillance and enforcement of those limits.

Fisheries experts today increasingly advise that a fourth basic element of fisheries management is consideration of the ecosystem contexts in which fisheries operate. Although the need for “ecosystem-based management” is only recently gaining widespread recognition, it may be in some cases the *sine qua non* of managing for true sustainability. For present purposes, however, ecosystem considerations will be treated as possible sub-elements of stock assessment or of the regulatory establishment of fishing limits.<sup>18</sup>

Some would also argue that beyond the substantive building blocks of responsible management just listed there are essential procedural elements as well. In particular, responsible management is increasingly seen as requiring adequate involvement of all stakeholder groups and a high degree of public transparency in the management process.

### **A Fundamental Need: Focus on MCS Infrastructure**

Perhaps the most powerful criteria that combine simplicity, objectivity, and importance would be those that demonstrate the tangible administrative infrastructure necessary to implement a responsible management system, such as vessel registries and catch documentation schemes. These basic administrative elements of management are sometimes called the Monitoring, Control, and Surveillance (MCS) infrastructure for a fishery. Substantial international effort, including at the FAO, is now being focused on improving MCS systems and establishing cooperative links among them.

An excellent example is the ongoing effort to establish centralized access to harmonized **vessel registry information** through a system administered by the FAO, as called for in the IPOA-Capacity. Progress towards implementation of this system is one of the agenda items featured at the 2007 meeting of the FAO’s political level Committee on Fisheries. It is intended to build upon existing international and regional efforts, such as the High Seas Vessel Authorization Records database maintained by the FAO and the EQUASIS system administered by the European Union as part of its vessel safety programme. These efforts have established specific information requirements that are serving as templates for harmonized vessel registries. Governments might consider making full participation in these efforts one of the specific management-related criteria incorporated into WTO rules.

**Catch documentation schemes** are similarly fundamental to responsible fisheries management. As discussed above, maintaining catch records is the minimum level of data necessary for all but informal methods of stock assessment. Catch documentation schemes have not yet been subject to the same degree of international harmonization and cooperation as vessel registries, but relevant efforts are underway, including a new international consortium for the sharing of fisheries data (the Fishery Resources Monitoring System) and the FAO Strategy for Improving Information on Status and Trends

---

<sup>17</sup> Cf. Flewwelling et al (FAO 2003) at 8, which gives a 4-part description that interposes “participatory management planning” between assessment & setting limits . . . and which also broadens the management exercise beyond biological assessment & controls, to include socio-economic factors/goals.

<sup>18</sup> For example, ecosystem considerations may have an impact on stock assessments by identifying inter-species relationships that alter predictions about the reproductive potential a stock. Or they may affect the establishment of fishing limits where it is necessary to maintain a balance between populations of stocks connected by a predator-prey relationship.

of Capture Fisheries. Here again, full participation in these efforts could be an important management-related criterion in new WTO rules.<sup>19</sup>

### Some Specific Options for Management-Related Criteria

In the areas of stock-related and capacity-related criteria, options were set forth in both the “basic bright lines” and “interdisciplinary” categories, with perhaps more falling into the latter than the former. In the case of management-related criteria, however, the ability to focus on critical elements of MCS infrastructure provides a greater number of powerful but “basic bright line” options.

**Table 6 –Management-Related Criteria ("Bright Lines" & MCS)**

Criteria	Notes
A comprehensive vessel registry scheme is in place, meeting emerging international standards for vessel information collection.	<ul style="list-style-type: none"> <li>Well developed international standards for vessel registration are operating in several key areas; a global effort is moving forward at the FAO.</li> </ul>
All fishing is subject to licensing, and a registry of licenses is publicly maintained.	<ul style="list-style-type: none"> <li>This is also a basic tool in the fight against Illegal, Unregulated, and Unreported fishing.</li> </ul>
A comprehensive catch documentation scheme is in place, to include information on bycatch and discards.	<ul style="list-style-type: none"> <li>A basic element of a management scheme, necessary for most reliable stock assessments and for capacity management.</li> </ul>
Science-based target and limit reference points have been translated into legally mandatory limits on fishing effort, capacity, and/or outputs.	<ul style="list-style-type: none"> <li>If this criterion is not fulfilled, the fishery is still in an essentially unregulated, open-access condition. Such fisheries do still exist.</li> </ul>
There is tangible evidence of meaningful enforcement activity.	<ul style="list-style-type: none"> <li>An area that needs further discussion; good measures of effectiveness in enforcement are elusive.</li> </ul>

### (d) International Fisheries

Before closing this section of the paper, one final but very important note. The foregoing discussion is styled mainly in the language of domestic fisheries management, but the analysis applies equally, if not more strongly, to international fisheries (migratory, straddling, or high seas stocks). In the case of international fisheries, it is not possible for the criteria outlined above to be met satisfactorily in the absence of effective cooperative management.

---

<sup>19</sup> An important question that merits further discussion is the degree to which independent verification of catch records (e.g., through on-board observers) could be a required element of a documentation scheme meeting WTO criteria.

### III. The Special Case of “Artisanal” Fisheries

As noted in Section I(d), the question has been repeatedly debated whether “small scale” or “artisanal” fisheries should receive special treatment under new WTO rules. For purposes of this paper, the specific question is whether the sustainability criteria to be imposed on permitted subsidies affecting these fisheries should depart from those that apply more generally.

As suggested in a previous paper published by UNEP, the terms “small scale” and “artisanal” have been used with a variety of meanings in the course of the WTO talks.<sup>20</sup> It may help smooth the negotiations if governments are able to resolve this ambiguity by focusing as specifically as possible on the characteristics of small-scale/artisanal fisheries that might make it inappropriate to impose on them the same rules applied to other fisheries.

Unfortunately, the distinguishing characteristics of “artisanal” fisheries do not include immunity to overexploitation. The fisheries management literature is replete with significant cases of overexploitation of small scale and traditional fisheries. It follows that basic sustainability criteria have relevance even for subsidies granted to fisheries even at the smallest and most traditional scales. Indeed, responsible management is especially important in parallel with fisheries development—particularly where development is intended to alter fishing patterns.

But to say that sustainability criteria have relevance to artisanal fisheries does not mean that the criteria can or should be the same as for more developed commercial fisheries. Where fisheries and fishing communities are impoverished, diffuse, rural, low-tech, and a largely governed by social tradition, criteria that require formal stock and capacity assessments or key elements of an MCS system may simply run counter to artisanal realities. The organization of management in these communities needs to be adapted to their social and economic circumstances with more flexibility than a standard checklist of assessment, regulatory, and MCS criteria allows.

Thus, sustainability criteria for subsidies to artisanal fisheries need to reflect their condition. This may require a deeper analysis of two things:

- First, what are the precise constraints that limit application of the standard criteria discussed above? Which elements of fisheries administration are most difficult in a given context, and which most plausible?
- Second, are the constraints in question to be considered permanent or temporary (and, if the latter, how rapidly subject to change)? What is the vision for how the fishery will be organized when it achieves a better developed condition, and when is that likely to occur?

These questions in turn imply at least two possible responses to the challenge of attaching sustainability criteria to subsidies to artisanal fisheries: **adaptation** of the criteria to artisanal contexts and providing for **phase-in periods** for their application.

These two elements of flexibility for artisanal fisheries could be built into WTO rules in ways that give leeway for innovative policy without eliminating the requirement that priority be given to subsidizing management before subsidizing significant increases in fishing capacity or effort. For example, assuming adoption of a careful and narrow definition of “artisanal fishery”:

- criteria for stock and capacity assessments could be relaxed for a limited number of years to allow the use of non-quantitative informal methods, so long as such

---

<sup>20</sup> Schorr, Artisanal Fishing: Promoting Poverty Reduction and Community Development Through New WTO Rules on Fisheries Subsidies, *An Option and Issues Paper* (UNEP, 2005)

informal assessment processes (and their results) are transparent to the public and based as closely on scientific method as conditions allow;

- if the stock- or capacity-related criteria adopted for non-artisanal fisheries include quantitative benchmarks (such as “fleet capacity less than 50% of capacity needed to harvest at long-term MSY”), these could be relaxed without being jettisoned by requiring informal assessments to establish explicitly that such conditions likely prevail;
- criteria related to vessel registries, licensing, and catch documentation could likewise be delayed or relaxed, or even put aside indefinitely if certain other conditions are fulfilled, such as maintaining the local, in-shore character of the fleet, or requiring phase-in of catch documentation to the extent that the fishery moves towards an export orientation.

Ideas such as these obviously require further development. The fundamental concept, however, would be that where social conditions genuinely make “modern” approaches to fisheries management inapplicable, the rules would allow appropriate adjustments to—but not elimination of—sustainability criteria.

## **IV. Institutional Mechanisms**

In the foregoing discussion, several reference have been made to the advantages that could be gained if new WTO disciplines include mechanisms for the involvement of expert individuals and the cooperation of authoritative organizations from the world of fisheries management. It will help in understanding the range of options for such mechanisms to ask a bit more about how they might be used.

### **(a) What Kinds of Questions?**

The principal use of the institutional mechanisms in question would be to aid WTO adjudicators in deciding whether particular sustainability criteria have been met. Another idea worth considering would be to seek the formal involvement of outside experts and authorities in the articulation of the criteria themselves. This latter thought will, however, be left aside for the moment.

As already evident in the categorization of options discussed above, some suggested criteria would be more likely than others to stretch WTO adjudicators beyond their proper remit. For example, for a WTO panel to decide whether a vessel registry is in place to cover a given fishery, or whether a fishery is in an unregulated, open access condition would not likely be perceived as the WTO making an environmental judgment.

Some of the criteria discussed above go a bit further, but still seem to settle on the safe (or at least the familiar) side of the “thin green line” that defines the limit of the WTO’s appropriate involvement in matters of environmental policy. These questions could be answered by a WTO panel without rupturing law or tradition, but the answers would greatly benefit in quality and public legitimacy if they included the views of outside experts and authorities. Asking a WTO panel to decide whether a stock assessment is “science-based”, for instance, seems entirely analogous to questions WTO panels (and the Appellate Body) have already adjudicated under existing WTO law in the context of the Agreement on Sanitary and Phytosanitary Standards (SPS) and the Agreement on Technical Barriers to Trade (TBT). (Some governments, and certainly some civil society observers, may be troubled by the extent of the jurisdiction the WTO took upon itself in these cases. Controversial examples such as the “hormone beef” case between the United States and the European Communities come to mind.)

There are, however, a number of ideas discussed above that would surely challenge the WTO’s competence if it were to attempt to implement them without the aid of external

authorities. The “broad approaches” discussed in Section II(c) seem obviously in this category.

### **(b) What Kinds of Answers?**

The nature of questions that can be put to external experts or authorities may depend in part on the legal quality of the answers to be received. There are, broadly, three possibilities:

1. the answers given can be binding on WTO panels;
2. the answers given can be subject to articulated “standards of deference”; or
3. the answers can have a purely advisory quality.

Although it may strike some as radical, the first possibility has precedent within the WTO system. Article XV:2 of the GATT requires the WTO to consult with the IMF whenever issues concerning monetary policy are at issue in a WTO dispute. Moreover, Article XV:2 states that the WTO shall accept certain determinations by the Fund as legal facts.

At the other extreme, WTO panels routinely receive advisory views in the form of expert testimony, including from non-adversarial experts engaged directly by the panels themselves.

There is, however, little experience within the WTO rule system with formal standards of deference. Much of the controversy over cases such as Hormone Beef might be reduced if such standards were clarified.

In the case of institutional mechanisms for applying sustainability criteria to fisheries subsidies, the articulation of standards of deference could be very helpful in creating shared expectations by parties and panels alike. For example, if a panel faced a case that raised the question whether a certain study conducted by a Member government was a stock assessment (much as the panel in Hormone Beef had to decide whether certain activities by the EC amounted to a “risk assessment”), a standard of deference might require it to accept the finding of an expert external entity unless that finding was “arbitrary” or (a lesser standard) “unreasonable”. In this way, WTO rules would cede substantial responsibility to external experts without abandoning the ultimate right of Panels or the Appellate Body to pass judgment.

### **(c) What Kinds of Mechanisms?**

The options for creating new institutional mechanisms would seem to include:

1. Not creating new mechanisms, but merely urging panels and parties to make good use of the right to experts;
2. Creating a standing body wholly under the auspices of the WTO, such as a Permanent Group of Fisheries Experts;
3. Creating a soft or hard obligation on panels to consult with relevant IGOs (such as a rule saying “shall [where appropriate and useful] consult with any regional fisheries management body with responsibilities for some or all of the fisheries in question”);
4. Entering into formal relationships with existing external IGOs (such as FAO or RFMOs) through MOUs to identify the role they may play in advising the WTO on facts within the remit of those IGOs;
5. Creating in cooperation with other IGOs a standing body to serve as an explicit liaison between the WTO and fisheries IGOs (modeled, for example, after the FAO-CITES panel [to be discussed at the Symposium]).

The last of these options, coupled with clear rules of deference (or simply with a rule making certain findings of the standing body binding on panels) seems to offer several possible advantages, including:

- Sufficient “ownership” by both the WTO and external IGOs;
- Sufficient independence of the standing body;
- Pre-agreement on critical elements of process for potential disputes; and
- A means of involving multiple external IGOs in a single standing body.

## **V. Conclusion**

This paper has attempted to lay out both an analytic approach and a series of specific options for governments and other stakeholders to consider as the WTO talks progress on the subject of sustainability criteria for fisheries subsidies.

The discussion above illustrates a number of important choices governments will confront on this issue in the weeks and months ahead. It is hoped that this draft serves as one helpful reference for the next stages of dialogue.