

Ecolabelling and Small-scale fisheries, will certification work?

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Abstract

National and intergovernmental regulation of fisheries has not been sufficient to prevent many failures of fisheries management at the global scale. International trade in fisheries is of the order of USD 10 billion annually, mostly from “South” to “North”. Developing countries, particularly in Asia, benefit from this trade, and domestic fisheries generally, in terms of contributions to GDP but also to livelihoods and household security at the local level. All of these may be in jeopardy if fisheries management is not improved. However, small-scale fisheries in the tropics are characterized by open access and overlapping multi-species fisheries, fished with numerous gears and using a multitude of landing sites. This complexity in range of operation, the number of fishing groups and the subsistence orientation of some aspects of the production, differ markedly from industrial fisheries in developed countries.

Developing country critiques of ecolabelling and the MSC initiative, as currently formulated, focus in five general areas: a) legitimacy and credibility, b) a mismatch between certification requirements and the reality of tropical small scale fisheries, c) potential distortions to existing practices and livelihoods, d) equity and feasibility, and, e) perceived barriers to trade.

This paper reviews these developing country concerns on the basis of already certified fisheries, and experiences from forestry, aquaculture and the aquarium industry, as well examining precedents and trends in international environmental and trade issues. It is suggested that ecolabelling as currently presented is unlikely to be widely adopted in Asian countries. Certification may have sporadic success in some eco-conscious, or niche product, markets but will require greater participation of developing country fisheries to ensure a global improvement of fisheries management.

1. *The state of marine capture fisheries*

The declines in marine capture fisheries (FAO, 1996 ;Williams, 1996; Christy, 1997; Pauly et al., 1998; Watson and Pauly, 2001; ICLARM, 2001; Bianchi et al., 2001; ICES, 2002) result from iterative failures in policy formulation, implementation and enforcement affecting both developed and developing countries. In the developed countries, where scientific advice has been available, it has been undone by lack of precaution, by lack of political will and by perverse subsidies to the industry, which enhance rather than control fishing capacity. There are, of course, notable exceptions (e.g. selected fisheries in New Zealand, Australia and north America). But, at the time of writing, the effective collapse of cod stocks in the Irish sea, points again to weaknesses in basing stock management on single-species evaluation methods, and to mismatches between the prescribed measures for management and their enforcement.

In developing countries, certainly in tropical developing countries, coastal and marine fisheries are characterised by multi-species fisheries fished with multiple gears and by commercial, municipal and artisanal fisheries. Some coastal fisheries (e.g. in the Pacific and Asia) are managed through the exercise of traditional fishing rights but the majority have open access regimes with relatively poor abilities to manage individual stocks or stock complexes, or to enforce zoning regulations between the different types of fishery. On the high seas, or with highly migratory or straddling stocks, the issue is the effective exercise of responsibility by individual states and challenges. The challenges to monitoring and enforcement over wide areas complicate management regimes and illegal, unreported and unregulated (IUU) fishing is so widespread that it undermines global statistics (Bray, 2000).

1.1 *The benefits and damage from the exploitation of fisheries*

Fish¹ is a healthy protein staple and its many types and products are widely traded on world markets. The trade in fish and seafood products is of particular importance to developing countries. In the year

¹ Unless specified, the word “fish” in this article is taken in the generic sense to include finfish, and other sea food including crustacea and mollusks.

2000, total world fish supply amounted to approximately 130 million tons, with approximately two thirds derived from marine and inland water capture fisheries, and one third being provided by aquaculture (FAO, 2000). A large share of fish production enters international trade, with about 37% exported in 2000 (live weight equivalent). Developing countries as a whole supply nearly 50% of total exports in value terms. Lower income developing countries play an active part in this trade and, at present, account for almost 20% of exports, contributing substantially to GDP. In the same year, the total import bill for global trade in fisheries products was slightly in excess of 60 billion dollars (FAO, 2000). Developed countries account for over 80% of total imports by value. Asia dominates both production and trade, producing over 85% of the world total and being responsible for USD 18-19 billion of the world's total value of exports.

Developing country fisheries have importance beyond the export dollar value. The domestic benefits lie in the provision of food security from common property resources for the poor, livelihoods, rural and urban consumption/nutrition, cultural observances and use. They are a component therefore of the sustainability issues surrounding water and the environment. Internationally proposed schemes for improving the sustainability of fisheries will have to accommodate countries requirements in these regards and not just the export bottom line. However, all these potential contributions would seem to be in jeopardy; in Asia, coastal fisheries biomasses are down to 8-12 % of unfished levels, there are reductions in relative abundance of longer lived, high value species and a relative increase of lower priced species such as squid. Open access regimes and poor enforcement of management regulations have led to severe overfishing, and structural problems mean that owners of craft and gear still make money whilst crews and artisanal fisheries are being confined to poverty. The potential profits from fishing are reducing whilst the relative costs of fishing under the current biomass levels are increasing (ICLARM, 2001).

In developing countries, such collapses, and the inability for scientific management regimes to make themselves understood to fishers at the local level, has led to a general lack of credibility for the scientific information generated on the conditions of fish stocks. The perceptions that fishers have regarding the condition of fisheries at the local level and what fisheries managers are telling them, are often far apart. Obtaining support for fisheries management policies, developed by researchers in fisheries research centers and government institutes, has been difficult. The credibility gap means that stock assessment results and models of management are not well received by fishers, exacerbating problems in uptake of recommendations and a tendency to management failure.

The urgency of the successive failures in management and need to rebuild depleted fisheries globally (Ministry of Fisheries, Government of Iceland/FAO, 2001; Pauly et al. 2002) has been recognised in the final declaration of the World Summit for Sustainable Development held in Johannesburg in 2002 (WSSD, 2002). The time is right therefore to examine the fundamental political failures in fisheries management and to rigorously test new alternatives and incentives. A positive move for improving fisheries management for sustainability of the resource could come, for instance, if one could recapture confidence at the local level and provide new incentives for fisheries to autonomously improve their state of health or methods of harvest.

2. Factors in an overall approach for better management.

It is not surprising, given the importance of fish and seafood products to so many, that avenues for improving the management of fisheries are under active consideration and development. Formerly, the management of fisheries at the national level was generally based on a centralised governmental command and control structure. At more local levels fisheries governance in developing countries has been exercised through traditional practices or through the emergence of user groups. A large body of research and evaluation, coupled with general moves by governments to the devolution of authority, is thus being placed on cooperative management regimes to try and enhance agreement and compliance with management plans. Secondly, for developed countries, stock assessment has been science-based and, as mentioned, there are issues in developing, explaining, and using indicators for fisheries management by the wider group of potential stakeholders.

A third major realisation in fisheries management is that even sophisticated single-species management plans can be undone when there are additional, unwanted effects on the wider ecosystem from the fishing methods employed or, conversely, decisions and practices outside the fishing sector which have effects on the integrity of aquatic ecosystems and fisheries. In consequence, ecosystem approaches to

fisheries management are being developed (FAO, 1995; Ministry of Fisheries, Government of Iceland/FAO, 2001) and the WSSD (2002) has promoted solutions to fisheries in the wider concept of sustainable development.

A fourth, and currently theoretical objection to the exploitation of renewable natural resources on a purely economic basis is that this fails to pay the price of sustainability. This must be factored into future management plans and costs, so that the commodity will be traded at its true value. The idea that many failures in natural resource management are brought about by the lack of the internalisation of environmental externalities has been cogently advanced (Panayotou, 1993; Van Dieren, 1995; Bawa and Gadgil, 1997). This is particularly the case in fisheries where price is determined by the buyers and less on the cost of fishing. The social costs of fishery resources are not factored in (Tokrisna, 2001), and indeed few coastal states are willing to try and remedy the situation through the use of economic instruments, especially alone, and when responding to short term export demand. We may already be mining the fisheries resource of the poorer countries for the benefit of northern markets, and undervaluing the product. Viewed from global environmental and equity perspectives, this amounts to a comprehensive “fail/fail” situation.

Fifth, are attempts to use the power of the market demand for fish and seafood products as incentives to induce compliance of fisheries managers with prescribed codes of practice.

It is in this respect that ecolabelling, which is a process of placing seals of approval on products that are deemed to have fewer impacts on the environment than functionally or competitively similar products, has emerged as an important issue in developing countries fisheries. Schemes appeal to enlightened self-interest: fishing in a sustainable manner will be rewarded. The opportunities that ecolabelling present to developing country producers willing to meet the sustainability requirements are increased value added to existing products, expanded reach in existing markets and opportunities to increase or maintain market share in a competitive environment and improved avenues for attracting capital investment and joint ventures. Ecolabelling has thus been viewed as the provision of incentives to the fishing community, governments, international agencies and more local authorities to improve the aspects of fisheries management for which they are responsible (Nordic Technical Working Group on Eco-labelling Criteria, 2000).

However, governments, producers and civil society groups in developing countries have expressed concerns about ecolabelling. These concerns include 1) the lack of transparency and opportunity for participation in the development of product standards, 2) ecolabels could be used to protect domestic industries, restrict market access and erode national competitiveness from those less able to meet or afford foreign labelling and certification standards, 3) fear of high compliance costs with transnational or foreign ecolabelling schemes, 4) institutional factors that may preclude developing countries to be sufficiently organized to independently institute effective management schemes and achieve certifiable status 5) definitions of criteria for certification could influence the impact of the schemes on countries with varied environmental and socio-economic conditions and interests especially given the wide gap in income and environmental conditions between developed and developing countries.

The need to understand and clarify the link between ecolabelling and environmental sustainability calls for systematic study of the ecolabelling schemes and their impacts on producer and consumer countries. Studies on the credibility of ecolabelled products, assessment of process versus performance schemes, technical and financial assistance possibilities for developing countries and trade related issues are all areas where substantial gains can be made from research.

The paper examines and updates the status of implementation of incentive-based mechanisms for sustainable natural resource management and examines the feasibility and possible impacts of implementing ecolabelling and certification schemes for fisheries management in developing countries, particularly in Asia. There is also an attempt to analyse the proper placement of ecolabelling schemes in relation to other current initiatives to make fisheries management sustainable.

3. What is ecolabelling?

Ecolabelling was first internationally recognized at the 1992 UN Conference on Environment and Development (UNCED) in Rio de Janeiro. This type of certification, originally defined simply as “making relevant environmental information available to appropriate consumers” (USEPA, 1993) is

meant to provide consumers with the opportunity to express their environmental-ecological concerns through choice of products. Ecolabels are thus seals of approval given to products that are deemed to have fewer impacts on the environment than functionally or competitively similar products (Deere, 1999). The consumers' preferences are expected to result in price and/or market share differentials between eco-labeled products and those which either do not qualify to be ecolabelled, or those whose producers do not seek to obtain such labeling. The label is obtained through a certification process based on a set of criteria. Potential price and/or market share differentials provide the economic incentive for firms to seek certification of their products (MRAG/IIED/ Soil Association, 1999).

3.1 *The different types of label*

Ecolabels have been used for some time in national programs (e.g. the German Blue Angel label dating from 1977); as intergovernmental standards (including Codex Alimentarius Commission, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the European Union “green” label, the products of the International Standards Organization, the WTO Committee on Trade and the Environment); as key elements of environmental initiatives of non-governmental organisations (such as Eco-UK, the Forest Stewardship Council (FSC), Marine Stewardship Council (MSC), Scientific Certification Systems (SCS)); and industry-led initiatives such as IFOAM (the International Federation of Organic Agriculture Movements) (reviewed in Dawkins, 1995; FAO, 1998). In the majority of these initiatives the intention is the certification of products produced by energy- or environment-saving processes, or the setting of standards for these. Ecolabelling schemes are generally classified into three categories (see Box 1)

[Box 1: Categories of Ecolabelling schemes (after Wessells et al., 2001, with fisheries taken as a generic example)

First party labeling schemes: these are established by individual companies based on their own product standards. The standards might be based on criteria related to the specific environmental issues known to informed consumers through the media or advertising. This form of ecolabelling can also be referred to as “self declaration”.

Second party labeling schemes: these are established by industrial associations for their members' products. The members elaborate certification criteria, sometimes by drawing upon external expertise from academia and environmental organizations. Verification of compliance is achieved through international certification procedures within the industry, or employment of external certifying companies.

Third party labeling schemes: these are usually established by an initiator (public or private) independent from the producers, distributors and sellers of the labeled products. Products supplied by organizations, or resources that are certified, are then labeled with information to the consumers that the product was produced in an “environmentally friendly” fashion. The label (seal) is typically licensed to a producer and may appear on or accompany a product derived from a certified fishery or producer. Producers are usually expected to track the “chain of custody” of their products in order to ensure that the products derived from the certified producer are in fact those so labeled.]

Certification is most credible to consumers and other stakeholders when supported by third party review. In this paper, the discussion of the Forestry Stewardship Council (FSC), the Marine Stewardship Council (MSC) and the Marine Aquarium Council (MAC) all concern third party labeling schemes. Industry-led certification schemes are referred to in relation to aquaculture certification (section 5.4.2). The International Standards Organisation (ISO) is the largest standard-setting body and its Technical Committee (TC 207) has helped develop principles and environmental standards (the so-called 14,000 series – or revised as the 14020 environmental management series). There has however been some criticism that “in the design of some schemes either governments, some sectors of the industry or environmental interest groups have not had the opportunity to express their interests” (Deere, 1999; FAO, 1998). Also the standards are largely process oriented and do not provide individual performance measures against which environmental changes could be estimated practically. The ISO 14,000 series products have been used as background information in the development of the criteria and certification processes of others, but do not constitute internationally agreed environmental standards in their own right.

3.2 The certification process

A certification process typically involves a) the development of principles and criteria, b) the development of guidelines for management and a competent third party means of certification and life cycle control², and c) promotion of the label by the agency concerned widely enough for it to be effective.

In some cases, the object of certification is not the product *per se* but the processes and production methods (or PPMs, see section 5.1) such as harvesting, used in the development of the product. In this case, the chain of custody of the product from the site of the environmentally favourable harvesting through its life cycle to eventual sale is critically important. The labeled product must be held distinguishable from similar but uncertified products in a reliable manner through its entire life cycle. This is particularly important in the transfer of live organisms (e.g. fish for the aquarium trade). The requirements for the post harvest handling of ecolabelled products are in this sense similar to those for products which are labeled for other reasons, such as food safety. Whilst there are successful examples of *product* certification schemes for fish (see Wallis, section 4, in Wessells et al, 2000) they tend to be for high value products such as tuna, for which the final market price makes such schemes feasible. Part of the credibility of certifiers is their ability to demonstrably manage the chain of custody, and for some commodities, such as timber products, this is quite difficult to guarantee in certain markets (FAO, 1998).

Elliot (2000) has developed a useful set of criteria to assess certification schemes (see box 2) from a review of the common requirements given for such schemes in the literature. As discussed below, ecolabelling and certification of fisheries is relatively recent and assessment by such criteria will be appropriate until such time as formal impact measures become applicable. However, ecolabelling of forest products was initiated in the 1980's with the first scheme (the United States Smart Wood Program) introduced in 1990. It provides the most relevant precedent for ecolabelling in fisheries.

[Box 2: Criteria against which to judge the effectiveness of certification schemes (after Elliot, 2000).

- Credible to consumers;
- Comprehensive to include all types of {fisheries} and {fish} products;
- Objective and measurable;
- Reliable in assessment results;
- Independence from parties with vested interests;
- Voluntary in participation;
- Equal treatment, non-discriminatory in trade impact;
- Acceptable to the involved parties;
- Institutionally adapted to the local conditions;
- Cost effective;
- Transparent to allow external judgment;
- Goal-oriented and effective in reaching objectives;
- Practical and operational;
- Applicable to all scales of operation.]

3.4 The Marine Stewardship Council

The major initiative in fisheries ecolabelling has been the formation of the Marine Stewardship Council (MSC) and its program in 1997. The MSC was initially formed by the WWF (following its experience with the operation of the similar Forestry Stewardship Council) and the company Unilever, the world's largest buyer of seafood. This alliance between an environmental NGO and a body involved in fisheries trade illustrates the emerging tendency, in a world where civil society groups and multinational companies are prominent and influential, for environmental policy initiatives to be set outside the government sector (Elliot, 2000). The initiative was given impetus by the declaration that Unilever would buy only ecolabelled products from 2005. Although operating independently since 1999 - neither founding organisation sits on the Board of the MSC or provides core funding - the genesis of

² Life cycle analyses, or LCA, are assessments of sustainability that consider all phases of a product – production, processing, use and disposal.

the MSC is a factor in public perception of the initiative in developed and developing countries, irrespective of the merits of its activities (Braaten, 1999, Kurien, 2000, May,2000).

[Box 3 – The Marine Stewardship Council is an independent, global, non-profit organization based in the UK. The MSC is “seeking to harness consumer purchasing power to generate change and promote environmental stewardship of the world’s most important renewable resource” i.e. fish. The MSC has developed an environmental standard for sustainable and well-managed fisheries. It uses a product label to reward environmentally responsible fisheries management and practices. There are three principles to the MSC standard supported by a number of criteria in each case (see Annex Y and the MSC Web site www.msc.org). The principles consider the condition of the stock, the impact of the fishery on the marine ecosystem and the fishery management systems. A certification methodology was developed and published in March 2001. Third party assessors (certifiers) follow a substantial process, and apply a standard scoring process, for the evaluation of a fishery against the principles and criteria to determine performance. Public Certification Summary reports are also posted on the MSC Website. To date (November 2002) six fisheries have been certified (see Box 4a) and a further eight are being evaluated for certification (Box 4b). A number of developing country fisheries have also expressed interest in obtaining certification (Box 4c).

“To accomplish its objectives, the MSC proposed a new approach to change the incentive structure so that benefits accrue to the fishers, fish processors, traders, retailers and consumers in adopting a more responsible and sustainable approach to fisheries exploitation. At the center of the MSC is a set of Principles and Criteria for Sustainable Fishing which are used in an independent assessment as a standard by which an independent assessment team evaluates a fishery. Using its expertise, the assessment team develops a set of performance indicators to be consistent with the intent and extent of the MSC Principles and Criteria.

“The MSC methodology for fishery evaluations utilises a decision support process known as AHP (Analytical Hierarchy Process) to assist the team weight and score sets of performance indicators and criteria within each individual Principle. Using this method, compliance with each MSC Principle is evaluated independently. Each Principle is considered independent of the others and, to be certified, a fishery must obtain a rating consistent with meeting compliance with the MSC Principles and Criteria. If the fishery does not meet compliance on any one of the three MSC Principles, the fishery is not recommended for certification.”

During assessment of the fishery, and evaluation of the fishery management, the assessors can draw attention of the management entity to requirements through Corrective Action Requests or CARS, which are defined as:

Major CARs, which must be addressed and re-assessed before certification can proceed, indicate a rating under Pass for one of the MSC Principles or a rating of under *Minimum* for one of the Criteria;

Minor CARs, which do not preclude certification, but should be preferably addressed and will be checked at the next surveillance visit. A CAR indicates a rating between *Minimum* and *Pass* for one of the MSC Criteria and under Pass for one of the performance indicators. The MSC is trying to extend the number of certifiers globally.]

[Box 4a: MSC certified fisheries by end November 2002

- Alaska Salmon in the US
- Burry Inlet Cockles in South Wales, UK
- Hoki in New Zealand
- South West
- Mackerel Hand line Fishery in the UK (a component of the north east Atlantic mackerel stock)
- Thames Herring in the UK
- Western Australia Rock Lobster in Australia]

The Western Australian rock lobster fishery is Australia’s most valuable single species fishery and a major export commodity (MRAG/IIED/Soil Association, 2000), and the Alaskan salmon and New Zealand hoki fisheries are also major, export targeted fisheries. The other certified fisheries are relatively small with modest export opportunities. The driving force for these fisheries obtaining certification was to secure and increase the market share of niche market commodities. Certification was sought in general on the basis of existing management regimes, rather than to improve fisheries management *per se* (see discussion of the hoki fishery below).

[Box 4b: Fisheries undergoing certification as of end November 2002 (as per the MSC), the WWF (op. cit) includes some additional small-scale fisheries not included in the MSC list].

- Alaska Pollock fishery in the US
- Banco Chinchorro Atoll Spiny Lobster Fishery in Mexico (certification has been discontinued)
- British Columbia salmon in Canada
- Mexican Baja California Spiny Lobster in Mexico
- North Sea Herring Fishery (under the auspices of the pelagic Freezer-Trawler Association)
- Hake in South Africa
- South Georgia Toothfish in South Georgia and the South Sandwich Islands (administered by the UK)
- Loch Torridon *Nephrops* fishery in Scotland, UK]

[Box 4c: Fisheries from Developing Countries currently seeking MSC certification

- Galapagos lobster and mixed fishery in Ecuador
- Ceara lobster fishery in Brazil
- the artisanal hake fishery in Chile
- the Pha Nga bay mixed fishery in Thailand
- the Sulu Sea blue crab fishery in the Philippines]

3.5 The example of the hoki fishery certification

It is informative to review the public reports of the hoki fishery certification³, as they illustrate the implementation of the MSC review process. However, this fishery provides a particular example of the assistance in gaining certification provided by effective national fisheries management (Box 5).

New Zealand is, of course, a developed, island nation sitting in temperate and sub-temperate latitudes. It has taken due cognisance of its dependence upon fisheries and coastal and marine affairs and has reduced the potential conflicts and complexity of its fisheries by reducing, over time, the contribution of fishing boats owned by foreign states. ‘Hoki’ is the local name for *Macruronus novaezelandiae*, also known as blue grenadier, a member of the Merluccid hake family (FishBase.org). It is a highly commercial species with the Total Allowable Commercial Catch (TACC) set at 250,000 tonnes. Two major stocks are recognized around New Zealand, and although there are environmental growth rate differences they are considered genetically uniform. Stocks are fished by bottom and mid-water trawls by industrial fishing boats largely in excess of 42 meters. There is relatively little by-catch, and incidental by-catch of sea birds and such icon species as seals is said to be well documented.

Few developing countries can presently hope to match such management sophistication (with the exception perhaps of those conducting tuna fisheries through regional consortia and agreements). New Zealand has taken steps to define access and property rights, to accommodate minority communities with traditional rights into national schemes for entry and allocation, and has in place legislation to commence the adoption of an ecosystem approach to fisheries management. Nevertheless, the weaknesses detected in the hoki fishery management by the certification assessors⁴ focus on the lack of an environmental impact assessment, including ecosystem effects. The weaknesses were identified in several “CARs” (or Corrective Action Requests in the terminology of the MSC - see explanation in Box 3 on MSC certification) and whilst they did not prevent certification, they did require revised management plans by the HFMC by the time of a follow up audit conducted 16 months after certification. The audit led to some parts of the revised plan being accepted, and additional minor CARs and review dates being developed. The certificate of sustainable fisheries has a five-year lifetime.

³ In this case the certifying agency was SGS (Societe Generale de Surveillance): SGS Public Summary Report (of New Zealand’s Commercial hoki fishery) pp70, and Hoki scoring guideline V2, pp 25, Document MAD-06, Dated 12 March 2001: see MSC.org

⁴ MSC Fishery Surveillance Report (of the New Zealand Commercial Hoki Fishery), Report No. MAD-43, 9 pages, dated 22nd July 2002: see www.MSC.org

[Box 5: Major advantages conferred by New Zealand's fisheries management structure on the process of certification (sources: Ministry of fisheries, New Zealand, 2002a; Straker et al., 2002)

New Zealand introduced a quota management system in 1986 which controls the total commercial catch from all the main fish stocks found within New Zealand's 200 nautical mile EEZ.

There are numerous statutes governing the conduct of fisheries and other uses of New Zealand's coastal waters. Chief amongst these is the New Zealand Fisheries Act of 1996, which encompasses the precautionary principle, and the concept of ecosystem effects of fishing. It also recognizes existing statutes on Maori fishing rights and the allocation of fisheries resources to a representative body of Maori. Many of the responses of the HFMC (Hoki Fishery Management Company), to meet the requirements of the assessors, referenced existing fisheries legislation in New Zealand.

The Government decides annually on the total allowable catch (TAC) for each fish stock on the basis of scientific information and consultation. For the hoki fishery such stock assessments are carried out with the help of independent trawl surveys and acoustic soundings. The commercial stocks have been regularly assessed since 1986 and there is good background knowledge and there are extant models of the fishery. The government conducts or commissions such assessments and charges industry for the costs.

Customary (non-commercial Maori) and recreational fishing are not directly governed by the QMS, but are regulated using input controls. Both customary and recreational catch levels are estimated before setting the TACC (total allowable commercial catch) for each quota species. This is the total quantity of each fish stock that the commercial fishing industry can catch that year. The TACC for each fishery comprises individual transferable quota (ITQs). Fishing and fishing boats are monitored by satellite and by an industry-based programme of observers. Occasional passage of boats and planes of the New Zealand Defense force help monitoring and compliance⁵].

The minor CARs largely related to the environmental/ecosystem effects of fishing, the need for better recognition of spatial structure rather than merely biomass estimates in management and effective implementation of a comprehensive management system. There was a *de facto* acknowledgement that the effects of bottom trawling in the relevant ecosystems are insufficiently known; "Information is not sufficient on the distribution of habitats, major assemblage types and the natural functions and trophic relationships among species in the midwater and benthic ecosystems where the fishery operates".

This highlights the need for a translation of even one of the best monitored fisheries from a single stock approach to an ecosystem based approach, as well as the potential for ecolabelling and certification to be a force in that direction. However, it could be argued that the country was already embarked on such a course, as such shifts are presaged in the New Zealand Fisheries Act (and similar efforts are being made in some other countries, see section 6.2). New Zealand is currently extending the quota system to other species and seeks to elaborate the effects on non-commercial and icon species more widely, as well enhancing stakeholder accountability (Ministry of Fisheries, New Zealand, 2002). Thus the influence of the certification process seems to have been in raising awareness of the practicalities of implementation of the new paradigm, and in hastening the engagement of the commercial fishing industry in these approaches.

It might seem perverse to dwell on the challenges faced by even a well-managed fishery gaining certification compared with the reality of small scale, multi-species fisheries in tropical developing countries. So that certification as currently formulated is not simply seen as a confirmation of the status quo in fisheries, it is necessary to examine the equity, social and ecological correlates of the potential introduction of fisheries certification schemes more widely, particularly in developing countries.

4. Certification applied to developing country fisheries.

The differences between the industrial off-shore fishing of single species in higher latitudes, and the fisheries of tropical developing countries are substantial. Small-scale fisheries in the tropics are characterized by open access and overlapping multi-species fisheries, fished with numerous gears and

⁵ It would be fair to say that New Zealand's fisheries are the envy of many OECD countries: New Zealand claims the ratio of net government expenditure on fisheries management to the annual landed value of the fishery resource to be 4% compared with an OECD country average of 17% for those with credible management regimes (Ministry of Fisheries, New Zealand, 2002b).

using a multitude of landing sites. The range of operation, sequential operation between fishers groups and the subsistence orientation of some aspects of the production, differ markedly from industrial fisheries with which however, they co-exist and compete (Panayotou, 1982). The coexistence of commercial, municipal and artisanal fisheries, and informal distribution and marketing of the catch for some fisheries, mean that current catches are often not properly monitored and reported. These differences in complexity, in current regulation (or its lack) and in the types of direct social dependence of fishers on the resource, have led those directly involved with small scale fisheries to question whether ecolabelling certification in general, and the Principles and Criteria specifically espoused by the MSC initiative, can be meaningfully applied to these fisheries. If they cannot, they argue, then ecolabelling is an elitist mechanism which cannot really serve the needs of the small-scale fisher and cannot therefore be extended to the global improvement of fisheries management.

4.1 Reactions to ecolabelling and the MSC initiative

The critiques of ecolabelling and the MSC initiative, as currently formulated, focus in five general areas: a) legitimacy and credibility, b) a mismatch between certification requirements and the reality of tropical small scale fisheries, c) potential distortions to existing practices and livelihoods, d) equity and feasibility, and, e) perceived barriers to trade.

4.1.1 Legitimacy and credibility

The MSC initiative is the only third party certification scheme for ecolabelling sustainably managed marine fisheries. As with any initiative, timing, context and the perceptions of stakeholders will affect whether good ideas are translated into new paradigms, practices and results. To be a truly global force in the improved sustainability of fisheries it must be applicable in some form or other to the different types of fisheries around the world. Developing countries are the biggest exporters of fish, largely to northern markets, as well as requiring to meet national and local needs for food security and livelihood. The inclusivity of the group that originally framed the MSC Principles and criteria, and its ability to speak for developing country fishers and fisheries have been questioned (Mathew, 2000, Kurien, 2000). Certainly the criteria and principles as initially formulated, although scientifically attractive, are not easily applied to the diversity of fisheries in developing countries. Indeed, Asian countries generally have reacted negatively to the MSC initiative on the basis of this issue, and defensively on the grounds of the legitimacy for an “NGO” to dictate terms to national governments having sovereignty over their resources (SEAFDEC, 2001). The early liaison with Unilever has raised fears that the initiative was motivated by the requirements of the retail trade, and not by true consumer pressure for eco-friendly produce - since the latter has yet to be educated or mobilized in some countries (Wessels et al., 2001). Although Unilever is not still represented on the Board of the MSC (May, 2000), this perception still persists in developing countries (Kurien 2000). Whilst in the case of forestry, the catalytic role of NGOs in setting environmental policy has been noted, the public perceptions of the NGO partner, WWF, and its activities in areas unrelated to fisheries, have caused collateral mistrust of the certification initiative (for example, in Scandanavia, Braaten, 1999). For these concerns to be assuaged, implementation of the certification scheme must be seen to result in better fisheries management more broadly, and to take on issues of social equity and not simply an increase in the price of high valued products in distant markets.

4.1.2 The mismatch between certification requirements and the reality of tropical small scale fisheries

If the initial certification of developed country fisheries accomplished to date (see section 4.1.2) were themselves a trial of feasibility of the certification concept, it is now pertinent to ask about the feasibility and consequences of extending this growing experience to approaches to tropical, developing country fisheries. Even for single species fisheries, substantial scientific effort and financial outlay are required for adequate stock assessment following the MSC guidelines. Compliance with catch reporting guidelines would be hard to develop, maintain and finance in many developing countries. If only export-driven fisheries are likely to meet these costs, the MSC initiative is unlikely to make a difference to the bulk of fisheries in Asia which fish for domestic markets. Stock-based assessment with heavy data requirements cannot be the only basis for assessing and determining labels. More indicator-based assessment tools will be needed and have to be developed for these purposes (and the MSC has commissioned expert advice in seeking to address this issue - P.Degnbol, pers. comm.).

Certification of fisheries may help improve awareness and marketability of the product but it will not be, and is not claimed to be (Schmidt, C-C. 1998), the only requirement for improved fisheries management. "Without addressing the issues of access or property rights to the coastal seas, product labels alone will be non-starters for achieving sustainability" (Kurien, 2000). Logically therefore, at the present time, certification of fisheries *is* limited to fisheries "that can" (Braaten, 1999). National governments must take the steps to put access control and shared management in place to make this feasible for other fisheries. Means must be worked out how to license the different user groups, including artisanal fishers, who exploit the fishery. Granting certification to one group in a fishery could potentially disenfranchise the poorer partners. For this to be seen to be done under the pressure of external forces may play to the detriment of government initiatives. The outcome of the deliberations amongst key south east Asian nations (SEAFDEC, 2002a) urged that the member governments should "anticipate and address" the potential impacts of ecolabelling of ASEAN fish and fishery products. This was suggested to be accomplished by developing regional guidelines and criteria and to consider a forum for exchange at a technical level relating to implementation, assessment and certification processes (SEAFDEC 2002b). Although developing countries are not expected to develop the level of monitoring that has been developed through government legislation for the hoki fishery in New Zealand, the existence of a monitoring, control and surveillance (MCS) system appropriate to the nature and scale of the fishery are, with tenurial arrangements, essential pre-requisites for the award of an ecolabel (Wessels et al., 2001).

In recognition of these issues, the WWF is attempting to test certification methodologies for small-scale fisheries at a number of sites. The approach, which aims to maximize the use of local knowledge in the certification process, depends on partnerships with fishers and other stakeholders to assess the state of the fishery. An earlier critique suggested that there was only moderate initial success (MRAG/IIED/Soil Association, 2000). In its account of the project, the WWF report (WWF, 2002) identifies two dilemmas, the data dilemma and the management dilemma. The data dilemma, both for the MSC certification process, and fisheries management in general, is how to obtain the scientific information required to assess the biological stock of the species in question when community fisheries deal in traditional local knowledge based on areas. In the case of the blue crab fishery, Sulu Sea, Philippines, there have been problems with conducting a full stock assessment. The stock is suggested to be unique, but the genetic analysis, which would have determined if the stock being harvested by the community is actually unique or otherwise, was too costly for the community to have conducted. The same dilemma extends to management, as community-based fisheries tend to rely on local traditional knowledge in their management rather than conventional western scientific methods and ways need to be found to fuse or overlap the two uses productively and to mutual functional advantage. This is unlikely to happen immediately and time will be needed to understand how well traditional measures can deal with both stock related and ecosystem expectations of management. Improved explanations will also have to be included in the packaging of science-based indicators to ensure confidence and the rationale for their adoption. Both time and financing to build and share experience will be required.

4.1.3 *Potential distortions of existing practices and livelihoods*

National fisheries management plans are built on national perspectives with several dimensions, which include ensuring sustainability of the resource, contributions to national food security, employment and livelihoods and the development of foreign exchange through export. The ecolabelling approach, by focussing on the perceived international market demand for properly managed fisheries and processed products also moves incentives and pressures for compliance into the international arena. Developing country fisheries seeking to export products to the developed markets of the more affluent and, in some cases, eco-sensitive northern countries, will be adding a premium to their products to accord with the certification processes.

Although the declared aim is to certify fisheries and not single species, there are technical and market issues to consider for multi-species fisheries if ecolabelling becomes successful. For instance, in a multi-species fishery, and to meet ecosystem monitoring requirements, monitoring of several species would be required. It has not been made clear for how many species the managing entity would have to develop life history and stock assessment knowledge and monitoring – and this is a daunting challenge in terms of finance and monitoring. A further risk is that only one (high value) component of the fishery is likely to be desirable for export. It is not yet ascertained if the price differential will then bias fishing practices and actually reduce management efficiency; or whether the costs of certification for the whole fishery will cause the price of all fish to rise, even in the domestic market - when food

security issues come into play. There is a danger that this will further increase the costs of all the high value fish and seafood products within the producing country where these items would become luxury items. This may exacerbate trends where the national produce, in some cases the "national fish" (e.g. kurau in Malaysia, tuna in the southern Philippines) become unaffordable in the local market. It has been argued that where developing countries are exporting single, high value species (such as shrimp and tuna) caught through specific fisheries (or potentially as a result of aquaculture in the case of shrimp) then this will not interact with the domestic market in any major way (MRAG/IIED/Soil Association, 1999). This assertion needs to be validated, to examine exclusion effects on other fisheries and issues related to by catch (which is either discarded or, in many developing countries, productively utilized *given current price differentials*). There would seem to be a need to monitor these trends and to assess the extent to which money in the national coffers, or accruing to those granted the prerogative to certify their products, off sets the possible limitation of choice in domestic markets. Research and monitoring is therefore required in multi-species fisheries of the fate and marketability of the species for which there is no export market.

The supervision of the chain of custody will also be problematical in small-scale fisheries. If certification were to be enacted, it would have major effects on markets and likely reward middlemen and the post harvest chain of custody, but not necessarily the fisher (Kurien, 2000; SEAFDEC, 2001). Care must be taken that sales to the export market should not threaten the nutritional security at the place of origin or displace women who find employment and play a central role in local fish marketing (Kurien, 2000).

Further, should ecolabelling become successful, the development of large price differentials between products may actually encourage the persistence of markets for unsustainably fished products. This could be referred to as the need to create "non-leaky" consumer demand for ecolabelled products. In the case, for instance, of marine aquarium fish and the provision of fish to the live reef food fish trade, multiple supplying countries and developed, developing and transitional country markets for these products presently complicate the implementation of reliable certification schemes (Chan, 2000). Whilst alternative marketing avenues exist for some of these products, even if the second, local market is less lucrative than the certified avenue, it is likely that poor fishermen will continue to exploit the resources, perhaps even increasing effort, legally or illegally, to make up for the lower market price. Extensive market demand studies and continuing environmental education will be needed in all countries.

4.1.4 *Equity and feasibility*

The equity issues are of two kinds. One is that the criteria and indicators set for certification should be able to be met by developed and developing country fisheries equally. If this is impractical, more flexible approaches to certification will be required to level the playing field and to lower the apprehension of developing countries that certification can be used as another barrier potential barrier trade (c.f the HACCP legislation which has, through the stringent requirements of the consumer countries, in some cases adversely affected the opportunities of producing countries to reach Northern markets).

Secondly, is the equitable inclusion of fishers in management units. This is likely to be difficult since most quota run systems are dominated by the richest (but see the example of the New Zealand national fisheries legislation, above, which has negotiated provisions for the inclusion of minority groups). If multi-species fisheries become the target for licensing because of international pressure to ensure that the methods of production are commensurate with sustainable fisheries management, rather than licensing schemes based merely on the commercial imperative of the highest value species, artisanal fishers who produce around 40% of the catch in these fisheries must be adequately recognised and compensated. We require knowledge of a) who benefits from these schemes, b) to establish equitable principles and to safeguard against possible certified fishery monopolies, and c) how best to ensure equity for legitimate participants in access to licensing schemes, as well as the sale of products and domestic consumption.

Finally is the question of feasibility and whether at the moment it is feasible in small developing countries, where even current catches are not properly evaluated and recorded, to enact and enforce the certification of communities or their fishing methods. A too rapid adoption of the ecolabelling approach might lead to "certified" products actually being "labelled as certified" through inadequate or

illegal practices. There is clearly a need to monitor and to demonstrate through research whether market-based certification can actually change behaviour at the fishery level as countries move to adopt the FAO Code of Responsible Fisheries at the country level.

Lack of financial (Mathew, 2000) and institutional capacity (Kuperan and Gardiner, 2000) will hinder the ability of developing country fishing management units to undertake certification, or to engaging the necessary scientific expertise. Research and testing is still required on the feasibility of community-based fisheries certification methods and protocols (Kuperan, Choo and Gardiner, 2002; and see section 6.3). In such circumstances, embarking on certification without a clear signal that the market will bear the ecolabel price could be foolhardy (Kurien, 2000; and see below). Certification of whole fisheries will encompass commercial and artisanal users and the plan must be sufficiently sophisticated to provide incentives and rewards for good practice to both groups. If certification is costly for developing country fisheries, cost effective alternatives for products to reach the market could be evaluated. Suggestions have included fair trade labeling schemes which assure that artisanal fishers livelihoods are maintained and rewarded for non-destructive, environmentally selective fishing methods, labels which promote traditional fishing methods (as these are generally considered to be less damaging than industrial methods) and labels of geographical origin (Kurien, 2000; Mathew, 2000). Although attractive in essence, the practicalities for such schemes still have to be developed and they run the risk of attracting similar criticisms of arbitrariness and potential trade infringements (see Deere, page 64 in Wessels, et al.2001, and section 5.1).

The fact that the responsiveness of consumers to ecolabelling schemes varies greatly among regions and countries is likely to create an incentive to direct those fishery products to eco-sensitive markets which can become certified, whereas uncertified or uncertifiable products will be directed to eco-insensitive markets. Most of the future expansion in demand for fish and fishery products is expected to arise in Asia, Latin America and Africa whose consumers are presently not very responsive to ecolabelling of fish and fishery products. Therefore, it appears that, at least in the medium term, the extent to which ecolabelling can serve as a tool for achieving sustainable fisheries on an international scale may be limited (MRAG/IIED/Soil Association, 1999).

4.1.5 *Perceived barriers to trade*

If the perception gains currency that certification will reward well managed fisheries regimes without making any impact on fisheries globally (Mathew, 2000), then mistrust about the economic motivation for ecolabelling will also be raised in developing countries. There is already a general anxiety about the globalisation of trade and a gradual move away from a more certain environment for trading - when tariffs and quotas are specified and clear to all traders in advance - to a situation when a product will be accepted or rejected for entry to a country on the basis of standards and labels for which the standards are determined by the importer. The determination of the standards, and the imposition of the label, often is in the hands of the more developed countries. This can lead to more uncertainty in trade for marine products for developing countries. The difficulties in establishing and applying impartial and transparent criteria for granting an eco-label, problems of ownership and control of the labelling schemes, the potential for eco-labels to be used as a non tariff barrier, and the disproportionate rewards to those responsible for the post harvest production and export over the catching sector have been widely expressed in debates on ecolabelling previously (see Deere, 1999; SEAFDEC 2001). Dawkins (1995) recommends that criteria for certification generally be broadened to include social criteria and identification of compatible financing vehicles – which would accord better with the wider criteria adopted in forestry certification (see sections 3.3 and 4.1.2 above). She draws attention to the growth of markets, for if markets for ecolabels do not grow sufficiently, the market will be subject to monopolistic practices at the expense of small producers in exporting countries. Life cycle analysis should ensure not only reliability for consumers but also producers in exporting countries.

4.2 *International research support for the improvement and extension of labeling schemes*

The FAO has convened groups on more than one occasion to evaluate the utility of product certification and ecolabelling in fisheries. The expert groups have remained divided (reported in Deere, 1999; FAO 1998), although the reports provide good case histories of the pros and cons of ecolabelling, and the demonstration that chain of command and product labelling schemes are feasible when the stakes are high - e.g. for tuna and Patagonian tooth fish (see section 4 in Wessels et al.2001). There are substantial reservations expressed by governments and fisheries representatives in Asia that

ecolabelling can quickly be made feasible and equitable for developing countries. Substantial bodies of research in all categories (biological, ecological, economic, social and policy) are required to move the debate from what ecolabelling cannot do, to what it might productively do in the future as part of a general set of integrated measures (see section 6).

Hamstrung by titles, the international community should seek to progress the debate (Deere, 1999) through a focus on standards of all types that will enhance good practice and trade.

5. Ecolabelling and International trade

5.1 Technical barriers to trade

The major developing country concerns about environmental labels acting as barriers to trade has led to several analyses of major international declarations governing trade and the environment, including relevant WTO agreements and the GATT, as they may affect labeled or certified products and processes. This subject has been comprehensively reviewed (see Deere, pages 58-65 in Wessels et al, 2001 and references therein, and Deere 2000) and the salient points are given in Box 6.

[Box 6: Major international instruments covering ecolabelling in relation to trade (summarized, in part, after Deere, op cit)

Principle 12 of the Rio Declaration on Environment and Development – “Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.”

The WTO Agreement, which directly addresses ecolabelling, is the Agreement on Technical Barriers to Trade (TBT)

WTO Secretariat notes that “well designed eco-labelling programs can be effective instruments of environmental policy” so long as the key requirement of non-discrimination between foreign and domestic products is honoured (www.wto.org/wto/enviro/eco.html.)

TBT differentiates “technical regulations” (mandatory requirements for products or related *processes and production methods* - PPMs) and “standards” (voluntary requirements for products or PPMs).

The rules of the TBT agreement, including its Code of Good Practice for the Preparation, Adoption and Application of Standards (the Code of Good Practice), prohibit both technical regulations and standards from discriminating between domestic products and foreign products that are alike (the national treatment principle) and between “like products” from different WTO Members (the “most-favoured-nation” principle).

In the case of technical regulations, if a regulation is applied in accordance with a relevant international standard, it is presumed not to create an unnecessary obstacle to trade.

Members must ensure that standardizing schemes operated at the national and international level comply with the Code of Good Practice of the TBT.

The Code of Good Practice requires a standardizing body to make reasonable efforts to harmonise standards at the international level.

The TBT has several provisions calling on countries to ensure transparency in the development and application of standards. It also calls on developed countries to recognize the difficulties that developing countries may encounter in the formulation and application of technical regulations and standards, and to provide advice and technical assistance for their endeavor in this regard (TBT, Article 11). Developing country members are also to be provided differential and more favourable treatment given their special development, financial and trade needs (TBT Article 12).

Article XX (b) of the GATT permits trade actions that “are necessary to protect, humans animal or plant life or health. Article XX(g) provides for actions “relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic

production or consumption. To qualify for any of the exceptions, a measure must also satisfy the requirements of the chapeau to Article XX.

WTO Ministerial Declaration (Fourth Session, Doha, November 2001), in the Work plan relating to Trade and Environment “instructs the Committee on Trade and Environment...to give particular attention to: (i) the effect of environmental measures on market access, especially in relation to developing countries, in particular the least-developed among them, and those situations in which the elimination of trade restrictions and distortions would benefit trade, the environment and development... (iii) labeling requirements for environmental purposes, para. 32.]

Thus ecolabelling schemes that are mandated by governments come clearly within the TBT's rules on technical regulations and other relevant rules of the WTO. Voluntary ecolabelling schemes, in contrast, do not appear to contravene existing multilateral trade rules. But there is a caveat relating to PPMs. PPMs include processes of production for which certification might be sought because they lead to the development of a product which is less environmentally polluting (called *product-related* PPMs). However, PPMs also can include a process or method, such as the harvesting of natural resources, that might have positive or negative effects on the environment in the production phase (and are distinguished as *non-product related* PPMs). These production externalities do not affect product characterization (i.e. the consumer could not distinguish fish produced by sustainable or unsustainable harvesting methods). Rather, the ecolabels invite consumers to discriminate not on the basis of product characteristics, but on the (unseen) means of production. The power of countries to make distinctions based on standards and regulations pertaining to PPMs, which do not show up in the physical characteristics of the product, is currently hotly contested (Deere, *op cit*, and discussed below in section 5.2). Whilst open discussion of this point would obviously be preferable, some governments have been reluctant to engage in this debate on environmental PPMs as they fear that further social considerations (based for example on labour standards and human rights) may further enhance discrimination. This lack of clarity is an issue, as PPM-based measures are clearly central to better conservation and environmental management in the case of fisheries (Downes and van Dyke, 1998).

5.2 Conflicts over trade, environment and seafood labels

There have been a series of judgments by the WTO on the ability of nations to impose environmental conditions or labels on internationally traded seafood products. Although none involves certification in the sense advanced by the MSC (above), they do shed light on the evolving treatment by the WTO of aspects of labeling of products from the fisheries sector.

5.2.1 Dolphin-free tuna

The two tuna-dolphin disputes (WTO, 1991 and 1994) collectively represent one of the major trade-and-the-environment challenges to be faced by the WTO⁶. They arose from the attempts of the US to impose import embargos for yellow fin tuna on countries that fish for tuna using purse seiners in which there was substantial tuna by catch, particularly in the tuna fisheries of the Eastern Tropical Pacific. The first challenge was brought by Mexico, as a primary tuna fishing nation and producer affected by the ban. The second was brought by the Netherlands and the EC, which were affected as secondary exporters of tuna they had imported from primary producing countries not recognizing the US measures. In both cases the dispute panels found against the US⁷. One test was whether Article XX of the GATT allowed exceptions to the trading rules in order to protect animal life or health. The 1994 judgment determined that exceptions to Article XX did not allow one state to take trade measures that can work only by forcing other states to change policies pursued within their own jurisdictions. Secondly, the panels found that the US rules did not so much regulate tuna as a product, but the process and production methods (PPM) for the product. As noted above, this remains a contentious issue and affects clear adjudication on ecolabelling schemes focused on PPM. Whether WTO judgments on PPM are coloured by the unilateral imposition of bans based on the imposition of domestic PPM, and

⁶ There have been many analyses of the tuna dolphin disputes. See Downes and Van Dyke (1998) for the conflict in relation to the wider trade law and sustainable fisheries; and Kingsbury (1994), for an account that includes implications for the potential restructuring of international law to accommodate such trade-environment issues.

⁷ Despite the further development of the International Dolphin Conservation Programme for the Eastern Tropical Pacific, political wrangling between environmental groups and the US executive and between the US and Mexico continues over these issues: see Anon (2000) The battle between environmental co-operation and trade embargoes flares up with possibility of Tuna Dolphin III, BRIDGES (Cover story) Year 4, No. 6, (July-August 2000), 1- 2.

would be more flexible if the PPM were internationally codified criteria, has yet to be tested (but see the judgment on sardines, see section 5.2.3). Further, the panel's findings in both cases were not taken up by the GATT Council, so neither has direct legal effect within the WTO/GATT system, and are of uncertain precedence despite their notoriety.

5.2.2 *Turtle-free shrimp*

In December 1995, The US Court of International Trade ruled that, in line with section 609 of the US Endangered Species Act, countries that trawl for shrimp in waters where marine turtles occur must, as of June 1996, be certified by the US government to have equipped their vessels with turtle excluder devices (or TEDs). TEDs had been mandatory on US shrimp boats since December 1994. A request was made by India, Pakistan, Malaysia and Thailand to examine whether the US ban was in violation of the United States' WTO obligations. The basis of the complaint was largely the opposition to the extra-jurisdictional and unilateral application of domestic law. A WTO dispute settlements panel ruled in April 1998 that demanding TEDs on shrimp trawlers violates the rules of the multilateral trading system (Anon, 1998). The judgment was controversial and left the WTO open to claims that it was insensitive to environmental issues. Upon US appeal, the WTO Appellate Body sat and delivered a verdict in October 1998 which still found against the US embargo, but treated the case more specifically rather than as a general infringement of trading under the WTO (see account by Shaffer, 1998). The Appellate Body found seven flaws in the United States' application of section 609: namely, that (i) insisting that all members adopt essentially the same policy as the United States had an unjustifiably "coercive effect" on policy decisions made by foreign governments, (ii) the US did not assure that its policies were appropriate for the specific local and regional conditions prevailing in other countries, (iii) even where shrimp were caught using US-prescribed methods, the United States still prohibited their importation if they were caught in countries not requiring the use of TEDs, (iv) the United States did not seriously attempt to reach a multi-lateral solution, (v) the United States discriminated among WTO members by applying different "phase in" periods during which they must require shrimp trawlers to use TEDs, (vi) the United States made far greater efforts to transfer the required TED technology to countries in the Caribbean/Western Atlantic region "than to other exporting countries, including the appellees" and, (vii) the application of the U.S. measure was "arbitrary" in that the certification process is not "transparent" or "predictable", and does not provide any "formal opportunity for an applicant country to be heard or to respond to any arguments that may be made against it".

This judgment appeared to satisfy only the complainants, as the US believed the judgment to be wrong, and the international and US environmental lobby felt that it did not meet the immediate needs for the conservation of turtles (although scientific advice was received by the AB that in fact TEDs were only a partial solution to the endangerment of turtles). However, observers have seen the judgment as an encouragement to the adoption of transparent and multilateral processes in the introduction of environmental considerations into trade negotiations to avoid further conflicts in the future (Shaffer, 1998), rather than insensitivity on behalf of the WTO to the plight of an endangered species. Whilst imposition of a requirement for certification to avoid a trade embargo, and voluntary certification as an incentive to increase market share through ecolabelling are qualitatively different (as are a stick and a carrot), it is likely that the community of developing countries have the right to expect similar forewarning, transparency and assistance in implementation to join in international schemes for which they may be initially disadvantaged.

5.2.3 *A sardine in Europe*

Critics of fisheries certification and ecolabelling as currently proposed have suggested alternative approaches, such as the adoption of fair trading labels, or labels of geographic origin, could be employed, perhaps accompanied by ancillary information to demonstrate the product was "environmentally-friendly" (see section 4.1.5). However, geographic labels can also be contentious (and the WTO will continue to investigate these, taking wine in Europe as a case in point: WTO Secretariat, 2001). Indeed, the means of labeling of products for trade (irrespective of harvest methods) can invite conflict.

The WTO Appellate Body delivered a landmark decision in September, 2002, on descriptive labeling. For the first time, a WTO member was held to be in violation of its obligations under the WTO Agreement on Technical Barriers to Trade (TBT) (Shaffer and Mosoti, 2002). Peru challenged an EC

regulation that maintained that only the species *Sardina pilchardus Walbaum* could be marketed in the EC under the name sardines. Peruvian sardines (*Sardinops sagax*) had been marketed in Germany as “Pacific sardines”, a formula recognized however by Codex standard 94, of the Codex Alimentarius Commission. Peru prevailed. The development of the Peruvian case was supported by an interesting coalition, including a Swiss-based Advisory Centre on international law, and a major British NGO (representing consumer associations), which was allowed to provide a letter of support for Peru’s position to the Appellate Body. This judgment clearly argues for the use or development of internationally agreed standards for product descriptions, and elevates the potential role of the Codex in providing such agreed standards. Whilst the rather abstract message of “harvested by sustainable means” is currently all that is being suggested for ecolabelling advocated by the MSC, the adoption of further types of descriptive labelling - that might elicit more immediate identification with the product by consumers – must also be carefully developed to avoid them being viewed as arbitrary or discriminatory by other producers.

All three of the above examples illustrate the powerful responses generated by producers subject to potential sanctions or exclusion from markets for fish and sea food products, and are further confirmation of the market forces which the MSC ecolabelling scheme seeks to exploit.

5.3 *New evaluation of rules for trade and the environment*

However, the thorny nexus of trade and environmental legislation is taken up in the current work plan of the WTO (see box 6). In response to overwhelming numbers of requests from developing nations, the intention is to launch negotiations on the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements. The negotiations will address how WTO rules are to apply to WTO members that are parties to environmental agreements. As well as the harmonization of trade rules with multilateral agreements, specific attention will be given to ecolabelling. The Trade and Environment Committee is to look at the impact of ecolabelling on trade and examine whether existing WTO rules stand in the way of ecolabelling policies. Parallel discussions are to take place in the TBT committee with the intention of identifying rules to be clarified. Public and political perceptions of ecolabelling are often blurred by being bundled with superficially similar product labeling matters e.g. the imposition of SPS/HACCP regulations – which then take on a collective and often negative connotation in relation to developing country trade. The Ministerial declaration at Doha carefully separates these issues⁸.

Also to be studied is the need “to clarify and improve WTO disciplines on fisheries subsidies, taking into account the importance of this sector to developing countries” (paragraph 28 op.cit).” Fisheries subsidies are to be tackled not just as an issue distorting trade (where they form a component of the reexamination of Article VI of GATT 1994 on Subsidies and Countervailing Measures) but also from the perspective of subsidies contributing to environmental damage by encouraging overfishing (see WTO secretariat, 2001). These are clearly steps that will improve clarity and the position of developing countries in deciding their next steps on ecolabelling. They also complement the Declaration of the WSSD (2002), which also makes strong recommendations on the need to improve the environmental effects of fishing, but says rather little on its interactions with trade regimes (FAO, 2002).

5.5 *Can ecolabelling schemes succeed? - economic choice, substitution and leakiness.*

A major assumption of ecolabelling as a market mechanism is that consumers are willing to pay the “green” premium on goods to satisfy their beliefs in environmental sustainability. Will consumers pay the price? The answer, so far, is less than clear-cut. Dawkins (1995) and Wessels (see section 3.3 in Wessels et al. 2001) have reviewed the theoretical and practical evidence for such schemes that are available in this relatively new area of environmental marketing. Theoretical analysis of labeling shows that, up to a point, in a case where demand for an environmentally friendly product exceeds supply, the ecolabelled product will increase in price. However, beyond a certain price differential adverse effects can be generated. Depending upon the price premium for labeled goods (and the relative size of the market captured by certified products), the price of both certified and un-certified

⁸ In paragraph 32 of the declaration of the WTO’s 4th Ministerial at Doha: “the outcome of this work...shall be compatible with the open and non-discriminatory nature of the multilateral trading system, shall not add to or diminish the rights and obligations of Members under existing WTO agreements, in particular the Agreement on the Application of Sanitary and Phytosanitary measures, not to alter the balance of these obligations, and will take account of the needs of developing and least-developed countries”.

goods can increase in the market. This could lead to further over-production of uncertified goods to take advantage of the higher prices. In forestry, as an example, if certification is mandatory, producers may switch away from certifiable forestry into other uncertified land uses. Environmental labeling in fisheries is almost too recent to conduct *ex post* economic analyses. Thus some of the assessments (Wessels, Johnston and Donath, 1999; Johnston, Wessels, Donath and Asche, 2001) are surveys of potential readiness to pay, not actual measurement. This *ex ante* assessment seems to indicate willingness to pay a premium price in a proportion of the population (evaluated in the USA and Norway). This willingness to pay depends heavily on degree of knowledge in the population about what ecolabels represent, and there are likely to be large differences in willingness to pay between consumers within countries, as well as between countries and regions. The studies were careful to compare like with like, e.g. certified salmon against uncertified salmon. However, there are quite large possibilities for substitution between types of seafood products (e.g. lobster, crab and shrimp; oysters, clams, mussels, scallops; and particularly amongst white fish fillets, noted in the growth in the market of tilapia and catfish fillets from fresh water aquaculture). At large price differentials (in markets not bound to buying fish as a cultural tradition), there can be substitution effects with other white meat products like chicken. The confounding effects of introducing further price differentials into seafood supply and demand through ecolabelling have not so far been studied.

These first essays in evaluation are in countries where consumer populations are expected to be relatively eco-conscious. However, two of the major markets for seafood are in Asia (Japan's imports accounted for 25% of the global trade total in 1999 – FAO, 2001); and China is prospectively one of the largest in the world⁹ (Delgado and Courbois, 1997; Yang, 2002). Neither market is particularly ecoconscious, and China has its own huge and diverse domestic market in which ecolabelled products may find it difficult to make a foothold. This is the case, at smaller scales, in most of the countries of South and South East Asia presently. The level of Japanese demand is so high that it is a stimulus to illegal fishing by others (Kattoulas, V. 2002).

An issue alluded to by Wessels et al. (2001), is the comprehension by the consumer market of what ecolabels actually mean and whether consumer mistrust of “advertising” will prove a serious hurdle to acceptance. It is clear that sections of the consumer public can be motivated to react to the actual or potential loss of icon species (dolphin, turtle, seal) but the less easily conveyed idea of “ecosystem sustainability” of unseen aquatic systems, may defy easy marketing, particularly when the general public has no simultaneous sympathy for magnificent animals such as tuna or swordfish. One could speculate that it will be easier in the future to label and promote farmed (aquaculture) species as an alternative means of protecting wild resources, than trying to convince the buying public about biomass limits and harvesting from the wild.

There is a current appreciation of fish as a healthy commodity (without, so far, any damaging examples of disease or toxicity problems arising from aquaculture at the level of the FMD/BSE affecting markets for red meat in Europe). This will keep demand high in the health- and (potentially) eco-conscious US and European markets. However, high demand from markets not requiring ecolabels in the future could marginalize a world wide approach to ecolabelling- leaving it as a mechanism to satisfy only retailers seeking niche marketing and not any overall improvement in fisheries management.

6. The importance of ecolabelling with respect to other management initiatives

Given the size of the market for fisheries products, ecolabelling may remain of importance to some nations' retailers but not others. However, assuming it can work as a market mechanism, the altruistic *raison d'être* for ecolabelling is that it is also a stimulus to the improvement of fisheries management - and it is being considered increasingly in this regard (Commission of the European Communities, 2002). Presently, the current MSC criteria appear scientifically correct but inapplicable in the context of tropical multispecies fisheries in developing countries. This too has been recognized by the MSC and the WWF and steps are being taken by these two agencies to examine the requirements in relation to indicators, and the appropriate means of application of certification to small-scale developing country fisheries (see section 4.1.2). The next section examines the three current aspects of fisheries

⁹ In the year 2000, China imported 2.52 million mt in volume and USD 1.85 billion in value of fish and seafood products. A key factor in the trade currently is the high importation of fish meal and low value species used for aquaculture feeds, and the tendency currently to export high value species. However, if the growth in overall meat consumption is taken as an indicator China's rapid development, its large population and growing affluence will increase the trend to import higher value food fish.

management, which are being developed in general, and how the requirements for certification may be integrated. The three areas are the development of indicators, an ecosystem approach to management, and community involvement and devolution of governance.

6.1 *Indicators of fisheries management*

Fisheries science is plagued with uncertainty - assessment of fish stocks is obliged to rely on random sampling of the whole, and biophysical interactions governing the success of recruitment to any fishery produce wide natural fluctuations in this fundamental parameter. Presently, standing stocks in many of the world's fisheries are below historical levels and the ecosystem interactions between fish populations that might occur at higher (or lower) overall abundances are still unknown for the majority of species. Goals for fisheries management can be set annually on the basis of the best available evidence, but the results must be frequently assessed because of these uncertainties. There must be an ability to adapt targets and management in the light of unexpected changes, and these must be capable of being discerned against long-term biological trends. The requirement to embrace uncertainty is embodied in the precautionary principle of the Code of Conduct for Responsible Fisheries (FAO, 1995). Further, the development of fisheries management is embarked on two courses which have not yet been resolved. The first is the more accurate measurement of management performance in fisheries so as to accurately set limits and to monitor sustainable fishing practices (these requirements are essentially enshrined in the MSC principles). However, in many countries there is a simultaneous move to devolve authority to wider groups of stakeholders and to manage fisheries locally in an effort to improve compliance. To accommodate these two trends a pragmatic balance must be struck, which will require the development of sets of indicators which are sufficiently precise for management, but which are more descriptive of the local fishery in terms which the stakeholders understand and can utilise (FAO, 1999, Garcia and Staples, 2000; Garcia, Staples, and Chesson, 2000; Degnbol, 2001). If the certification agencies wish to involve the range of global fisheries, like the FSC it will have to adapt its criteria for certification to these changes in local circumstances. However, making choices amongst indicators is not always a straightforward task. Gorfine et al. (2001) describe attempts to define single measure reference points for a sessile, invertebrate species (abalone) in response to Australian Commonwealth regulations that each fishery be developed sustainably (using very similar principles and criteria to those of the MSC). A single indicator was considered insufficient and biomass assessments are complicated when background information is incomplete, or biomass estimates are distorted by illegal harvesting. The ability to develop simple but effective indicators is something of a conundrum (of which both the MSC and the WWF are aware) and is likely to require many empirical choices of indicators to be followed through in different types and scales of fisheries before confidence in the setting and use of indicators for local fisheries management is developed. It is recommended that a number of these trials be undertaken in developing countries with government, agency and NGO support and the results made available internationally. Demonstrated feasibility in utilizing such indicator sets and frameworks for sustainable management will be needed before they can be incorporated into internationally recognized schemes for certification and ecolabelling, which is genuinely open to all scales of fisheries.

6.2 *The ecosystem approach to fisheries management*

A second dimension of the new paradigm for fisheries management is the ecosystem approach to fishing (Gislason et al. 2000). The implementation of this approach is key to raising fisheries management from protracted discussions of overfishing and habitat degradation to management for sustainable development as urged by the World Summit on Sustainable Development (WSSD). The ecosystem approach to fishing has been presaged in many earlier international documents and is the subject of careful work of the FAO and others presently¹⁰. Once crystallized, an international effort will be required to move the concept forward. The publicized collapse of conspicuous fish stocks around the world, and the urgings of the WSSD declaration, give a driving force to consideration of this approach, which has already been adopted by some developed countries (e.g. Australia op cit.) and international conventions (Constable et al. 2000). We do not underestimate the challenges in its adoption. In the case of the Alaska ground fish fisheries, attempts to operate the concept include public

¹⁰ Draft Guidelines on Ecosystem Approach to Fishing. FAO, in preparation; Note also that the SCOR/IOC working group has just completed its second meeting on this topic. SCOR-IOC Working Group 119 (2001). Report of the First SCOR-IOC Working Group 119 "Quantitative ecosystem indicators for fisheries management" held 5-6 October, Reykjavik, Iceland (www.ecosystemindicators.org - accessed November 2002). WWF Australia (2002) *Policy proposals and operational guidance for ecosystem-based management of marine capture fisheries*. downloadable from www.wwf.org.au 80pp

participation, reliance on scientific research and advice, conservative catch quotas, comprehensive monitoring and enforcement, definition of TACs and fishing quotas, strict rules on by-catch (where species caught as by-catch are factored into TACs for that species etc.), spatial distribution of fisheries and potential networks of marine protected areas (Witherall et al., 2000). In the case of developing countries, primary issues would also include controlling access, reducing excess capacity and improving monitoring catch monitoring generally. This is difficult for many developing country and small-scale fisheries to develop. The ecosystem approach is specifically included in the MSC principles and research is required in how to turn the intention into practice.

There is however, a political issue in the presentation of the ecosystem approach as the concept is still emerging, and in many cases we do not have the precise scientific knowledge of (particularly marine) ecosystems for it to be implemented in full. The MSC principles (and the closely similar ones adopted by Australia) assume that ecosystem management can be put in place. In the case of the MSC certification of the hoki fishery, the fishery management planning has been urged towards the development of more explicit ecosystem conserving activities even though the fishery has been certified as an interim measure. It is therefore important to stress for developing countries that a) ecosystem considerations should be built upon the existing fisheries management regime and are not something separate from it, b) appropriate time and experimentation is required for the full development of the concept, c) in terms of the fisheries management plans it will mean more attention to by-catch and habitat protection issues, d) in terms of national governance it will mean moving beyond fisheries indicators *per se*, to more attention to the legal and administrative exercise of property rights of fishing groups and integration of fishing activities with other cross cutting uses of the marine waters and the coastal zone, and e) the rate of its rigorous implementation as a principle driving certification of sustainable fisheries management should depend upon the international state of knowledge of the concept and process, and assistance in its implementation in developing countries. The development of the ecosystem approach to fishing is too important to ignore, and ecolabelling concerns should not be presented as a barrier to its implementation. More should be done practically to translate the concepts into measures to be implemented – and artisanal or simply improved gears (e.g. Munro et al., 2002) are likely contributions to this as by-catch is limited) but access, zoning and monitoring remain three essential functions to be initiated by national governments.

A clear conceptual advantage of the ecosystem approach is that it moves from management of catches to a set of integrative measures which include conservation. The cost of better management is the cost of environmental conservation. The ecosystem approach properly implemented would allow the identification of the measures required for exploitation and conservation of fisheries, and the internalization of so far unpaid environmental costs into the fishing industry. Ecolabelling may be a partial means to recoup some of the additional costs, but improved management will also come at some temporary social costs which so far most fishing nations have been unwilling to recognize and bear. Nevertheless it would seem better to accept these costs, than suffer fisheries and environmental failures which will lead anyway to the loss of livelihoods and possibly unregulated social conflicts.

6.3 Certification and community based fisheries

The past decade has witnessed a growing importance of community participation in the management of environmental assets. This is by no means new as common resources such as grazing lands, irrigation systems, fisheries, forests and wildlife have been managed historically by the people who use them. What is new, however, is that policy makers are beginning to view the need for community involvement not only in the context of finding a solution to perceived market failure (such as over exploitation of a fishery) but, more importantly, as prerequisite for the development of legitimate institutions for managing natural resources. Pursuing the same logic, the move towards community-based certification as an approach for dealing with the overexploitation of fisheries is cited as the best way of including small-scale fisheries. The approach involves selecting sites where there are organized communities that manage fisheries. The concept of certification and labeling is then discussed with the community and the criteria that have to be fulfilled by the fishers in the community are agreed upon. The fishery is then assessed using criteria that account respectively for the stock conditions, the impact on the ecosystem, and the management system that is in place for the fishery. The community will then take the responsibility of ensuring that the fishing practices within their jurisdiction follow the certification criteria.

The key problem with community certification is the question of what *is* the relevant community to certify, and the issues surrounding the inclusion and exclusion of stakeholders. In most small-scale fisheries the community is more than just fishers including also farmers, foresters and part-time workers. Dealing with only a fishing community does not work in most small-scale fisheries situations. The other major problem is the issue of the scale of the resource and the control the community can effectively exercise over the resource. The larger the scale of the resource, the harder it becomes to manage within a community due to the impacts of activities of other groups, either upstream or downstream. An example given earlier is the control a small-scale fishing community could have over the subsequent post harvest processes and chain of command. The scale issue continues to be a major challenge for community-based management systems.

The increasing devolution that is taking place in the fisheries of Southeast Asia is an indication that there are some promises for community based certification schemes. However, the wider aspects of certification are still seen very strongly as a government responsibility among the fishers of the region. The strong role of government, and support for financing certification has to be considered to make certification work in Southeast Asia and the developing world in general. At present the possibility of attracting a significant portion of developing country fisheries into certification schemes appears to be slim. The problem of an oversupply of non-certified fish products will be the norm in the developing world and will thus increase the cost risks and possible losses for those traders who volunteer for certification.

6.4 Avenues for research and international support

Many of these issues and objections raised in sections 4, 5 and 6 of this paper have not been sufficiently tested to allay concerns over ecolabelling in developing country fisheries. To be relevant in the producing country context, ecolabelling and certification schemes will have to be developed with, and respond to, the major developments in fisheries management. There is ample scope for such testing and evaluation of small scale and developing country issues to be carried out, in line with steps to improve fisheries management generally (see Boxes 7a and 7b for some of the key topics arising from this discussion).

[Box 7a: Issues for research

- Feasibility and consequences of extending ecolabelling to tropical, developing country fisheries.
- Feasible indicator development and testing for all scales of fisheries management.
- Analysis and evaluation of the efficacy of such schemes for improving fisheries management.
- It will be important to determine in small developing countries where even current catches are not properly evaluated and recorded how best to ensure equity for the potential beneficiaries in access to the licensing schemes, the sale of products and domestic consumption.
- Impact of certification for one group in a fishery on others.
- Impact of certification on prices of fish, especially high value fish, which may become completely out of reach of most of the consumers in the developing countries.
- Impact of price differentials between certified and non-certified fisheries and fisheries within these groups.
- Impact of certification on uncertified fishery if fishing effort and fishing capacity is redirected from certified fishery to uncertifiable or illegal fisheries.]

[Box 7b: Issues for policy support in the development of ecolabelling and certification of sustainable fisheries

- Equity in opportunity to participate and to implement.
- Government involvement in access regimes and national planning (including the restoration of credibility of ecolabelling schemes) for improved management.
- Improved harmonization of environmental and trade regimes
- Clear trade rules on non-product PPM
- Financial support and *institutional capacity building* to take on the improved monitoring system(s) required.
- Support for learning through the implementation of regionally appropriate management and certification schemes and for the international harmonization of certification and ecolabelling standards (bearing in mind the need for equivalence)].

The MSC is collaborating in the assessment of stakeholder groups in some countries (with an initial trial in Africa rather than Asia) and is commissioning studies of the development and application of appropriate local indicators for management of small scale and artisanal fisheries. Whilst we consider that the definition of user groups and community-based management in relation to certification is one of the keys, there are several roles to be played by international agencies in this research also. There will be a need to develop awareness in more countries of the issues and, for example, the ASEAN countries to join this debate. There is a need to facilitate and improve the readiness for NGO and governments to come together in testing useful and equitable practices. Regional organisations could be invested with authority by governmental groupings to help develop additional labelling schemes, although there is no way of avoiding third party certification for the products to be globally accepted.

6.5 Setting the agenda and a call for response

One of the reasons for ecolabelling being contentious is the way in which the agenda is being set. The majority of United Nations and other international institutes have been established as organizations of member states. They tend to restrict deliberations to the mandate of the organization and resolve issues according to international law or in reference to international guidelines for the subject matter. Such organizations recognize the equivalence of states and the sovereignty of governments over the affairs of the state and its resources. Delegations to such bodies reflect the government position and not necessarily the consensus of public or scientific opinion. In the past, developing countries have been relatively well served by such equivalence principles, although a draw back of inter-state dispute settlement is that political considerations, particularly balancing environment against trade, can lead to compromise agreements – or even to countries being unwilling to fight for their “rights” on an issue, fearing economic reprisals. Unilateral actions or sanctions by states have been discouraged (Kingsbury, 1994).

Also in a globalising world, NGOs, trade associations, multinational companies and other elements of civil society are finding means to raise environmental and other issues outside the inter-governmental structure. Consortia (or ‘advocacy coalitions’) of these additional partners, sometimes including governments, are formed according to the topic in question (Elliot, 2001). This has the advantage of focusing both public and private expertise and opinion on the issue at hand. The consortia so formed are less susceptible to deflection by political trade-offs in reaching resolution of the issue, e.g. on the environment or human rights, although they are largely dependent upon states to act on the outcomes (or to legislate for others to act). Some developing countries object *a priori* to this extra-territorial infringement of rights – as exemplified by ecolabelling – whilst others would argue that extra-territorially imposed environmental regulations are unlikely to strike the right balance between environmental conservation and social and economic development at the national or local level (Rotherham, 2002). However, in cases where there are no clear international rules to guide the debate, consensus is hard to achieve or resolution of the issues is left to the interpretation of available international instruments. As international law covering environmental issues is still less well founded than trade law, the WTO is being forced to provide judgments on environmental disputes for which in the past it has been ill equipped (Downes and van Dyke, 1998). The inter-state deliberations of the WTO have previously allowed relatively little input from non-governmental actors. The outcomes of the WTO Ministerial meeting in Doha mark a change towards the explicit acceptance of the need to examine the rules of the WTO covering environmental and trade issues. Also, the acceptance of *amicus curiae* briefs, or other written depositions, from NGOs and governments during the deliberations on environmental issues (Shaffer, 1998; Shaffer and Mosoti, 2002) marks the recognition that additional scientific or public sector perspectives should be admitted to international arbitration on the environment (as foreseen by Kingsbury, 1994).

If it is accepted that a consequence of globalisation is that international view points, set in increasing measure by trans-national advocacy coalitions, will increasingly impinge on the domestic level of governance, it is therefore in the interest of all states to engage in the development of international guidelines for the environment which can inform and regulate actions (or adjudications) in a more rational and standardized manner. In the case of new initiatives to enhance the sustainability of fisheries management, states must decide whether the agenda has really been set by the declaration by Unilever, or by the FAO Code of Conduct for responsible fisheries. Or will the WSSD Declaration on the urgent action needed to manage fisheries, which results from a broader consultation and more synthetic intergovernmental process on environmental issues and development, set the environmental

agenda for fisheries? For the satisfaction of developing countries each of these attempts to stimulate action must be continued, as rapidly as possible, to the formulation of harmonious, internationally acceptable and recognized guidelines for the more specific implementation of sustainable fisheries management globally and regionally. A parsimonious approach would be to recognize the overlapping levels in these calls to action and to make clear the need for guidelines as a nested set of management guidelines globally, regionally and at the level of fisheries. There will be a need to recognize that whilst the principles and criteria at higher levels can be espoused that the verifiers and indicators of sustainable fisheries are likely to require development according to more local criteria (as espoused by Degnbol, 2001). The recognition of technical equivalence in the indicators and monitoring requirements for individual types and scales of fisheries should therefore be made a higher order principle, and efforts made to put the measures into practice empirically. This would take the discussion more practically outside the realm of contentious trade-related issues and onto an operational stage from which all could learn. An additional measure required is the development of standards agencies in developing countries which can assist nations, or regional trade groups (Helland, 2001), deal not only with environmental labeling but other health and product quality issues to provide developing countries with capacity and bargaining power in the wider debates on labels (Rotherham, 2002).

7. Conclusions

Whilst this paper has ostensibly been a discussion of ecolabelling in fisheries, we have argued that a preoccupation with ecolabelling tends to focus defensive debate on only one aspect of a larger issue. The emphasis must be on improved fisheries management. Ecolabelling and market share are just part of the rewards for more sustainable fisheries management regimes.

Developing countries must move towards developing access rights to fisheries and capacity monitoring as national priorities (before fisheries collapses drive an unregulated political process). National efforts should be dovetailed where possible with regional and international research efforts on devolved governance arrangements (since the responsibility of fisheries user groups, or quota holders in other fisheries, generally results in the development of more sustainable fisheries plans), indicators and the development of ecosystem fishing as an inter-sectoral issue, not just the fishery in isolation. Governments should be prepared to work with a range of regional and international actors to extend indicators for local use and to develop their application through adaptive management. Disagreement with ecolabelling must not be used as scapegoat for inaction (or to cover the fact that some countries still make large amounts of money out of shrimp, and trash fish for fish meal, from otherwise impoverished fisheries).

Is it intellectually honest to downplay the role of fisheries certification on the basis of its current criteria being too difficult, but to at the same time promote the new paradigms in fisheries management - which encompass many of the same goals (including ecosystem approaches) and are as difficult? We would rationalize this apparent contradiction on the evidence to date, which suggests that good national fisheries management regimes predispose to the development of conditions that allow certification, but that the current MSC criteria are inoperable in many developing countries and small-scale fisheries. Even developed countries have considerable research to do to find means to implement the ecosystem approach satisfactorily. Revision of national fisheries management will therefore have to precede the ad hoc development of certified fisheries, which may meet retail needs for the trade but which will fail as a stimulus to the global improvement of fisheries management. Revision of the MSC criteria – or adoption of indicators that could enhance the probability of small-scale fisheries accessing certification schemes, will still be a worthwhile contribution. But the emphasis should be on national governments (working regionally where possible) to take steps to improve fisheries management and to join in debates and trials about how best this is taken forward. The development of agreed international management standards for sustainable fishing will assist recognition and compliance under international trade law. In the developing world, the role of governments will be crucial in making or breaking certification schemes. Forging advocacy coalitions that include governments, rather than attempts at extraterritorial imposition of labeling schemes, is required for success.

Further research is required to value the environmental and social costs of fishing so that the true costs of management can subsequently be reflected in fish prices. Parallel efforts should be made to evaluate the means by which ecolabels can be given to aquaculture products. Attention should then be paid to the interplay (in potentially ecosensitive markets) between labeled aquaculture products and wild

caught products, as the specter is raised of industrial aquaculture products undercutting trade in sustainably fished wild caught seafood and thus turning the current debate on its head.

At the international level, the WSSD has set several ambitious deadlines for the implementation of plans of action to reverse the parlous state of fisheries management. The somewhat longer deadline (until 2010) suggested by the WSSD for the general application of the ecosystem approach (to responsible fisheries) reflects three issues that need to be addressed in the intervening period; 1) further development of the nature and implications of the approach, including the scientific, data and analytical requirements; 2) the development of conservation and management measures appropriate to the approach; and, 3) the introduction of regulatory mechanisms that will be new to fisheries and will have socio-economic consequences (FAO 2002). This is an area in which the MSC and its advocacy coalition can join in the development and testing of indicators and feasible approaches. It would also therefore seem unreasonable to expect stringent compliance by fisheries with a concept whose underpinnings are still being developed.

Utopian calls for better management and the adoption of right principles will not go far without funding (FAO, 2002). Further, unless judged to be monopolistic, international trading organizations can be instrumental in assisting in the adoption of various principles, including environmentally conserving ones. Part of the substance of the WTO's Appellate Body findings against the USA in the dolphin tuna dispute were based on the fact that the US could not impose conditions on other countries in a manner different from that which they would use to condition and inform their own national organizations in the imposition of new environmental law. The implication is that the partner countries require adequate time and practical and financial assistance to prepare for, and to implement, new and improved management. This is not a call to delay, rather a call for nations to take the lead in changing management and for donors and those who benefit from the commercial exploitation (particularly at the fishing industry and retail levels) to help pay for the research and management required. Trade in fisheries was not specifically mentioned in the Declaration of the WSSD (although it is of course implicit in the work plan of the WTO), but the financial benefits from the trade are one of the most obvious sources of financing for improved management and paying the costs of sustainable fisheries.

As international bodies review the pros and cons of ecolabelling as part of action plans for their own fisheries policy (e.g. Commission of the European Community, 2002) they must also consider how the north can assist governments of the developing countries to start and examine controlled access, the removal of excess capacity and improved monitoring of their natural resources. The experience thus far with certification and labeling show that all the certified fisheries are in countries where there is substantial fisheries management and governance. Having in place good management regimes at the national level would seem to be a prerequisite to certification and labeling, and developing countries will have to move toward improved management in general to help ensure their fisheries can enter into third party certification schemes. Paying for sustainable management will be more costly than currently but the costs of *conservation* may be a means of internalising the real environmental costs of fish as a product. True pricing of fish in the world market will be of advantage to the developing countries in trade terms. Sustainable fisheries management will be of advantage to all.

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Annex

MSC Principles and Criteria

Principle 1: A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery.

Criteria:

1. The fishery shall be conducted at catch levels that continually maintain the high productivity of the target population(s) and associated ecological community relative to its potential productivity.
2. Where the exploited populations are depleted, the fishery will be executed such that recovery and rebuilding is allowed to occur to a specified level consistent with the precautionary approach and the ability of the populations to produce long-term potential yields within a specified time frame.
3. Fishing is conducted in a manner that does not alter the age or genetic structure or sex composition to a degree that impairs reproductive capacity.

Principle 2: Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends.

Intent: The intent of this principle is to encourage the management of fisheries from an ecosystem perspective under a system designed to assess and restrain the impacts of the fishery on the ecosystem.

Criteria:

1. The fishery is conducted in a way that maintains natural functional relationships among species and should not lead to trophic cascades or ecosystem state changes
2. The fishery is conducted in a manner that does not threaten biological diversity at the genetic, species or population levels and avoids or minimizes mortality of, or injuries to endangered, threatened or protected species.
3. Where exploited populations are depleted, the fishery will be executed such that recovery and rebuilding is allowed to occur to a specified level within specified time frames, consistent with the precautionary approach and considering the ability of the population to produce long-term potential yields.

Principle 3:

The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resources to be responsible and sustainable.

Intent: The intent of this principle is to ensure that there is an institutional and operational framework for implementing Principles 1 and 2, appropriate to the size and scale of the fishery.

A. Management System Criteria:

1. The fishery shall not be conducted under a controversial unilateral exemption to an international agreement.

The management system shall:

2. demonstrate clear long term objectives consistent with MSC Principles and Criteria and contain a consultative process that is transparent and involves all interested and affected parties so as to consider all relevant information, including local knowledge. The impact of fishery management decisions on all those who depend on the fishery

- for their livelihoods, including, but not confined to subsistence, artisanal, and fishing-dependent communities shall be addressed as part of this process;
3. be appropriate to the cultural context, scale and intensity of the fishery – reflecting specific objectives, incorporating operational criteria, containing procedures for implementation and a process for monitoring and evaluating performance and acting on findings;
 4. observe the legal and customary rights and long term interests of people dependent on fishing for food and livelihood, in a manner consistent with ecological sustainability;
 5. incorporates and appropriate mechanism for the resolution of disputes arising within the system;
 6. provide economic and social incentives that contribute to sustainable fishing and shall not operate with subsidies that contribute to unsustainable fishing;
 7. act in a timely and adaptive fashion on the basis of the best available information using a precautionary approach particularly when dealing with scientific uncertainty;
 8. incorporate a research plan - -appropriate to the scale and intensity of the fishery – that addresses the information needs of management and provides for the dissemination of research results to all interested parties in a timely fashion;
 9. require that assessments of the biological status of the resource and impacts of the fishery have been and are periodically conducted;
 10. specify measures and strategies that demonstrably control the degree of exploitation of the resource, including but not limited to:
 - a) setting catch levels that will maintain the target population and ecological community’s high productivity relative to its potential productivity, and account for the non-target species (or size, age or sex) captured and landed is association with, or as a consequence of, fishing for target species;
 - b) identifying appropriate fishing methods that minimize adverse impacts on habitat, especially in critical or sensitive zones such as spawning and nursery areas;
 - c) providing for the recovery and rebuilding of depleted fish populations to specified levels with specified time frames;
 - d) mechanisms in place to limit or close fisheries when designated catch limits are reached;
 - e) establishing no-take zones where appropriate;
 11. contains appropriate procedures for effective compliance, monitoring and control, surveillance and enforcement which ensure that established limits to exploitation are not exceeded and specifies corrective actions to be taken in the event they are.

B. Operational Criteria

Fishing Operation shall:

12. make use of fishing gear and practices designed to avoid the capture of non-target species (and non-target size, age, and/or sex of the target species); minimize mortality of this catch where it cannot be avoided, and reduce discards of what cannot be released alive;
13. implement appropriate fishing methods designed to minimize adverse impacts on habitat, especially in critical or sensitive zones such as spawning and nursery areas;
14. not to use destructive fishing practices such as fishing with poisons or explosives;
15. minimize operational waste such as lost fishing gear, oil spills, on board spoilage of catch, etc.;
16. be conducted in compliance with the fishery management system and all legal administrative requirements; and

assist and co-operate with management authorities in the collection of catch, discard, and other information of importance to effective management of the resources and the fishery.