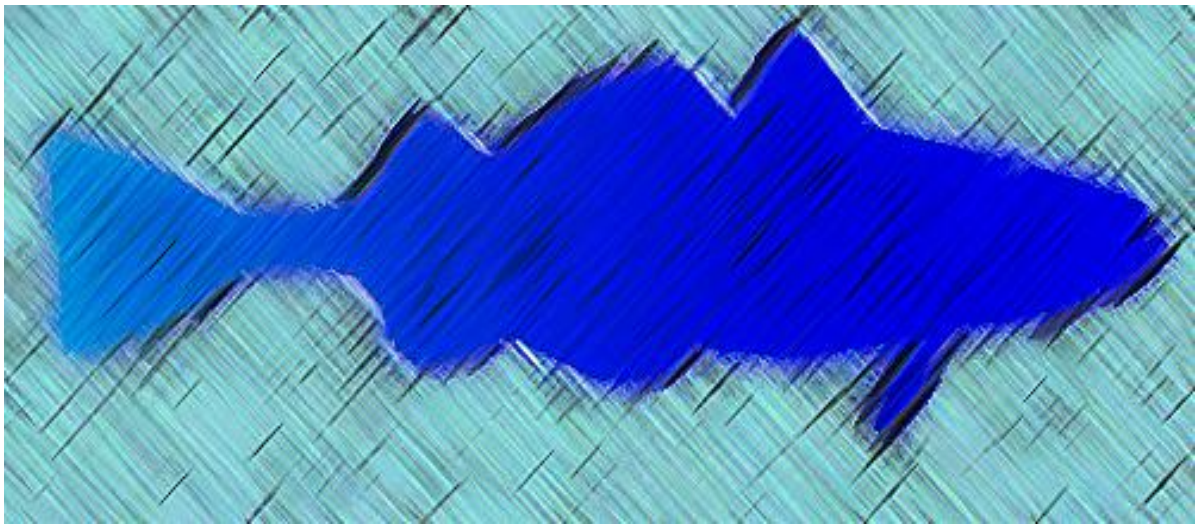
ASSESSING THE ROLE AND IMPACT OF ECO-LABELLING IN THE THREE BCLME COUNTRIES

BCLME Project LMR/SE/03/02



PRESENTED TO:

BCLME Benguela Current Large Marine Ecosystem Programme

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EXECUTIVE SUMMARY

An eco-label on a fish product is a distinctive mark or statement indicating that it has been harvested in compliance with preset sustainability standards. It is intended to encourage informed choice by consumers selecting among competing products. Currently only one Benguela fishery has such an eco-label (South African Hake). This report analyses the various eco-labelling options available, emphasising that third party certification (such as that offered by the Marine Stewardship Council) is the preferred form. The benefits of eco-labelling are intended to include increased market share and price premia for complying producers, utility gains for consumers, and general ecosystem benefits. It is not clear that these necessarily accrue. Producers interviewed indicated doubt that price premia would occur. The literature suggested that before such benefits accrue to producers, advertising is needed to acquaint consumers with the meaning and implications of the eco-labels. Moreover, if eco-labelling becomes the norm in world fisheries, costs will have risen, but the extent of the total market will not have increased. Eco-label compliant firms will simply be chasing the same enlightened market share, but at a higher cost! Against this, the positive aspect is in the potential 'stock externality' associated with controlled sustainable harvesting. Larger and healthier fish stocks translate into lower average harvesting costs.

It is suggested that the Namibian hake sector, which is more strongly export based, could apply for MSC certification, and that the resulting discipline could help restore the viability of the industry. It seems unlikely that real benefits would accrue from eco-labelling for small pelagic (purse seine) or mid-water trawl fisheries, since the markets for these products are local, relatively unsophisticated and primarily price driven. The incremental costs involved would yield little incremental market share and would reduce margins in sectors that are already squeezed.

The large pelagics in the BCLME are not captured using nets, and therefore conform to the "dolphin friendly" requirements of the American market. Formalisation of this would require no change in harvest technique and should be explored.

Angola's fisheries do not yet seem suited to eco-labelling. In the formal commercial sector monitoring levels and standards are poor by comparison with South Africa and Namibia. Moreover, the system of TAC setting and quota allocation is less transparent. Angola's semi/small-commercial fisheries (a segment of the industry that has proved difficult to eco-label elsewhere in the world) is relatively large and is being state supported.

Despite these problems, the BCLME could begin the development of a 'Regional Fisheries Management Organisation' (RFMO) as advocated in the FAO's 2003 guidelines for eco-labelling. It is suggested, however, that this should initially be located in the southern Benguela region.

CONTENTS

1. INTRODUCTION

The international trade in fish and fish products amounts to about $55 billion annually, much of which originates in developing countries. Poor management and inadequate property rights pose significant threats to this trade and to the livelihoods it sustains. Direct regulation has had limited success and pressures on marine resources continue to grow. A number of mitigating measures have been suggested of which eco-labelling is one. In the context of the fishing industry it is a voluntary tool intended to reward sustainable fisheries management and thereby to protect the world's fish resources.

An eco-label is a voluntary trademark awarded to goods or products that have proven themselves less environmentally detrimental than other goods in the same category. The Australian Environmental Labelling Association (AELA) notes that this definition implies two fundamental characteristics of eco-labels:

i. they are voluntary;

ii. and they require independent third party certification to define the levels of environmental harm that will differentiate products within the same category. [1]

It is important to note here that eco-labelling requires third-party certification, as opposed to first party certification (i.e. a producer's 'self-declaration' of its environmental standards) or second-party certification (the internal certification awarded by an industry association to its members). Moreover, although some mandatory government-backed label programmes exist, these are distinct from voluntary eco-labelling schemes.

Despite the apparent simplicity of eco-labelling as a concept, it remains controversial. Despite being one of the least coercive market-based mechanisms to improve environmental outcomes, a number of related issues have made many suspicious about the benefits of eco-labelling.

One concern is with eco-labelling's effects on consumer and producer behaviour, and hence its implications for established markets. Developing countries in particular are concerned with the impact on trade and development. The applicable role for the World Trade Organisation (WTO) is another concern, as is the role of the respective governments[2]. Finally, there is uncertainty about both the economic and the environmental benefits of eco-labelling programmes – whether the environmental benefit will prove significant and whether any economic net gains (and these are not yet proven) would survive if eco-labelling became an industry norm.

Clearly guidelines will be needed if eco-labelling schemes are to be effective and equitable. The appropriate role for international organisations should also be determined, especially since increasing consumer awareness of environmental issues suggests that the eco-labelling issue will increase in importance. Since nearly half of the global fisheries production is traded internationally, and since levels of environmental awareness are growing in many of these markets, eco-labelling has the potential to significantly improve fisheries management and processes.

The UN Food and Agricultural Organisation (FAO) issued guidelines that provide the underlying principles and the procedural and institutional details involved in eco-labelling of fish and fish products. While these indicate the minimum standards required, and recommend standard approaches, they do not address the basic question, 'is eco-labelling worth the effort?'

[1] Australian Environmental Labelling Association, Eco-Labelling Resources, http://www.aela.org.au/Ecolabellingresources.htm

[2] This problem is addressed in the 1995 FAO guidelines (see//ftp.fao.org/docrep/fao/008/a0116t.a0116t00.pdf)

Research into the full implications of eco-labelling, especially for developing countries, has been limited (Notable exceptions to this statement include the work undertaken by Deere, Viswanathan, and Gardiner, to be discussed later in the paper). However, industry experience combined with the available literature allows answers to some of the questions posed above.

The developing country debate lies at the heart of the issue as to whether eco-labelling is applicable for any/all of the fisheries in the Benguela Current Large Marine Ecosystem. If eco-labelling is a viable option, the optimal scheme needs to be determined. The benefits, costs and ramifications of participating in such a scheme need to be carefully outlined.

This paper will first examine the broader eco-labelling theme, looking at the theory and economics behind eco-labelling. It will draw on empirical studies of consumer behaviour to ascertain the feasibility of eco-labelling. This will be followed by an analysis of the developing country issue and a brief overview of the role of the World Trade Organisation. The paper will then narrow in on fishery eco-labelling and the Marine Stewardship Council standard in particular. Finally, the applicability of such standards for the Benguela Fisheries will be reviewed, and recommendations for Benguela Fishery Management offered.

2. WHY ECO-LABELLING?

Over the last twenty years, increasing numbers of people have become 'environmentally conscious' and environmental considerations have become increasingly important, especially among first world consumers. Concepts such as bio-products, fair trade and sustainable development are now widely recognised. In financial markets, companies are also being rated on their environmental and ethical standards.[3] Eco-labelling is a legitimate response to these developments, especially for firms that target the markets of North America and Europe. Survey evidence indicates that as long ago as the early 1990s more than half of North American consumers had purchased a product that they felt was better for the environment, boycotted a specific product that they felt was bad for the environment, or boycotted products made by a company that they felt was damaging the environment.[4]

2.1 A Brief History of Eco-labelling

During the 1970s, a few small eco-labelling schemes began to emerge in some of the developed countries. In 1989, the International Organization for Standardization[5] (ISO) issued a basic standard: 'Environmental labels and declarations – General principles' (ISO 14020). In 1999, the ISO clarified three types of international standards:

- 'Type I' (ISO 14024) - eco-labelling via third person certification
- 'Type II' (ISO 14021) – self declared eco-labelling
- 'Type III' (ISO 14025) – quantitative data measuring environmental impact.[6]

Eco-labelling was first internationally recognised at the 1992 UN Conference on Environment and Development (UNCED) in Rio de Janeiro. There governments agreed to "encourage expansion of environmental labelling and other environmentally related product information programmes designed to assist consumers to make informed choices."[7] Through the 1990s and early 2000, the eco-labelling approach spread steadily as both developed and developing countries began to adopt it. The number or associations and organisations offering third party certification (such as the Marine Stewardship Council) also increased, as did international cooperation, as countries commenced exchanging information while engaging in mutual technical assistance and mutual certification activities. Recently, the United Nations Food and Agriculture Organisation (FAO) has issued a set of 'Guidelines for the Eco-labelling of Fish and Fishery Products from Marine Capture Industries'[8].

2.2 The Efficiency- Equity Trade Off

Beyond its intended ecological benefits, eco-labelling can have two distinct areas of impact – efficiency (essentially an economic issue) and equity (essentially a political issue). An eco-labelling programme creates efficiency gains by increasing the information available to consumers about alternative consumption choices. Equity issues arise when a labelling programme imposes disproportionate cost increases on certain producers (say from developing countries).[9]

[3] Investigation of the Market Impact and Penetration of the European Eco-label over the years 1992-2000 and 2001-2004, TN SOFRES Consulting, December 2001.
[4] Jha, V. Green Consumerism, Eco-labelling and Trade', UNCTAD paper, 1993.
[5] The ISO is a non-governmental network of the national standards institutes of 156 countries, on the basis of one member per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system.
[6] Basic Positions on Trade and Eco-labelling, Committee on Trade and Investment, Nippon Keidanren (Japan Business Federation), March 14 2003.
[7] Paragraph 4.21 of Agenda 21.
[8] fao.org/docrep/fao/008/ao116t/a0116t00.pdf
[9] Australian Environmental Labelling Association, Eco-Labelling Resources, http://www.aela.org.au/Ecolabellingresources.htm

Are eco-labelling programmes economically efficient, and do their economic benefits outweigh their costs? The answer obviously depends on the responses of both consumers and producers. If the only applicants to the labelling programme are producers who *already* meet the environmental standards, these producers could benefit from increased market share in their preferred markets, and from the possible ability to charge a premium for their labelled products in those markets. Against these benefits, the costs accruing to them would be those related to monitoring, certification and direct labelling. Benefits can also accrue to consumers who should now have improved information about product characteristics, and potentially a broader range of product prices[10].

If, however, producers have to change their production process in order to comply with the label, the balance of costs and benefits is affected. Immediate benefits to the firm remain as before while consumers continue to benefit from improved information and greater product differentiation. An additional benefit arises, however: *there is now a reduction in environmental damages associated with the product*. In a depleted fishery, compliance with the eco-label's requirements may also lead to long term recovery of fish stocks. This in turn should give rise to a 'stock externality', i.e. a reduction in harvesting costs for all firms in the industry, whether they comply with the eco-label requirements or not. Against this the costs continue to include both the monitoring and direct labelling expenditures, to which now have to be added the costs of compliance with the label specifications.

2.3 Effect on Consumer and Producer Behaviour

The efficiency effect can be analysed further by looking at the response of consumers and producers to eco-labelling. The magnitude of these responses will, in turn, determine the economic and ecological successes of the programme.

2.3.1 Effects on Consumers

The effect on consumers depends on both the amount of information they actually perceive, as well their willingness to pay a premium for environmentally friendly goods.

Research suggests that consumers (especially those in developed countries):

- demand label information
- absorb little of the information on labels (Robertson and Marshall (1987), Feldman and Erickson (1988))
- find label information, especially on food labels, difficult to understand (Klein and Greyser (1989))
- do not have time to process the information at moment of purchase (Caswell and Padberg (1992))
- absorb more information if they have been exposed to the concept before, for example through an advertising campaign (Ippolito and Mathios (1990), Jensen and Kesavan (1993))
- absorb more information if they are educated and have a high disposable income (Ippolito and Mathios (1990)).[11]

[10] The consumer welfare gains associated with such product differentiation were initially detailed by Lancaster (1966 a & b)

[11] Robertson K.M. and R. Marshall, 1987, 'Amount of label information effects on perceived product quality', International Journal of Advertising, 6 (Summer); Feldman L.P. and L.W. Erickson, 1988, 'Labelling as an element in food marketing strategy: the United States experiment', Food Marketing, 3 (February); Klein N. and S.A. Greyser, 1989, 'The giant effort to inform consumers', Harvard Business School Case Study, 9; Caswell J.A and D.I. Padberg, 1992, 'Towards a more comprehensive theory of food labelling', American Journal of Agricultural Economics, May; Ippolito P.M. and A.D. Mathios, 1990, 'Information advertising and health

Furthermore, in Zarkin and Anderson's (1992) examination of factors influencing consumption, it was found that taste (65%) and price (64%) still dominated health and nutrition information (58%).[12]

Essentially, a (small) section of the consumer population is both influenced by label information and willing to pay a price premium. These influences and effects depend on their income and education levels, and on the level of previous exposure to such information.

2.3.2 Effect on Producers

As eco-labelling programmes are voluntary, we would expect the rational producer to apply for a label if the expected incremental benefit of doing so is greater than the expected incremental cost. Effectively, the costs of complying with the label's environmental standards and the cost of the label itself must be less than the expected benefits in terms of improved sales / higher price, better consumer relations, and improved competitive advantage. If the reaction of consumers to the new information is negligible or they are unwilling to pay a premium for a labelled product, producers may not apply. Ippolito and Mathios (1990) noted that eco-labelling programmes are most effective in oligopolistic industries, because producers are not only sensitive to the actions of rivals, but are better able to leverage the effect of a label through an advertising campaign. The small number of operators in an oligopoly reduces the negotiating costs involved in reaching an industry wide consensus when jointly agreeing to adopt an eco-label. This point is particularly relevant to the BCLME situation. For instance, the South African hake industry is notably oligopolistic, though recent state interventions have put pressure on the structure of the industry. The Namibian hake industry is also oligopolistic and already well monitored, however it too faces direct state pressures to broaden the ownership base, though the natural monopoly arguments against this remain strong. The Angolan industry is relatively smaller, the product (*Merluccius polli*) sells at a relative discount and monitoring is more difficult. In consequence eco-labelling as practiced by the South African industry seems far less likely.

Depending on the level of consumer awareness therefore, a few producers may change production in order to comply with the label standards (although research suggests that this effect is small). It has also been shown that producers are more likely to respond to a labelling programme when:

- the compliance period is at least a year
- regulation is flexible
- firms can operate through associations that provide services (legal resources, laboratories, printing, etc)[13]

In some markets (e.g. household cleaning products) eco-labels have proven to promote the spread of more environment-friendly production and raise consumer awareness about environmental issues. Consumer environmental awareness can have economic consequences, as recent consumer concern over genetically modified food crops has shown. Nonetheless eco-labelling schemes for natural-resource products are generally too new and small to have provided tangible results (the US 'dolphin safe tuna' label is an exception, but since its

choices: a study of the cereal market', The Rand Journal of Economics, 21.3; Jensen H.H. and T. Kesavan, 1993, 'Sources of information consumers attitudes on nutrition and consumption of dairy products, The Journal of Consumer Affairs., Winter.

[12] Australian Environmental Labelling Association, Eco-Labelling Resources, http://www.aela.org.au/Ecolabellingresources.htm

[13] Australian Environmental Labelling Association, Eco-Labelling Resources, http://www.aela.org.au/Ecolabellingresources.htm

imposition was mandated, its effects cannot be compared to the impacts on market share of voluntary labelling).[14]

2.4 Recommendations for Effective Eco-labelling Programmes

Experience suggests that, to be financially effective, an eco-labelling programme should satisfy the following characteristics:

- previous consumer exposure to similar label information
- third party certification
- oligopolistic market structure
- consumer willingness to pay a premium
- inexpensive and clear labelling.[15]
- low and identifiable monitoring costs

The Australian Environmental Labelling Association suggests that at an international level, principles for an effective programme include:

- transparency
- mutual recognition (by both exporting and importing countries)
- internationally agreed guidelines
- flexibility in ways to achieve eco-objectives.[16]

The Australian Environmental Labelling Association further notes that environmental goods display characteristics of both *credence* and *public* goods. A credence good is one whose attributes (such as environmental and health benefits) cannot be observed on purchase. As such, before believing the label claims, rational consumers require legitimate third party certification of the good. The effect can be compounded by promotion of the attributes. As noted earlier, an oligopolistic industry may undertake this cost in order to differentiate its product. For more competitive industries however, unless a third party or government undertakes some promotion responsibility, the costs are likely to be preclusive.[17] This is especially important where the economic benefits of eco-labelling are shared as a reciprocal positive externality by the industry.

In fisheries that have locally competing small firms selling into an international market, state involvement is clearly a pre-requisite for successful eco-labelling. State involvement, especially in the context of international fisheries agreements, allows easier co-ordination of national eco-labelling initiatives. In the initial stages of a programme, national bodies can assist in the flow of information to consumers – stressing the environmental benefits of the programme, licensed producers, etc. Governments can also reduce costs to producers, at least in the initial stages of the programme. Although producers may be responsible for the full cost of complying with the environmental standards of the label, governments should try to keep the label application process itself uncomplicated and inexpensive. Keeping the costs of eco-labelling programmes to a minimum reduces the barriers to certification and means that the programme discriminates against the 'worst' offenders instead of merely creating a niche market for the 'best' producers. This should increase the programme's effectiveness in achieving environmental gains. In a

[14] Deere, C. Eco-labelling and Sustainable Fisheries, Report for the World Conservation Union (IUCN) and Food and Agricultural Organisation of the United Nations, 1999.
[15] Australian Environmental Labelling Association, Eco-Labelling Resources, http://www.aela.org.au/Ecolabellingresources.htm
[16] Australian Environmental Labelling Association, Eco-Labelling Resources, http://www.aela.org.au/Ecolabellingresources.htm
[17] Australian Environmental Labelling Association, Eco-Labelling Resources, http://www.aela.org.au/Ecolabellingresources.htm

competitive fishery that sells into international markets the economic rationally for eco-labelling rests even more centrally on the stock externalities can generate.

International bodies also have an important co-ordinating role. Without co-ordination, a range of different national standards and certification bodies may evolve. This duplication of effort would not only be extremely inefficient, but would reduce the information value of the labels. [This issue is covered in more detail in section 3]

2.5 Effect of Eco-labelling on Developing Countries

As noted earlier, current research suggests that only a small proportion of consumers are responsive to eco-label information, the large majority of consumers remaining more sensitive to price than environmental concerns. There is therefore still a substantial market for unlabelled goods. Although this implies a negligible effect of eco-labelling on the market share of developing country exporters, they are still concerned about the trade effects of the programme. Some view eco-labelling as simply another disguised trade barrier. Given the level of trade protection still upheld by developed countries, this concern is understandable.

Eco-labelling schemes can discriminate against foreign manufacturers where it is more difficult and costly for them to obtain the label than it is for domestic producers. Direct discrimination is evident when foreign producers have unequal access to information, or when they are prevented from participating in a scheme. Indirect discrimination is more common and occurs when schemes are based on domestic production standards, conditions and environmental priorities. This is especially true when labelling criteria are based on life-cycle analysis (LCA, which assesses the whole product life cycle for environmental implications) or Production and Process Methods (PPMs, where the label is awarded on the basis of compliance in product-related process and production methods).[18] The certification costs of PPMs are not only high, but where adequate expertise is not available the developing country may have to rely on expensive foreign consultants. These costs will be further inflated if the domestic regulatory agencies are weak, providing developed countries with a hidden advantage. For this reason it is important to ensure government support for programmes. There is concern that PPM-based labelling could be based on criteria that undercut the principle of comparative advantage by (for example) requiring workers earn a minimum wage.[19] Furthermore, it is commonly felt that the criteria often overestimate the environmental impacts in the actual country of production.

At present, the results of the United Nations Conference on Trade and Development (UNCTAD) and United Nations Development Program (UNDP) surveys indicate that only a few developing country exporters currently consider the effects of eco-labelling programmes significant. A 1994 UNCTAD survey did find however that some countries considered the cost of test requirements for the European Union's eco-labelling programme (based on life-cycle analysis) to be preclusive. They noted that it would increase the factory gate price and capital costs by over 50%.[20]

2.6 Eco-labelling and World Trade Organisation Rules

The World Trade Organisation's role has become increasingly important. Although it is generally recognised that trade liberalisation can occur without degrading the environment, this is often difficult to achieve due to lack of effective resource pricing and regulatory controls. This is especially true for developing countries that lack technical and financial resources.

[18] Trade Implications of Eco-labelling, International Council of Chemical Associations, June 2003.
[19] Deere, C. Eco-labelling and Sustainable Fisheries, Report for the World Conservation Union (IUCN) and Food and Agricultural Organisation of the United Nations, 1999.
[20] UNCTAD, 1994c, Reconciliation of the Environmental and Trade Policies: Synthesis of Country Studies.

As developing countries correctly claim, it is hypocritical for the first world to impose their environmental standards on them, when they themselves reached their level of development through environmental degradation. As such, the issue is as much developmental as environmental.

One of the most common attempts to solve the environmental-trade issue has been the formation of Multilateral Environmental Agreements (MEAs). These sometimes include versions of the "common but differentiated responsibilities" formula, which occasionally exempt developing countries from the more severe environmental regulations or allow them longer time periods to comply. Although these are often viewed as one of the best methods to secure WTO-compliant regulatory outcomes, the process is laborious and reactive.[21]

Market based solutions may be a better option. As noted by the Organisation for Economic Co-operation and Development (OECD) Round Table on Sustainable Development,

> "Eco-labels are a potentially attractive way of simultaneously informing consumers about the environmental impact of their purchasing decisions and providing producers with a means of extracting a market place preference and possibly a price premium as a result of making verifiable improvements in sustainable production techniques."[22]

However, since research (see sections 2.3.1 & 4.1) shows that consumers absorb little label information, successful eco-labelling schemes may require marketing campaigns, at least in the initial stages of label adoption.

2.6.1 Current Status of Eco-labels in the WTO

Both the Committee of Trade and the Environment (CTE) and the Committee on Technical Barriers to Trade (CTBT) have discussed eco-labels. They were evaluated in terms of the most favoured nation clause in the General Agreement on Tariffs and Trade (GATT) Article I and the national treatment clause in GATT Article III. The CTE has focused on product-related environmental requirements, while the CTBT has focused on the Technical Barriers to Trade (TBT) Agreement. [23]

The TBT Agreement was designed to ensure that technical regulations and standards did not create unnecessary barriers to trade. It encouraged the adoption of international standards but was not in favour of using standards as a reason to increase levels of protection.

The extent to which eco-labels are covered by the agreement is a topic of much debate. An eco-label can be awarded on the basis of either product-related criteria or PPMs. Many argue that the life-cycle approach, which uses PPMs as criteria, is damaging to developing countries and contrary to the spirit of the TBT. At present it appears that due to the voluntary nature of the label programmes, Annex 1 (2) permits labels to differentiate between products on the basis not only of the final product characteristics, but also on how they are produced. The TBT Agreement categorises standards as either '*Technical regulations*' (mandatory standards) or '*Standards*' (voluntary standards). Any standardising body of the governments of member nations (regardless of whether they are central government bodies, local government or non-governmental bodies) has to adhere to the TBT Annex III '*Code of Good Practice for the Preparation, Adoption and Application of Standards*.' This includes the institution of conformity assessment procedures which are transparent, based on mutual recognition and are not unnecessarily restrictive of trade. It also upholds the principle of national treatment with respect

[21] Eco-labelling and WTO Rules: What needs to be done, OECD Round Table on Sustainable Development, 2001.
[22] Eco-labelling and WTO Rules: What needs to be done, OECD Round Table on Sustainable Development, 2001.
[23] Eco-labelling and WTO Rules: What needs to be done, OECD Round Table on Sustainable Development, 2001.

to like products. Finally, the TBT calls on developed countries to recognise difficulties that developing countries may encounter in the application of technical regulations and standards, and to provide them advice and assistance (Article 11). They are also to be provided differential and more favourable treatment (Article 12).

Eco-labels are particularly likely to discriminate between imported and domestic goods if local industry is influential in their input criteria. They can affect foreign producers if they insist on strict conformity criteria and specific third-party assessment bodies. It is obvious that depending on the type of information required, competitiveness can be enhanced or reduced.

The way forward suggested by the OECD Round Table on Sustainable Development, is to both address the desire of consumers to know more, while still upholding the 'Code of Good Practice' contained in Annex 3 of the TBT. They advise against 'asymmetric labelling schemes' which are implemented by a domestic agency and highlight environmentally negative attributes of products (e.g. a label stating 'not made from renewable resources'). This would directly attack existing producers and does not provide incentives for innovation. They instead suggest a 'mutually advantageous label' which provides information about the minimal effect that the product has on the environment. This creates an incentive to alter production to secure the premium conveyed by the label. The role of national and international bodies in providing assurance systems and information about the scheme is again stressed. [24]

It has also been suggested that governments can increase eco-label visibility through such measures as consumer and professional fairs, thematic events such as 'eco-label month', and co-ordination of public relations with the media. Information about the eco-label could also be provided to rating companies and investment funds who maintain ethical and environmental criteria. To the extent that these measures are successful, they will increase the environmental benefit of the programmes. This will however, mean that foreign producers will be pressurised to conform to the standards.

The fact that there is so much confusion and concern about eco-labels, especially relating to non-product related PPMs, suggests that the WTO should take on a stronger role. It needs to establish rules or guidelines on how to keep eco-labelling schemes compatible with WTO goals. For instance, the 'like product' principle, in terms of which both labelled and unlabelled products are treated similarly, should be upheld. Some bodies are also calling for the WTO to institute an 'ecological equivalence' principle, where foreign producer's efforts are recognised as equivalent to the fulfilment of domestic criteria.[25] Alternatively, an importing country might accept as equivalent standards if these are different but still beneficial to the domestic environment of the producing country, taking into account its own environmental and developmental needs.

The most encompassing equivalency principle is that of 'mutual recognition'. In this case, a product that qualifies for the eco-label of an exporting country programme is automatically awarded the eco-label of an importing country eco-labelling programme. It is most successful between countries with similar eco-labelling criteria. Deere (1999) suggests that the International Accreditation Forum (IAF) could also play a role in reviewing equivalence. The IAF is an international body focused on improving the credibility of conformity assessments by developing transparency and accountability procedures for accreditation organisations that are responsible for granting certification. International Accreditation Forum membership includes accreditation bodies from nations in all parts of the world, industry representatives and accredited certification/registration bodies.[26]

[24] Eco-labelling and WTO Rules: What needs to be done, OECD Round Table on Sustainable Development, 2001.
[25] Trade Implications of Eco-labelling, International Council of Chemical Associations, June 2003.
[26] Deere, C. Eco-labelling and Sustainable Fisheries, Report for the World Conservation Union (IUCN) and Food and Agricultural Organisation of the United Nations, 1999: 26.

The WTO is taking this further. In the 2001 Doha Ministerial Declaration, provision was made for discussion on:

- the relationship between WTO rules and MEAs
- information exchanges between MEA secretariats
- the reduction and elimination of tariffs on environmental goods and services.

(Paragraph 31)

The Declaration also called for recommendations (to be presented at the Cancun Conference) on:

- the effect of environmental measures on developing country market access
- TRIPS related to environmental measures.
- Eco-labelling and trade.

(Paragraph 32)

Since the WTO is not an environmental agency, it is not *mandated* to revise national environmental priorities, set environmental standards or develop global environmental policies. Although the CTE was created to analyse and prescribe on the relationship between trade and environmental measures, the WTO's main focus remains maintaining the health of the multilateral trading system.

2.6.2 WTO disputes

It is useful to look at the legal precedent set by the environmental disputes brought before the GATT/WTO. In 1991 and 1994, dolphin-friendly tuna disputes arose after the US tried to install import embargoes for yellow-fin tuna from countries that used purse-seine vessels to catch the fish. Although its findings were not adopted by the GATT Council, the investigating panel held that GATT Article XX did *not* allow States to take trade measures that can work only by forcing other States to change policies pursued within their own jurisdictions. The WTO Appellate Body came to a similar conclusion in the case of the 1995 US embargo on shrimp (WTO case numbers 58 and 61) caught on boats without Turtle Excluder Devices (TEDs), finding that the US had violated the rules of multilateral trading. In particular, they noted that the US did not ensure that its policies were appropriate for the specific regional conditions prevailing in other countries, the US policies discriminated among different WTO members and that the US certification process was neither transparent nor predictable and did not allow sufficient options for recourse.[27]

The gist of these findings is that, to be compatible with WTO rules, a country cannot impose environmental impact conditions on other countries that it would not require from its own industries in similar circumstances. Trading partners require adequate time and assistance to implement new programmes. The actions taken by the WTO should at least assure developing countries that new environmental initiatives in the first world are transparent, and non-discriminatory.

2.6.3 Fishery Products and the WTO

Fisheries products do not fall under the jurisdiction of the WTO Agreement on Agriculture but are covered by the other agreements, including:

- general rules of the GATT, in particular the prohibition of quantitative restrictions;

[27] Viswanathan K and R. Gardiner, Eco-labelling and Small-scale fisheries, will certification work?, The WorldFish Center, Malaysia, 2002.

- agreement on Sanitary and Phytosanitary Measures requiring the harmonisation of domestic food safety standards with international standards;
- agreement on Import Licensing Procedures providing principles for import licensing to prevent its use as barrier to trade;
- agreement on Technical Barriers to Trade calling for the reduction of technical regulations (e.g., storage, transport, labelling, packaging) that distort or obstruct trade;
- agreement on Safeguards providing measures to protect domestic industries against import surges; and
- agreement on Subsidies and Countervailing Measures restricting and regulating the use of subsidies.[28]

Eco-labelling schemes were also supported by the Food and Agricultural Organization (FAO) Code of Conduct for Responsible Fisheries which emphasises the importance of market-based measures in fostering sustainability[29] (See Box 1).

Box 1: Environment and Trade-related Provisions of Article 11 of the FAO Code of Conduct for Responsible Fisheries

Article 11.1.11. States should ensure that international and domestic trade in fish and fishery products accords with sound conservation and management practices through improving the identification of the origin of fish and fishery products treated.

Article 11.1.12. States should ensure that environmental effects of post-harvest activities are considered in the development of related laws, regulations and policies without creating any market distortions.

Article 11.2.3. States should ensure that measures affecting international trade in fish and fishery products are transparent, based, when applicable, on scientific evidence, and are in accordance with internationally agreed rules.

Article 11.2.4. Fish trade measures adopted by States to protect human or animal life or health, the interests of consumers or the environment, should not be discriminatory and should be in accordance with internationally agreed trade rules, in particular the principles, rights and obligations established in the Agreement on the Application of Sanitary and Phytosanitary Measures and the Agreement on Technical Barriers to Trade of the WTO.

Article 11.2.13. States should co-operate to develop internationally acceptable rules or standards for trade in fish and fishery products in accordance with the principles, rights, and obligations established in the WTO Agreement.

Article 11.3.2. States, in accordance with their national laws, should facilitate appropriate consultation with and participation of industry as well as environmental and consumer groups in the development and implementation of laws and regulations related to trade in fish and fishery products.

[28] Sustainability Assessment of Trade-related Policies in the Philippines: Capacity Building at the National Level and Application to the Fisheries Sector, WWF Proposal.

[29] The Code is voluntary. However, certain parts of it are based on relevant rules of international law, including those reflected in the United Nations Convention on the Law of the Sea of 10 December 1982. The Code also contains provisions that may be or have already been given binding effect by means of other obligatory legal instruments amongst the Parties, such as the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, 1993, which, according to FAO Conference resolution 15/93, paragraph 3, forms an integral part of the Code.

3. CURRENT ECO-LABELLING PROGRAMMES

The range of eco-labels in existence, and the diversity of products that they encompass have grown rapidly in the past two decades. The proliferation of eco-labels has meant a credibility loss. This section suggests the extent of the problem, and makes clear the need for the recent FAO decision to establish guidelines for eco-labelling of fish and fishery products. The new guidelines are intended to remedy this.

The European Eco-labelling scheme includes the EU states as well as Norway, Iceland and Liechtenstein (a total market of 370 million people). The scheme was established in 1992, with the aims:

> '*to promote the design, production, marketing and use of products which have a reduced environmental impact during their entire life cycle'*
>
> *'and to provide consumers with better information on the environmental impact of products, without compromising product or worker's safety or significantly affecting the properties which make a product fit for use.*[30]'

The 'flower label' was created in response to a growing number of national initiatives, indicative of a growing demand for 'greener products'. In 2000, it was expanded to include services, allowing retailers to apply for the label.

The criteria are based on Life Cycle Analysis which assesses the whole product life cycle for environmental implications - from extraction of raw materials through to product use and disposal. The logo itself consists of a flower, a license registration number and an information box outlining key product advantages.

The EU claims that the flower label does not have critical mass to affect developing country exports, especially as it is a voluntary scheme. As yet, it does not apply to food products. Currently, several hundred products bear the flower label, with the most prolific countries being Denmark, Italy, Greece and Spain. In 2001 sales reached over €54 million.

Spain is a surprising forerunner for eco-labelling. The Spanish NGO '*Fundacion Entorno*'[31] has published results of the study 'Consumption Environment in Spain 2001', showing that despite a low level of recognition of eco-labels, consumers are increasingly willing to purchase green products. Fifty-nine percent of interviewees felt that eco-labels would lead to a guaranteed improvement in the environment, and 30% buy eco-labelled products when available. The majority also felt that there was not enough information available to make informed choices. Given Spain's prominent position as an importer of BCLME fish, this is particularly important.

Other prominent national labels include:

- The Emblem (Spain) – created in 1994 by the Department of the Environment in Catalonia (market size: 6 million inhabitants)
- NF Environment (France) – created in 1992 by the certification agency AFNOR (market size: 57 million inhabitants)
- The Nordic Swan (Denmark, Sweden, Finland, Iceland, Norway) – created in 1989 by the Nordic Eco-labelling Board (market size: 24 million inhabitants)

[30] European Union Council Regulation No. 880/92.
[31] www.fundacionentorno.org

Some other national and international labelling programmes should also be noted:

- The German Blue Angel (Europe's first eco-label, instituted in 1977)
- The United State's Green Seal
- The *Codex Alimentarius* Commission
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

The Global Ecolabelling Network (GEN), an association of eco-label organisations throughout the world, was formed in 1994 to spread information about national eco-label activities[32]. It also helps co-ordination between existing members and countries that intend to introduce eco-labels. Outside of Europe, the 26 GEN member organisations include:

- The Chinese eco-label 'HUAN': developed by China Environmental Labelling and first awarded in 1993. Criteria for 25 product groups have been elaborated so far.
- India's eco-label 'Ecomark' which was developed by the Indian government in 1991. It focuses on consumer goods and foods.
- The Japanese Environment Agency (JEA)'s 'Friendly to the Earth' – Eco Mark was first awarded in 1990. The symbol appears with The Global Ecolabelling Network (GEN) - a non-profit interest group composed of eco-the product category below it. In principle, products must meet the following criteria: impose less environmental load than similar products in their manufacture, use and disposal; and reduce the environmental load in other ways, thus contributing significantly to environmental conservation. At present, 59 product standards are in use. The label is awarded for periods of two years each. The award is primarily based on life-cycle studies.
- Singapore's 'Green Label Singapore' was developed in 1992 by the Ministry of the Environment. Singapore tests the products applying for the label according to a simplified life-cycle analysis checking the product's main parameters for its relative environmental compatibility. If the application for the Green Label is filed within 12 months from the publication of the award criteria for a certain product its use is cost-free for the first five years. After this one-year period application involves expenses while the use is cost-free for the initial period of use (three years). After three or five years, respectively, an annual fee is charged. Today, product standards exist for 36 product groups.
- The Canadian eco-label 'Environmental Choice – *Choix Environnemental'* was developed in 1988 by the Canadian Ministry of the Environment – Environment Canada (EC). It is also responsible for the development of certification criteria as well as for the award of the label. Prior to a possible award of the Environmental Choice label by the EC the applicants' products are tested by technical institutes. Application involves expenses. In addition, a sales-dependent annual fee accrues. Currently, Environmental Choice has more than 1400 approved products, in 14product category, under which companies may be licensed and their products certified.
- The Brazilian eco-label '*Qualidad Ambiental*' was developed by the *Associacao Brasileira de Normas Tecnicas* (ABNT) under an agreement between government, economy and industry. The first award is yet to come. By means of life-cycle analyses the products are tested for their overall environmental compatibility. Product standards are set upon completion of the testing procedure. Also a period is fixed at the end of which the standards must be reviewed and, if necessary, revised.

[32] Ref: http://okocimke.kvvm.hu/public_eng/?ppid=2450000

- New Zealand's 'Environmental Choice' eco-label was developed by the Ministry of the Environment in 1990. The bodies involved in the elaboration of the criteria and in the award procedure are TELARC (Accreditation Authority for Quality Assurance, Laboratory Testing and Industrial Design) as well as the Environmental Choice Management Advisory Committee (ECMAC). At the insistence of TELARC the applicant's products are tested at independent laboratories upon filing of the application. The costs of testing are charged to the applicant. TELARC charges a one-time fee as well as annual sales-dependent fees.

Some labelling programmes have also come into being as environmental initiatives of Non-Governmental Organisations (NGOs):

- Eco-UK
- The Forest Stewardship Council (FSC)
- The Marine Stewardship Council (MSC)[33]
- The Scientific Certification Systems (SCS)

Others are industry-led initiatives:

- IFOAM (the International Federation of Organic Agriculture Movements)[34]

What is clear from the EU and other eco-labelling initiatives is that success in a programme hinges on both:

- its relevance to the product and the environment i.e. how adherence to the programme affects the nature and magnitude of environmental impact and how it influences product development, and
- the use of the label in public procurement as a criterion for tenders, and in private purchasing decisions as a benchmark for excellence.

The status of the certification body is a key element in determining the success of a programme. For example, France has a private certification agency, dedicated to the marketing of products such as eco- and quality labels. As such, the eco-labelling programme is more widely accepted. Where certification is run by a State Ministry, lack of manpower and product marketing knowledge may prove more problematic. Whether run through the private sector or through State involvement, the local success of an international eco-labelling scheme strongly depends on a positive public attitude and the dedication of sufficient resources to the programme.

[33] Given the central place of EU markets as targets for Sothern African fish exports, it is not surprising that the MSC has been a key institution in the development of local fisheries eco-labelling

[34] Viswanathan K and R. Gardiner, Eco-labelling and Small-scale fisheries, will certification work?, The WorldFish Center, Malaysia, 2002.

4. FISHERIES AND ECO-LABELS

Before delving into the legal status of eco-labelling in fisheries, it is worth examining the evidence on consumer awareness, a key determinant of the viability of eco-labelling. Like the market for other environmental goods, it is clear that more research needs to be done on the effect of price increases on seafood consumption. With relation to research done in fairly eco-sensitive western markets, it is generally recognised that consumers substitute between types of fish, types of seafood products and types of white meat relatively easily. However, major seafood markets such as Japan and China are less sensitive and this precludes wider application of these results. More research also has to be conducted into the effect of different labels. It is clear that consumers are more likely to react to the potential loss of icon species (dolphin, turtle) than to a more vague idea of 'ecosystem sustainability'.[35]

4.1 The Market for Fish

The University of Rhode Island conducted an extensive survey on US consumer preferences for eco-labelled seafood. They emphasised that the critical determinant of eco-label success is consumer acceptance. Their telephone survey of 1640 seafood consumers focused on salmon, cod and shrimp. One interesting result was the importance of label design. Consumers were more comfortable with labels like 'no over-fishing' than ones saying 'eco-system friendly' or 'no by-catch'. From the responses they also realized that the labels themselves may obscure other environmental damage done by the product (e.g. just because the tuna are caught in a dolphin-safe manner does not mean that the fishery is sustainable).

Respondent's recognition of potential certifying agencies was also tested. Half named the National Marine Fisheries Service (NMFS) as the most credible; followed by the World Wildlife Fund (WWF), with only 5% recognising the Marine Stewardship Council (MSC). When asked which seafood they most trusted, US consumers gave the highest rating to certified, wild stocks from US waters. Environmentally aware respondents (who bought eco-magazines, etc.) were more likely to choose the certified product, as were those who believed the fishery to be over-fished (though this only played a role for some species). Those with larger weekly seafood budgets were more likely to buy certified products; although for cod, those respondents who purchased fish more often were less likely to buy certified. Those who purchased seafood in a frozen form were *less* likely to choose certified, which may have implications for a company like Unilever (a MSC partner), given its share in the frozen food market in the US. Women were also more likely to choose certified products. The analysis showed that preferences for eco-labelled fish are sensitive to species, geographical region, consumer group, and perhaps by certifying agency. However, there does seem to be a feasible US market for eco-labelled products, especially if the scheme is combined with an effective educational marketing campaign.[37]

In an earlier survey of US seafood consumers Idrissi (1997) found that almost all respondents would purchase the labelled product if the price were identical to the unlabelled. Eighty-five percent would still purchase the labelled product at a 10% price premium and 66% would purchase the product at a 20% premium.[38]

A more recent (2001) survey undertaken by the Seafood Choices Alliance in the US indicated a slight increase in environmental sensitivity. One thousand adults who consumed fish at least

[35] Wessells C.R., Cochrane K., Deere C., Wallis P. and Willmann R., Product certification and eco-labelling for fisheries sustainability, FAO Fisheries Technical Paper No. 422., Rome, 2001.
[37] Wessells, C., Donath, H. and R. Johnston, US Consumer Preferences for Eco-labelled Seafood, University of Rhode Island, 1999.
[38] Idrissi, M. Toward Sustainable Fisheries: Economic Analysis of Seafood Eco-labelling, Department of Environmental and Natural Resource Economics, University of Rhode Island, 1997.

once a month were surveyed. Freshness, taste, health and price still ranked far above other factors influencing the purchasing decision. Environmental concerns did play a significant role however. Of the respondents, 44% considered over-fishing an important issue, 47% were concerned about possible harm to other ocean creatures and 43% were worried about possible harm to the ocean environment. Furthermore, 37% stated that they had decided against purchasing a fish product due to environmental concerns. With regard to information provision, 67% were interested in obtaining more information on the environmental impacts of their fish product purchases. In particular, 71% noted that an 'environmentally responsible' label would make the purchase of a fish more likely.[39]

The Seafood Choice Alliance undertook a survey of 400 chefs and restaurateurs, and 150 seafood retailers in 2002/2003. This group was much more 'environmentally aware' than fish consumers, with 30% of chefs and 20% of retailers changing their purchasing practices due to environmental concerns relating to a particular fish. Seventy-four percent of chefs and 68% of retailers were knowledgeable about the environmental impacts of commercial fishing, while 69% of chefs and 45% of retailers were aware of the impacts of certain kinds of fish farming. At least in the US market, this suggests considerable scope for labelling programmes. [40]

4.2 Standards Available

There are already several national, international, industry-sponsored, NGO-led and consumer-supplier partnership certification and standards schemes in the fisheries sector and the range of labels is broad. This is a source of concern: the broad range of schemes confuse consumers who are not fully aware of 'sustainable fishing' as a concept, and cause them to lose faith in certification, and may cause them to lose confidence in certification.

4.2.1 First Party Schemes

A number of producers are distinguishing their fish by labelling where they were caught – a Mark of Origin. Although this approach is of questionable worth in itself, it does enable more effective fishery tracking and management. Furthermore, it is a 'first step' toward building the consumer information and public consciousness needed to expand demand for eco-labelled products.[41] This is especially important when the fish appear fungible, e.g. Argentinean and Namibian hake are imported by South African fish processors to meet domestic demand while South African "sustainably-harvested" and "eco-labelled" hake is exported. Another first-party scheme is the dolphin-safe self-declaration that US companies can make if they fulfil the criteria set out by the Dolphin Protection Consumer Information Act (1991). A number of Alaskan companies are also trying to break into the organic food market, by labelling their salmon as organic.

4.2.2 Second Party Schemes

The Responsible Fisheries Society of the United States (RFS) and the Global Aquaculture Alliance (GAA) have initiated a joint eco-labelling scheme to recognise industry commitment and participation in responsible fisheries and aquaculture. It involves more than 200 companies with the RFS programme targeting all types of domestic US seafood products and the GAA focusing on farm-raised shrimp world-wide.[42]

[39] The Marketplace for Sustainable Seafood: Growing Appetites and Shrinking Seas, Seafood Choices Alliance, June 2003.
[40] The Marketplace for Sustainable Seafood: Growing Appetites and Shrinking Seas, Seafood Choices Alliance, June 2003.
[41] Deere, C. Eco-labelling and Sustainable Fisheries, Report for the World Conservation Union (IUCN) and Food and Agricultural Organisation of the United Nations, 1999.
[42] Deere, C. Eco-labelling and Sustainable Fisheries, Report for the World Conservation Union (IUCN) and Food and Agricultural Organisation of the United Nations, 1999.

4.2.3 Third Party Schemes

The most credible schemes, and those that fit the 'eco-label' description, are obviously those involving third-parties. These include the Forestry Stewardship Council (FSC), the Marine Stewardship Council (MSC) and the Marine Aquarium Council (MAC). The MAC was launched in 2001, a voluntary third-party certification programme for marine ornamentals, ensuring that they are harvested in a way that fosters sustainability and minimises environmental damage.

Also important are the ISO14000 series (or revised ISO14200 environmental management series) instituted by the Technical Committee (TC 207) of the International Standards Organisation. These standards are largely procedure-based however, and are not considered internationally agreed upon environmental standards in their own right. As such, it is more prudent to use them as a starting point in the development of other certification criteria.[43]

Vishwanathan and Gardiner, in their work on eco-labelling and small-scale fisheries, note that although there is very little precedent in fishery schemes, the 1980s United States Wood Programme for timber products offers some useful lessons. They suggest a number of criteria by which to judge fishery-related certification schemes:

- 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, i.e. non-discriminatory in trade impact;
- Acceptable to the involved parties;
- Institutionally adapted to the local conditions:
- Cost effective;
- Transparent to allow external judgement;
- Goal-oriented and effective in reaching objectives;
- Practical and operational;
- Applicable to all scales of operation.[44]

Paragraph 11 of the FAO 'Technical Consultation on the Feasibility of Developing Non-discriminatory Technical Guidelines for Marine Capture Fisheries' (1998) suggested similar criteria. Eco-labelling schemes should:

- be of a voluntary nature and market driven;
- be transparent;
- be non-discriminatory, do not create obstacles to trade and allow for fair competition;

[43] Viswanathan K and R. Gardiner, Eco-labelling and Small-scale fisheries, will certification work?, The WorldFish Center, Malaysia, 2002.
[44] Viswanathan K and R. Gardiner, Eco-labelling and Small-scale fisheries, will certification work?, The WorldFish Center, Malaysia, 2002.

- establish clear accountability for the promoters of schemes and for the certifying bodies in conformity with international standards;
- have a reliable auditing and verification process;
- recognise the sovereign rights of States and comply with all relevant laws and regulations;
- ensure equivalence of standards between countries;
- be based on the best scientific evidence;
- be practical, viable and verifiable;
- ensure that labels communicate truthful information;
- provide for clarity.

Paragraph 5 of the FAO Code of Conduct for Responsible Fisheries explicitly recognizes the limited capacity of developing countries to implement FAO guidelines. It recommends that States, relevant inter-governmental and non-governmental organizations and financial institutions consider measures to address developing country needs, especially in the areas of financial and technical assistance, technology transfer, training and scientific cooperation. This would ensure that these countries develop the capacity to fully participate in sustainability schemes.[45]

International consensus on guidelines and criteria is necessary to ensure that a labelling programme actually contributes to fishery sustainability. Deere suggests that although the existing text of the FAO's 1995 Code of Conduct for Responsible Fisheries is an important starting point, additional issues need to be clarified. In particular she draws attention to a clearer definition of a 'sustainable fishery', the procedural aspects of running a scheme, and guidelines on the equivalency of different eco-labelling schemes. With regard to a sustainability definition, Deere questions whether criteria should be based solely on fishery stock sustainability or whether other environmental (such as fish habitats, eco-systems, or energy use in harvesting and processing) should be considered. She also questions whether criteria should include economic, social and cultural elements (such as impact on local fishing communities).[46]

The FAO's 2003 'guidelines for the eco-labelling of fish and fishery products from marine capture fisheries' have resolved many of these problems. The guidelines are clear and describe not only the terms and definitions, but also the minimum substantive requirements and criteria for eco-labels, and the procedural and institutional aspects of initiating and operating them. These guidelines are presently the key document to which one can turn for information on the actual initiation and operation of an eco-labelled fishery.

4.3 The Marine Stewardship Council Standard

The Marine Stewardship Council (MSC) was established in 1997 as a joint initiative of the World Wide Fund for Nature (WWF) and Unilever. Since 1999 it has operated independently and neither organisation sits on the board. It is a self-regulatory eco-labelling regime for fishers, fish distributors, fish processors, and retailers that creates incentives for sustainable fisheries.

The MSC Standard defines itself as "the only internationally recognised set of environmental principles for measuring fisheries to assess if they are well managed and sustainable."[47] This

[45] FAO Code of Conduct for Responsible Fisheries, www.fao.org
[46] Deere, C. Eco-labelling and Sustainable Fisheries, Report for the World Conservation Union (IUCN) and Food and Agricultural Organisation of the United Nations, 1999:
[47] www.msc.org

entails healthy fish populations and responsible resource use, enabling the fishery to continue supporting an industry in the future. The three principles of the MSC Standard are:

- *The condition of the fish stocks* - This examines whether the fish stock is sufficient to sustain the fishery.
- *The impact of the fishery on the marine environment* -This examines the effect that fishing has on the immediate marine environment including other non-target fish species, marine mammals and seabirds.
- *The fishery management systems* -This examines the applicable rules and procedures, as well as their implementation and determines if they are suited to maintaining a sustainable fishery and minimising its impact on the marine environment.[48]

(See appendix A for further information on the principles and criteria underpinning the MSC label)

Third party certifiers use a standard scoring process, evaluating the fishery against the principles and criteria to determine performance. Public Certification Summary reports are also posted on the MSC website. During the assessment, the certifiers can make Corrective Action Requests (CARS). If the fishery rates less than a *pass* for one of the principles or less than *minimum* for one of the criteria, this implies a major CAR, which must be corrected and re-assessed before certification can occur. Minor CARs, do not preclude certification, but should be addressed before the next surveillance visit. They indicate a rating between *minimum* and *pass* for one of the MSC criteria. The certificate of sustainable fisheries has a five-year lifetime.

Once a fishery has been certified to the MSC standard, companies wishing to sell the product undergo a "Chain of Custody" certification which ensures that MSC-labelled seafood is kept separate from non-certified products at every stage of the production chain. Certified companies can apply for a licence to use the MSC logo on their products – informing customers that the related fishery has been properly managed. The MSC logo can only be used with the express permission of the MSCI (Marine Stewardship Council International Ltd., the trading arm of the MSC authorised to issue licences). The design of the label must be approved by the MSCI and must include the MSC logo, MSC website address, chain of custody registration code, copyright symbol and on-product statement (i.e. "This product comes from a fishery which meets the Marine Stewardship Council's environmental standard for a well-managed and sustainable fishery").

A fish product cannot display the MSC label together with any other trademark, logo, environmental statement, etc. unless it has obtained the approval of the MSCI. The chain-of-custody certification is not required if a company wishes to display the MSC logo off-product (on promotional or educational material for example) or if a retailer or restaurant wants to make a claim that they support the MSC Fishery Certification Programme. Where the organisation is promoting their association to the MSC for commercial reasons, a $100 annual administrative fee is currently charged.[49] Costs of certification for the fishery itself depend on the size of the fishery. Generally a preliminary assessment costs between $10,000 and $35,000, and a full assessment between $25,000 and $150,000.[50]

4.4 Assessment of the MSC Standard

The self-regulation of a single fishery by its own members faces problems of information-asymmetry, while its economic value may be impeded by legitimacy concerns. Third-party

[48] www.msc.org
[49] Summary of Regulations and Guidelines (on-product use of the MSC logo), www.msc.org.
[50] www.msc.org.

involvement, transparency, and feasible mechanisms for dispute resolution can often help to mitigate these concerns. The MSC is adopting strategies to do so.

During the creation of the MSC standard, care was taken to foster legitimacy by ensuring third-party involvement. Fish harvesters, fishery scientists, academics and experts were consulted in the development of the MSC principals. Third party fishery experts are responsible for the peer review of the certification reports, and interested parties can influence MSC policy through website discussions. This process has enhanced the legitimacy of the MSC standard. The involvement of the WWF is also important. As a highly respected unbiased international NGO, it acts as an accountable enforcer of the system. With the power wielded by the WWF, companies are less willing to face the loss of reputation and shareholder value that repudiating the standard would entail.[51]

The involvement of the WWF has, however, increased the fishing industry's mistrust of the MSC programme. The industry's fractured relationship with environmentalists has led them to suspect that the MSC has a covert agenda that takes little note of the industry's own interests. The process has also been criticised by some as failing to include sufficient consultation with fishing interests in developing countries. Furthermore, some question whether a private body should fulfil a regulatory role.[52]

The transparency of the MSC process has also been queried. The MSC certification process is undertaken by an independent expert auditor approved by the MSC secretariat. The auditor is required to follow transparent agreed-on procedures, which reduce the potential for conflicts of interest. Pre-assessment reports are kept confidential however, to encourage fisheries to assess their applicability without fear of adverse consequences. Since the certifier is independent of the fishery, he faces an information asymmetry problem as he is forced to rely on the information supplied by the industry and government bodies, both of whom desire certification. He is the agent of both the fishing industry and the MSC itself. However, as Chadwick (2002) points out, to the extent that third-parties are involved and can challenge the results of certification, these weaknesses should be limited.[53] If the MSC wishes to maintain this credibility however, it needs to ensure that it expedites its dispute-resolution process.

Self-regulatory schemes are often expected to face commitment problems and be limited to those parties least in need of regulation. Despite this, MSC members appear willing to change their business operations and invest significant amounts to achieve certification. Uncovering the motives for joining a schemes like the MSC, will provide information about the type of parties likely to respond – useful for future programme design.

As of September 2005, ten fisheries had been certified, four were being evaluated and a number of developing country fisheries had requested certification. The certified fisheries are:

- Alaska salmon and Alaska Pollack fisheries in the US,
- Burry Inlet cockles in South Wales,
- Hoki in New Zealand,
- the south west mackerel hand-line fishery in the UK,
- the Thames herring fishery in the UK,
- the Western Australia rock lobster fishery,
- the Mexican Baja California spiny lobster fishery in Mexico,

[51] Chadwick, Amanda. Marine Stewardship Council: Who should join and why?, London School of Economics, 2002.
[52] Chadwick, Amanda. Marine Stewardship Council: Who should join and why?, London School of Economics, 2002.
[53] Chadwick, Amanda. Marine Stewardship Council: Who should join and why?, London School of Economics, 2002.

- the Loch Torridon *Nephrops* fishery in Scotland,
- and, importantly from a BCLME perspective, hake in South Africa.

The rock lobster fishery, the Alaskan salmon and the New Zealand hoki fisheries are all major export-targeted fisheries. The others are relatively small with modest export opportunities.

Fisheries currently being evaluated include:

- The Banco Chinchorro Atoll spiny lobster fishery in Mexico (certification has been discontinued),
- British Columbia salmon in Canada,
- the North Sea herring fishery,
- the South Georgia toothfish fishery in South Georgia
- and the South Sandwich Islands fishery.

Fisheries from developing countries currently seeking MSC certification include:

- 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,
- and the Sulu Sea blue crab fishery in the Philippines.

Research suggests a number of motivations for certification. These include:

- The expectation of increased sales to MSC customers
- The belief that consumers and stakeholders value certification
- Addressing state-led regulatory challenges
- The belief that the label can be used to leverage funding and influence quota allocations
- Improving prospects for attracting capital investment and joint ventures
- Reducing market volatility and uncertainty costs
- The desire to protect traditional livelihoods (in some cases) i.e. promoting the sustainable nature of some artisanal modes of fish harvesting.

When one applies this to the MSC-certified fisheries themselves, one can almost predict the types of organisation most likely to apply for certification. The evidence suggests that small-scale, traditional fisheries that use simple gear seek MSC certification to protect traditional livelihoods. Examples of current MSC fisheries that fall into this category include the Thames-Blackwater herring, south west mackerel hand-line and the Burry Inlet fishery. [54]

Large scale fishers, with homogenous gear, 'pro-active' corporate structures and quality management systems (such as the New Zealand hoki and Western Australia rock lobster fisheries) seek certification if it increases their market power. Fisheries with heterogeneous

[54] Chadwick, Amanda. Marine Stewardship Council: Who should join and why?, London School of Economics, 2002

gear, but backed by professional marketing organisations (such as the Alaskan salmon fishery) will seek certification if it enables improvement in market position.

Fishers are also more likely to apply for certification if the government, retailers and processors actively support the eco-label programme. The commitment by Unilever, Sainsbury's (UK) and Shaw's Supermarkets (US) is especially important, due to their substantial market bargaining power (Unilever, manufacturing Birds-Eye and Gorton's frozen fish products, has approximately 20 - 25% of the market share of frozen fish in both Europe and the US).

There is some controversy over governmental agencies joining the MSC, as some question whether they can effectively be bound by the rules of a self-regulatory regime. Despite this, three government agencies have joined the MSC. It is in the interest of governments, especially fishery regulation authorities, to encourage MSC certification, as it fosters good fishery management while freeing-up resources.[55]

The converse has also been advocated: fisheries that perceive themselves potentially threatened by poor State planning can strengthen their negotiating stance by associating with an international organisation. This aspect could make the MSC attractive to BCLME fisheries managers who perceive a risk that over-allocation of new quotas could threaten the long-term viability of their industry.

Due to the certification costs, the applicability of the MSC to small-scale fisheries and developing countries is a topic of much debate. However, the World Bank and European Union have offered funding assistance to developing countries for the MSC certification. In fact, several community fisheries have already received financial and other assistance from WWF. It is useful to analyze this issue further, especially in relation to small-scale fisheries.

4.5 Small-scale fisheries

Small scale fisheries in developing countries are often characterised by overlapping multi-species, multi-gear harvesting involving both commercial and artisanal sectors. Because they are typically inshore fisheries, exclusion and monitoring are difficult, so that many have open access regimes with little ability to manage individual stocks or enforce zoning regulations. With highly migratory or straddling stocks, the issue is complicated further. Informal distribution and marketing of the catch mean that there is a great deal of illegal, unreported and unmonitored fishing. Returns from the industry may also be uneven, typically being skewed in favour of boat owners while the crews remain impoverished. Furthermore, scientific management regimes are rarely understood by the fishers themselves, leading to an intense mistrust of policy and stock assessment results. [56] These features can make eco-labelling difficult, but the number of small scale fisheries currently undergoing certification demonstrates that it is possible. Small-scale fisheries currently working with WWF to undergo the MSC certification process include: the Seri Indian blue crab fishery in the Gulf of California, Mexico; the lobster fishery in Prainha do Canto Verde, Brazil; the Burry Inlet cockle fishery in Wales; the Waddensea cockle fishery in the Netherlands; the Southern Fishermen's Association mixed estuarine fishery in New South Wales, Australia; the Banco Chinchorro lobster fishery in Mexico; the Cayos Cochinos lobster fishery in Honduras; the Baja California Peninsula Pacific lobster fishery in Mexico; the mixed multi-species fishery in Eritrea; and several shellfish fisheries in the UK.[57]

The coastlines of South Africa and Namibia are relatively un-indented and there are relatively few small fishing ports south of Angola. The resulting concentration of vessels reduces

[55] Chadwick, Amanda. Marine Stewardship Council: Who should join and why?, London School of Economics, 2002
[56] Viswanathan K and R. Gardiner, Eco-labelling and Small-scale fisheries, will certification work?, The WorldFish Center, Malaysia, 2002.
[57] 'WWF working with community-based fisheries', www.panda.org

monitoring costs and suggests that the Benguela coastline could offer some cost advantages if small-scale operators try for eco-labels.

Viswanathan and Gardiner state that developing country critique of eco-labelling and the MSC focuses on five general areas:

- legitimacy and credibility,
- a mismatch between certification requirements and the reality of small scale fisheries,
- potential distortions to existing practices and livelihoods,
- equity and feasibility, and
- perceived barriers to trade. [58]

It appears that to meet the MSC criteria a developing country fishery should meet at least two basic criteria:

- Definite access and property rights, with provision for minority communities (incorporating traditional rights into national schemes)
- Effective legislation and associated monitoring facilities supporting an ecosystem approach to fisheries management.

Developing countries themselves have added further concerns. Viswanathan and Gardiner (2002) discussed these - On the legitimacy and credibility aspect, many developing countries are suspicious of the MSC initiative, with many of the Asian countries protesting about the rights of an NGO to supervise a government. There is also concern that Unilever's involvement meant that the driving force behind the MSC programme was the retail trade rather than true consumer demand. To alleviate such concerns, the MSC should perhaps incorporate more social equity issues and emphasise that its goal is better fishery management, not the creation of a niche market.

With regard to the mismatch between certification requirements and the reality of small scale fisheries, it is clear that few developing countries can meet the certification costs. At most, it seems probable that only the export-driven fisheries will do so, disenfranchising the poorer users of the fishery. This reduces the effectiveness of the MSC programme as the bulk of developing country fisheries target their domestic consumers or other third world markets.

In recognition of the fact that data-heavy stock-based assessment tools are preclusive and that more indicator-based assessment tools are needed, the WWF is currently testing alternative certification methodologies for small-scale fisheries. These try to incorporate local knowledge and depend on partnerships with fishers and other stakeholders to assess the state of the fishery. As yet success has been limited and the WWF is finding it difficult to obtain the requisite scientific data to assess local biological stocks exploited by community fisheries. Community-based fisheries also find it difficult to assimilate local knowledge into western scientific management methods.[59] It is important to note that although greater flexibility is important, the goal is to raise standards, not legitimise current practices. The latter merely reduces the credibility of the scheme and increases certification costs. These problems may be mitigated by the global spread of co-management as a tool for the sustainable operation of artisanal and small scale commercial fisheries.

[58] Viswanathan K and R. Gardiner, Eco-labelling and Small-scale fisheries, will certification work?, The WorldFish Center, Malaysia, 2002.
[59] Viswanathan K and R. Gardiner, Eco-labelling and Small-scale fisheries, will certification work?, The WorldFish Center, Malaysia, 2002.

BOX 2: Is the MSC applicable to small scale fisheries? What entails a good fit?

The basic features of a successful MSC certified large scale fishery suggest the characteristics that predict success: the New Zealand hoki fishery (a large and highly commercial operation) is a case in point. It appears that a number of factors made certification a relatively painless process.

Hoki (*Macruronus novaezealandiae*) is a highly commercial species whose Total Allowable Commercial Catch (TACC) is based on scientific information, with assessments being carried out by independent trawl surveys and acoustic soundings. The management regime is sophisticated, with a number of laws governing access rights. The New Zealand Fisheries Act of 1996 recognises both the precautionary principle and the ecosystem effects of fishing, as well as providing for existing Maori rights. [1] Industrial bottom and mid-water trawl vessels, mainly over 42 metres in length, form the bulk of the hoki fishing fleet. The TACC for each fishery is allocated in the form of Individually Transferable Quotas (ITQs) and boats are monitored by satellite, an industry-based observer programme, and occasionally by the New Zealand Defence force.

Even this exemplary fishery example has been criticised by the MSC for its lack of effective environmental impact assessments. The need for spatial structure instead of just biomass estimates was noted, as was the need for further research on the effects of bottom trawling.

The potential distortions that the MSC programme can introduce in a multi-species fishery are important. Not only do the monitoring costs increase exponentially but it is also possible that only one or two high-value species will be applicable for export. This may increase the price of these high-value stocks, turning them into a luxury that the domestic market cannot afford. (e.g. Kurau in Malaysia, tuna in the southern Philippines). If fishing effort is redirected towards the high-value species, a local market protein shortage may occur. This does not seem a potential problem in the Southern Benguela where the only potentially high value artisanal fishery has been that for Cape Rock Lobster. This ceased being a source of cheap protein some years ago, and is now a commercial product. Eco-labelling would thus not affect food security, and might raise incomes.

Equity as an objective requires more flexible approaches to certification to enable developing countries to meet the criteria equally well. It is also important to ensure internal equity; promoting fishers to management positions, ascertaining that all fishery members benefit from labelling schemes, and monitoring the exercise of monopoly and monopsony powers. If certification does not allow this, alternative solutions should be researched. Tentative options include fair trade labelling schemes, geographic labels and other labels which promote traditional fishing methods. Furthermore, many developing countries are trying to both accommodate scientific management measures, while at the same time making an effort to include disenfranchised communities and local knowledge into the management process. Any certification process must account for this feature and ensure that criteria can be understood by local players. This is especially pertinent to the concept of 'ecosystem management'. New policies and tools should be built on existing systems and allow sufficient time for experimentation and adoption. Ensuring government co-operation is essential.

Viswanathan and Gardiner also note that an upswing in the eco-labelling initiative will likely result in a split market, with 'environmentally-friendly' fish going to eco-sensitive markets, and the uncertified products going to less-sensitive markets in Asia, Latin America and Africa.[60]

/[60] Viswanathan K and R. Gardiner, Eco-labelling and Small-scale fisheries, will certification work?, The WorldFish Center, Malaysia, 2002.

Although this scenario is not inevitable, what is evident from their research is that current MSC criteria may be inoperable in many developing countries and small-scale fisheries. As noted however, the MSC is aware of these criticisms and is attempting to address them. It is currently engaging in an African experiment to develop appropriate local indicators for management of small scale and artisanal fisheries.

5. SUMMARISING THE BENGUELA FISHERIES

The Benguela Current Large Marine Ecosystem (BCLME) covers the west coast of South Africa, the entire Namibian coast, and southern Angola. It is home to important commercial species, including hake, horse mackerel, west coast rock lobster, deep sea red crab, tuna, swordfish, sardine and anchovy. A number of these stocks are shared, as they extend/migrate across national boundaries. The hake fishery, the most commercially valuable, is shared principally by Namibia, South Africa and to a lesser extent, Angola.

The most developed and lucrative fisheries in the Benguela system are the hake fisheries. Hake is also the most likely candidate for certification. As such, it is useful to examine it further. The main fisheries off Namibia and South Africa are for the Cape hake (*Merluccius capensis*) and the deep water hake (*Merluccius paradoxus*) (using both demersal trawlers and long-line vessels). Off Angola, there is small bottom trawl fishery for Benguela hake (*Merluccius polli)* and *Merluccius capensis.* Since the introduction of conservation measures, South African hake catches have remained relatively stable, fluctuating between 133 000 – 140 000 tonnes per year between 1978 – 2004. On independence in 1990, Namibia introduced similar measures (in particular the exclusion of foreign vessels) and the annual local catch is now in the region of 180 000 tonnes per year. In Angola, catches of Cape Hake amount to about 1 000 tonnes per year and catches of Benguela hake amount to about 40 000 tonnes per year.[61]

5.1 Namibia

The fisheries sector is the third largest of the Namibian economy, behind agriculture and mining, accounting for about 5-8 percent of the GDP. Namibia's fisheries are also its second-largest export-earner behind mining. The sector employs about 15 000 people, of which 7 500 are fishermen (including about 1500 foreigners– mainly in the horse mackerel and tuna fisheries). The demersal fishery accounts for about 60 percent of landed revenue and almost all is exported. About 90 percent of this is hake and the rest is monkfish.[62] Despite the strong export emphasis, the Namibian hake industry has not sought an eco-label. The recent difficulties encountered by both the demersal and small pelagic sectors in Namibia suggest that the discipline imposed by eco-labelling could be of long run value to these fisheries.

5.2 South Africa

The South African Benguela fisheries provide livelihoods for about 26 000 people, and supply food to the whole southern African sub-region. Although the fishing industry accounts for less than 1% of South Africa's GDP, many communities depend on fishing for their livelihood, especially in the Western Cape (About 90% of the landed catch is taken from the Benguela system).

Like Namibia, the demersal hake industry is the most economically important.[63] The hake fishery is the most advanced in terms of both harvesting and processing, and in the sophistication of the value chain. Although South Africa exports a far smaller proportion of its hake than does Namibia, it has already been recognised by the MSC. The other demersal species which is targeted is the Agulhas sole. Monkfish and kingklip are taken as by-catch in the demersal fishery, and their stocks are still recovering from historic over-exploitation.

The second most important fishery, and the largest by volume is the pelagic fishery, which includes anchovy, pilchard and round herring.[64] These species have fluctuating populations,

[61] Sumaila, R., Ninnes, C. and B Oelofsen, Management of Shared Hake Stocks in the Benguela Marine Ecosystem, 2000.
[62] Sumaila, R., Ninnes, C. and B Oelofsen, Management of Shared Hake Stocks in the Benguela Marine Ecosystem, 2000.
[63] Demersal species are those that spend most of their life close to the sea floor, as opposed to living in the water column.
[64] Pelagic species are those that spend most of their life in the water column as opposed to resting on the sea floor.

and monitoring, control and surveillance at sea has been relatively poor. Approximately 19% of the purse seine vessels carry onboard observers at any one time. Small quotas mean that new entrants cannot cover costs, leading to rationalisation and excess inshore processing capacity. The industry includes 9 fishmeal plants (anchovy, horse mackerel), 6 canneries (pilchard), and about 100 purse seine vessels, and provides permanent employment for about 5300 people. In particular, the Anchovy TAC is subject to major fluctuations and there is significant pilchard by-catch. A large number of international substitute products also mean that South African pelagic fisheries are basically price-takers.

The third most important BCLME fishery in South Africa is for the west coast (Cape) rock lobster. Most of the catch of this high value product is exported. The species supports three fisheries; a full commercial, offshore fishery, a semi-commercial inshore fishery, and a recreational fishery. Quota allocations are relatively small, and the fishery is seasonal, meaning that most of the approximately 5500 workers in the fishery are not permanently employed.

Horse mackerel are targeted in a South African mid-water trawl fishery. Most of the fish are caught using two large mid-water trawl freezer vessels which fish on behalf of a number of quota holders. These low-value species are transhipped at sea, and delivered to regional African markets. Probably only about 200 people are directly employed in the industry in South Africa.

Other South African fisheries that fall within the BCLME include the tuna pole and line and large pelagic longline fisheries, targeting tuna, swordfish and pelagic sharks. Probably in the region of 2500 – 3000 people are employed in this fishery at any one time, but a number of these people are also active in other South African fisheries.

5.3 Angola

The Angolan fisheries sector is the third-most important industry after oil and diamond mining. It is the dominant source of food and livelihood for many, providing about 50% of the country's animal protein. (Domestic consumption of fish – at 11.1 kg per person per annum, is the highest in the region). Well over 30 000 people find employment within fisheries, including about 18 000 artisanal workers. (Recent estimates raised the number of artisanal fishers to over 23 000)[66]

Half of the fishery revenue comes from exports, with prawns accounting for at least 48%. The main export markets are Europe for prawns and demersal fish, African countries for small pelagic fish including horse mackerel, and Japan for tuna and crab.[67]

5.4 The Management Framework

Sumaila et al note:

> "In all three countries bordering the Benguela Current it is national policy to utilise living marine resources on a sustainable basis for the benefit of the nation, and to base the management on scientific information and principles. Ultimate responsibility for control measures rests with the State in all three countries."[68]

Namibia is governed by the progressive Marine Resources Act of 2000. South Africa's Marine Living Resources Act of 1998, makes significant attempts to expand participation in decision-making processes and work toward more equitable access to fisheries. Until recently fishery management fell under the Fisheries Act of 1992 in Angola, which was developed with the

[66] Sumaila, R., Ninnes, C. and B Oelofsen, Management of Shared Hake Stocks in the Benguela Marine Ecosystem, 2000.
[67] Sumaila, R., Ninnes, C. and B Oelofsen, Management of Shared Hake Stocks in the Benguela Marine Ecosystem, 2000.
[68] Sumaila, R., Ninnes, C. and B Oelofsen, Management of Shared Hake Stocks in the Benguela Marine Ecosystem, 2000: 9.

assistance of the FAO. This has now been superseded by the Aquatic Biological Resources Act of 2004, and has taken cognisance of the SADC protocol on fisheries.

All three BCLME countries belong to the Southern African Development Community (SADC). SADC established 21 Sector Co-ordinating Units (SCU) with the responsibility for marine fisheries delegated to Namibia. The SCU has instituted a Programme of Action (POA) to facilitate the 'trans-boundary management' of shared stocks. The POA includes the:

- Regional Fisheries Information Systems Project (RFIS),
- Monitoring, Control and Surveillance of Fishing Activities Project (MCS),
- The Policy Harmonisation Project,
- The Benguela Environment Fisheries Interaction and Training Programme (BENEFIT), and
- The Benguela Current Large Marine Ecosystem Programme (BCLME) Assessment.

The MCS project aims to develop both national capacity and address trans-boundary management issues. BENEFIT is a regional marine research and training programme involving Angola, Namibia and South Africa. It aims to improve information about the trans-boundary commercial stocks in the Benguela (primarily hakes, horse mackerels, small pelagic fish and crustaceans). The Benguela Large Marine Ecosystem Programme is an initiative supported through the Global Environmental Facility (GEF) and focuses on 'holistic approaches to ecosystem management.'

The SADC Protocol on Fisheries[69] follows recent international legislation, focusing on co-operative management of shared stocks and promoting 'responsible and sustainable use of the living aquatic resources and aquatic ecosystems of interest to State Parties.'[70]

Angola, Namibia and South Africa have all ratified United Nations Convention on Law of the Sea (UNCLOS) and have voted for its Convention on Trans-boundary and Highly Migratory Stocks, and the United Nations Implementing Agreement (UIA). Subject to the UIA, Angola, Namibia, South Africa and the United Kingdom (acting on behalf of its protectorates) have formed the South East Atlantic Fisheries Organisation (SEAFO) for the conservation and management of straddling and High Seas stocks in the South-east Atlantic (other signatories include: the EU, Norway, Russia, Ukraine and the USA).

All three countries belong to the International Commission for the Conservation of Atlantic tunas (ICCAT). Namibia and South Africa are members of the Convention for the Conservation of Antarctic Living Marine Resources (CCAMLR).[71]

Despite the significant attempts by the three countries to achieve responsible and sustainable fishery management, a number of problems exist. Most of these relate to the specific problems inherent in shared stocks, multi-species fisheries and third-world infrastructure. Some of these problems can be dealt with, although in the short term they may preclude certification. These obstacles include:

- Inadequate definition of stocks

[69] The SADC Fisheries Protocol is a subsidiary Protocol to the South African Development Community Treaty. The Protocol is adopted under Article 22 of the SADC Treaty, which mandates SADC members to conclude such Protocols as may be necessary in each area of cooperation under the Treaty, which includes fisheries. It was approved by SADC fisheries ministers in Maputo at the end of May 2001 and formally adopted by the SADC Heads of State and Government in August 2001. It entered into force in August 2003.
[70] Sumaila, R., Ninnes, C. and B Oelofsen, Management of Shared Hake Stocks in the Benguela Marine Ecosystem, 2000: 12.
[71] Sumaila, R., Ninnes, C. and B Oelofsen, Management of Shared Hake Stocks in the Benguela Marine Ecosystem, 2000.

- Inaccurate or non-existent information on basic biological characteristics such as growth and natural mortality rates, reproductive characteristics, recruitment variability and population age structures
- Inadequate absolute estimates of population size and unreliable indices of population trends.
- Lack of Operational Management Procedures based on population models (especially for Angola)
- Inability to predict the effect of environmental disturbances on resource dynamics
- Lack of trans-boundary surveys
- Lack of ichthyoplankton surveys and migration studies in both Namibia and South Africa
- Different survey techniques, sampling gear and ageing methods
- Different interpretations of commercial catch data
- Different approaches to management and exploitation control and different level of modelling skills
- Shortage of funds, vessels and staff for appropriate monitoring and dedicated behavioural studies.[72]

[72] Sumaila, R., Ninnes, C. and B Oelofsen, Management of Shared Hake Stocks in the Benguela Marine Ecosystem, 2000.

6. A BENGUELA CURRENT ECO-LABEL?

The three countries in this analysis have already expressed interest in eco-labelling. This interest is not new: it is nearly a decade since Namibia's Minister of Fisheries and Marine Resources stated that:

> "To the extent that customers are interested in being assured that the products they buy are harvested by sustainable fishing practices, and are prepared to pay more if necessary to buy products carrying the assurances they seek, we think they are entitled to reliable information in that direction. In this way, eco-labelling can harness consumer preferences through trade to strengthen sustainable fisheries management. For this reason, Namibia is supporting work by FAO towards the development of guidelines for eco-labelling."[73]

Support for the concept of eco-labelling however, is not the same as dedication to the required programme. Before the Benguela fisheries attempt this a number of questions need to be considered:

- Should the Benguela fisheries aim for certification
- If so, should the certification be that offered by the MSC?
- If the MSC is selected, what is an appropriate timeline for achieving compatibility?
- What are the potential economic, environmental and social/developmental impacts of the available certification programmes? What will the relative impact be on the small-scale and commercial sectors?
- What impact will certification have on export volume, destination and revenue? Which species will be most affected and will this induce distortions or have an impact on local availability?

South Africa's experience with the MSC certification of its hake industry has been generally positive. In a series of interviews with industry participants it was noted that much of the stated concern was based on misinformation about the financial cost of the certification. Amongst those who were aware of these costs, and who were involved in the strategic decision making of the major firms, there was little serious concern that certification had been a mistake. There is little reason to doubt that the same would hold for the Namibian hake fishery: monitoring in Namibia is more extensive than in South Africa, the management approach is also based on scientific stock assessments, and the legislation is similar. The Angolan industry is more problematic. Monitoring is weaker, scientific stock assessment is poorer and the process whereby TACs are set is more opaque. Serious reform of the industry would be needed if MSC certification was sought. More importantly, both South Africa and Namibia would currently lose by association if they joined Angola in certifying their fisheries with a "Benguela" certificate of origin.

With the trend of increasing consumer sensitivity to environmental issues and stakeholder realisation of the dangers of unsustainable fishing, it is clear that eco-labelling schemes for fisheries are here to stay. At the same time, countries have legitimate interest in safeguarding their trading interests and ensuring that schemes are not merely disguised protectionism. Namibia, South Africa and Angola need to work toward certification to ensure that they are not disadvantaged by the growing labelling trend in the developed world. Since all three countries are already embarking on numerous sustainable fishery initiatives, it is worthwhile to try and

[73] Iyambo, A. in Deere, C. Eco-labelling and Sustainable Fisheries, Report for the World Conservation Union (IUCN) and Food and Agricultural Organisation of the United Nations, 1999: 21.

align these with labelling requirements (try to as great a degree as possible), to prepare for the possibility of future certification.

As for the question as to whether the relevant body should be the MSC, it appears that despite its extremely strict standards, the MSC is the most thorough and well-recognised fishery programme. The support it enjoys from both the WWF and the scientific community are testament at least to its environmental legitimacy. The level of sophistication required by the MSC and its lack of flexibility *are* drawbacks. Apart from the certified South African hake fishery, very few of the Benguela fisheries are anywhere near certification. It is possible that in a few years the sole, monkfish and Angola prawn fisheries may also achieve certification.

Furthermore, as noted earlier, the WWF is currently testing a more flexible certification option for small-scale fisheries in Africa.[74] For the less advanced fisheries and especially for those in Angola, this may make certification a possibility. If necessary, it may also be possible to apply for the funding assistance currently being offered by the World Bank and the EU to developing countries that seek MSC certification.

In the near future, it is important that the three countries work toward alleviating some of the problems outlined above. In particular, it is vital to improve the available information on the biological characteristics and population trends of the various stocks. Trans-boundary surveys need to be undertaken on a more frequent basis and the different approaches toward exploitation control among the countries need to be harmonised. It is also imperative that any surplus funds are invested in upgrading monitoring equipment and training and recruiting staff.

The actual economic, social and developmental effects of eco-labelling will obviously depend on the specific fisheries certified, the conditions in the market at the time, and the then prevailing state of the stocks and fishing communities. If, as this paper suggests, certification in the near future is limited to the hake stocks, it is unlikely that a great deal of 'displacement effects' will be felt. As the smaller and less developed fisheries seek certification, the effects are likely to be more pronounced. This if course depends on whether the MSC allows greater flexibility for small scale fisheries in the future.

All in all, it is obvious that a growing demand for 'green products' and the state of the world's fisheries can no longer be ignored. If the three countries sharing the Benguela stocks wish to retain their market share in the seafood markets of the developed world and position themselves as responsible environmental stewards, the need to give serious consideration to eco-labelling programmes. Since there is currently still a large market for unlabelled products, the three countries have a few years to work toward certification 'readiness'. However, the process should definitely be set in motion. The available research, economic reasoning and trend analysis all appear to highlight the benefits of eco-labelling – evidence that developing countries fisheries cannot afford to overlook.

[74] For more information please see 'Steps For Certifying Small-Scale Fisheries', World Bank Website, www.panda.org or Viswanathan and Gardiner, 'Certification Applied to Developing Country Fisheries', Chapter 4 of Ecolabelling and Fisheries Management, Published by WorldFish Center, Malaysia, 2004.

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APPENDIX A: 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.

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.

A. Management System Criteria:

1. The fishery shall not be conducted under a controversial unilateral exemption to an international agreement.
2. The management system shall:
3. 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, artisinal, and fishing-dependent communities shall be addressed as part of this process;
4. 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;

5. 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;
6. incorporates and appropriate mechanism for the resolution of disputes arising within the system;
7. provide economic and social incentives that contribute to sustainable fishing and shall not operate with subsidies that contribute to unsustainable fishing;
8. 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;
9. 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;
10. require that assessments of the biological status of the resource and impacts of the fishery have been and are periodically conducted;
11. specify measures and strategies that demonstrably control the degree of exploitation off 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 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;
12. 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.

<u>B. Operational Criteria</u>

Fishing Operation shall:

1. 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;
2. implement appropriate fishing methods designed to minimize adverse impacts on habitat, especially in critical or sensitive zones such as spawning and nursery areas;
3. not to use destructive fishing practices such as fishing with poisons or explosives;
4. minimize operational waste such as lost fishing gear, oil spills, on board spoilage of catch, etc.;

5. be conducted in compliance with the fishery management system and all legal administrative requirements; and
6. 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.

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