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Potential costs and benefits of fisheries certification for countries in the Asia–Pacific region

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POTENTIAL COSTS AND BENEFITS OF FISHERIES CERTIFICATION FOR COUNTRIES IN THE ASIA–PACIFIC REGION

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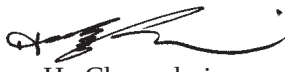
FOREWORD

The 29th Session of the Asia–Pacific Fishery Commission (APFIC) recognized that one of the emerging issues in the region is the development of standards and certification schemes and the potential opportunities and constraints that these might bring to the region. In particular, member countries specifically requested APFIC to review costs and benefits associated with certification schemes for capture fisheries and aquaculture in the APFIC region. This report was prepared in response to this request.

The report reviews environmental certification, social certification and branding initiatives of potential relevance to marine capture fisheries in the Asia–Pacific region and considers their net costs and benefits. Consideration is also given to potential problems that countries, producers or exporters in the Asia–Pacific region might have with such initiatives. It is important not to generalize about whether the sector should engage in certification or branding schemes because of the specificities of each fishery/product and its end market. Therefore, the recommendations focus on providing some practical advice on how to conduct cost–benefit analyses and a decision-making tree for assessing the viability/feasibility of certification or branding in different situations.

It should be noted that certification and branding are only part of the solution to a more sustainable capture fishery. There is a wide range of possible mechanisms that can be used for sustainable management of a fishery and for product promotion in the Asia–Pacific region in line with the FAO Code of Conduct for Responsible Fisheries.

This report is part of the work that APFIC and FAO are jointly carrying out in the region for member countries. The findings in this report have been presented at the "APFIC Regional Consultative Workshop on Certification Schemes for Capture Fisheries and Aquaculture" held in Ho Chi Minh City, Viet Nam in September 2007. This report, together with input from the regional workshop, will provide a solid base for APFIC members to move forward on certification issues related to aquaculture. It should be noted that this work is complies with the *FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries.*



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1. EXECUTIVE SUMMARY

This publication was prepared as a background paper for an Asia–Pacific Fishery Commission (APFIC) Regional consultative workshop on "Certification schemes for capture fisheries and aquaculture" held in Viet Nam 18–20 September 2007. At the 29th APFIC Session (21–24 August 2006) in Kuala Lumpur, member countries recommended that APFIC's work should focus on "Certification in Fisheries" as one of the emerging issues for the fisheries sector in the region. To follow up on this recommendation, this paper assesses the potential costs and benefits of fisheries certification and branding for countries in the Asia–Pacific region. It does not examine certification of aquaculture production, which is to be covered under a separate publication.

The publication starts by providing a comprehensive review of existing and recent environmental and social certification schemes in fisheries, as well as some examples of branding. It then considers the hypothetical and actual evidence for the demand for, and benefits of, such initiatives. Related costs are also discussed, before considering the net benefits of such initiatives, i.e. benefits less costs. There is a dearth of studies and very little quantitative evidence published on the financial costs or the benefits of certification or branding schemes; this gap is even more pronounced when it comes to an assessment of the *net* benefits. There is some evidence that the conditions attached to certified fisheries do encourage improved institutional structures and operational practices, but to date these are largely restricted to established, well-managed fisheries.

The publication summarizes work by others that have highlighted the potential problems faced by developing country producers in engaging with both certification and branding initiatives, before presenting some possible solutions.

It is not easy to determine whether it is sensible to engage with certification and/or branding initiatives for particular products or fisheries. The net benefits are likely to be too specific to the particular country and product concerned, the end market, the characteristics of the supply chain and so forth. Generalizing about the actual costs and benefits is, in almost all cases, neither possible nor advisable. As a result, the main focus of the paper is attempting to provide some assistance to APFIC members on *how* to make decisions about whether engaging in certification and/or branding initiatives is a good idea. This assistance takes the form of suggestions on how to conduct cost–benefit analyses as well as a simple decision-making tree. The decision-making tree could usefully be field tested in a small number of countries. This would enable its refinement for later use and replicability, while at the same time providing some practical assistance to the countries concerned in making decisions about the feasibility of certification or branding for particular products or fisheries.

The publication concludes that certification and branding are only aspects of product promotion and that it is almost certainly more important to comply first with the basic mandatory requirements of food safety and hygiene (i.e. in terms of HACCP compliance). There are also many other ways (e.g. quality improvements, pricing strategies and improvements in logistics to meet client requirements) that may be at least as effective as certification or branding in helping producers and exporters to improve the net value-added of their business operations. Traceability is also expected to become increasingly important in this regard.

2. INTRODUCTION AND SCOPE OF THIS STUDY

This study was prepared as a background paper for an Asia–Pacific Fishery Commission (APFIC) Regional consultative workshop on "Certification schemes for capture fisheries and aquaculture" held in Viet Nam 18–20 September 2007.

The main objective of the publication is to provide a strategy for the region, to be used in decision-making, as to whether or which certification/branding schemes should be pursued for capture fisheries in the Asia–Pacific region. The study attempts to provide a clear analysis framework to be used by countries/producers in the region in determining where and when certification/branding is likely to provide net benefits. While a review of different initiatives is presented, along with some discussion about the potential benefits, costs and problems for developing country producers of such schemes, it is hoped that the publication represents a departure from the many rather general studies that are already available, which often fail to provide much guidance to developing country producers and decision-makers as to how to go about assessing whether to pursue different types of initiatives.

This work focuses on those environmental and social certification initiatives related to the marketing of products in either domestic or export markets. It examines certification initiatives from the point of view of their ability to generate competitive market benefits to producers. In addition to social and environmental initiatives, there is also a growing trend towards product branding, labeling and quality improvements. This study therefore considers not only certification *per se*, but also the potential benefits from branding and quality schemes.

The paper does not consider in any detail the overall benefits of more general initiatives to encourage improved management measures or social practices, such as the FAO *Code of Conduct for Responsible Fisheries* (CCRF), or specific national or fishery management organization initiatives to improve fisheries management, although such schemes can be expected to lead to market impacts through long-term sustainable production. The study only examines initiatives relating to capture fisheries production — initiatives related to aquaculture are covered in a separate study — and hence it does not consider any organic initiatives as these relate primarily to farming and/or aquaculture production (e.g. GLOBALG.A.P.). Appendix D provides some discussion on why not all wild caught fish can necessarily be considered as complying with organic standards.

Finally, the study does not examine the legislative requirements for, or benefits of, food standards, traceability and product labeling — i.e. mandatory requirements imposed by regulatory authorities in importing countries. If countries in the Asia–Pacific region wish to export to the European Union or the United States of America for example, they must comply with certain import requirements; there is no choice to be made about the economic competitive benefits of doing so, except insofar as they will be unable to generate any benefits at all from sales to such markets if they do not comply with the traceability and product labeling requirements specified. This study therefore focuses on *voluntary* schemes/initiatives with which countries in Asia and the Pacific could potentially engage.

3. OVERVIEW OF CERTIFICATION SCHEMES AND OTHER BRANDING INITIATIVES

There are many certification schemes and branding initiatives of relevance to the marketing of capture fisheries products. Certification initiatives may involve assessment of the fishery itself as well as certification of the supply chain, known as chain-of-custody certification. In addition, some certification initiatives use product labels, while others do not. Equally, some labeling/branding schemes do not require formal certification. Labels, seals, or logos are used to give consumers more information about the provenance, production methods, or environmental friendliness of the product (or company). All labels are intended to inform the consumer, but not all labels have the same influence. They range from the strictly regulated and third party certified use of labels to self-assertions made by individual companies to promote their own products. They also cover a huge range of topics including the environment, social justice and the quality of products.

It is important therefore to distinguish between environmental certification, social certification and branding in fisheries, all of which are covered in this paper.

Environmental certification examines the level of sustainability of fisheries exploitation and is generally restricted to environmental issues, such as the maintenance of fish stocks and the ecological impacts of production, rather than any wider coverage of socio-economic issues, although some environmental certification schemes do include some social issues. Furthermore some environmental labels might be restricted to certain key issues such as reducing marine mammal bycatch, rather than a more comprehensive assessment of the fishery and its impacts. Environmental certification rarely guarantees the quality of certified products, just their provenance. Certification generally implies that producers conform to a certain set of standards and that they are regularly audited against these standards by a third party verification body.

Social certification examines the social provenance of products, mainly in terms of the social/working conditions of those producing the fish and fish products; and/or whether they receive a fair price.

Brands/branding allows a producer to promote certain qualities of a product that are often purported to be unique or otherwise sought after. As a result, environmental and social certification schemes can therefore be considered forms of brands/branding.

- A brand is a product, service, or concept that is publicly distinguished from other products, services, or concepts so that it can be easily communicated and usually marketed. Brands are often expressed in the form of *logos*, or consistency in product packaging. These logos or product packaging are used to convey a potentially wide range of product attributes in terms of provenance/source, quality, history, price, desirability and social aspirations.
- A brand name is the name of the distinctive product, service, or concept.
- Branding is the process of creating and disseminating the brand name. In the case of fisheries, branding can be applied to the entire output of a country, region or company, as well as to individual products. Branding may involve advertising and other marketing campaigns.

3.1 Environmental certification and initiatives

There are a number of environmental certification initiatives. A list of these initiatives are given in Appendix E which presents information on initiatives for global third-party fisheries certification and some information about International Standards Organization (ISO) certification, i.e. voluntary initiatives with which APFIC countries/companies could actively engage — should they wish to do so. The table shows clearly that except for the Marine Stewardship Council (MSC) and the Friend of the Sea schemes,

there are currently few options for voluntary environmental certification of marine capture fisheries, especially as the ISO provides certification of companies and would not represent certification of fisheries management *per se.*

In 2005 FAO prepared a series of guidelines on the ecolabeling of fish and fishery products from capture fisheries. These guidelines were intended to cover principles, general considerations, terms and definitions, minimum substantive requirements and criteria and procedural and institutional aspects of voluntary, third party certified ecolabeling initiatives. At present, it would appear that the only such fisheries-specific scheme that adheres to these guidelines is the MSC Responsible Fisheries Scheme.

Other environmental schemes and initiatives in Appendix E include:

- Mandatory schemes/initiatives relating to sustainability.
- Schemes run by retailers which involve their own assessment of sustainable levels of fisheries exploitation.
- Fisheries-specific codes of practice or guidelines that do not involve certification or labeling.
- Non-fisheries specific networks/associations of ecolabeling organizations.
- Fisheries certification schemes outside the APFIC region (and therefore not of direct relevance to APFIC countries).
- Consumer information initiatives specifically on fisheries, which are not certification or labeling schemes *per se* (i.e. seafood guides which involve other parties making comment about the sustainability of capture fisheries production).
- Non-fisheries sector schemes in the Asia–Pacific region and in APFIC countries which are focused on manufacturing products.

3.2 Social certification and initiatives

Only a very few social certification/initiatives involve, or have involved, fisheries. Appendix F presents information on global social certification schemes and initiatives and also provides reference to some specific schemes where previous or potential involvement with fisheries has been reported.

In addition to the schemes mentioned in the appendix, it should also be noted that many supermarkets in developed countries include some social aspects in their traceability audits and assurances from suppliers about products being sourced from companies engaged in fair social practices. In addition the MSC certification scheme includes some social issues, but such issues are not an integral or especially important part of the certification process.

3.3 Branding initiatives

This publication considers branding only, as opposed to generic product promotion. The difference between the two is that “brand” promotion is undertaken by an individual firm, group of firms, or even by a country, with the aim of growing the market for its brand, i.e. to increase its sales by diverting existing consumption from competing brands and by stimulating additional consumption. In the case of country branding this would involve trying to increase the market share in overseas markets.

Generic promotion on the other hand refers to activities undertaken by an industry or group to promote benefits that relate to a whole sector or category rather than to specific brands, for example, “drink more milk”, or “eat more fish”. Its purpose is to benefit demand for the industry — to “grow the size of the pie” or “slow the shrinkage of the pie” (Tveteras *et al*. 2006). It should be recognized that branding is just one aspect of product promotion. However, having made this distinction, it should also be noted that country

Figure 1: Some examples of branding of fish products in Asia and the Pacific

Fish sauce brands

Pangassius catfish

Shrimp brands

or regional branding is something of a combination of both brand promotion and generic promotion, and may be used to both expand market share, and increase the size of the market.

As noted at the APFIC forum in Malaysia in August 2006 (Subasinghe 2006), branding is important in adding value to fisheries products and creating consumer awareness about products. Some branding schemes are specific to fisheries, while others are wider in their scope and cover both fisheries and non-fisheries products, as discussed hereunder.

Branding can involve both third-party certification and own-brands. Branding a product can be used to convey many messages to consumers, including issues related to aspirational qualities, environmental issues, quality and the provenance/source of products (i.e. a particular company, a region or a country).

Self-declared ecolabels not involving certification or third-party assessment can also be thought of as a form of branding, for example the pesticide-free label in Thailand (Figure 2).

Typically, however, guarantees or implications of good quality are often paramount in branding exercises, as it is through such an emphasis that producers/retailers attempt to capture the market share and add value through generating price premiums.

Figure 2: Thai pesticide-free label

In **Japan**[1] the Japan Agricultural Standard (JAS) Certification System allows various agricultural commodities, including seafood products, which comply with the standards specified for each product, to bear the quality label — the "JAS" mark. The JAS standard consists of two different standards, the "quality" (the standard of the agricultural, forestry and marine products) and the "display" (which demands the display of the descriptive label standard, the history and the quality). For the sake of consumers, a descriptive labeling standard was specified in 2000 for all kinds of food and drinks. The "JAS' mark is considered a descriptive label quality standard rather than a quality specification of the product, and is mandatory for exports. In addition, there is a Frozen Food Processors Registration system, managed by the Japan Frozen Foods Association, which accords registration to frozen food processors who produce food products with a high level of quality and safety for domestic as well export marketing. The association has more than 2 000 registered members on its roll.

Japan Agricultural Standard (JAS)

In **Republic of Korea**, to secure food safety and to harmonize with international standards of food quality, the government enacted the "Fishery Products Quality Control Act" in 2001; an HACCP mark is approved for use by the Korea Food and Drug Administration (KFDA) and the Ministry of Agriculture and Forestry (MAF).

Figure 3: HACCP mark (Republic of Korea)

Also in Republic of Korea, the National Fisheries Product Quality Inspection Service (NFPQIS) has three categories of certification for fisheries products accredited by the government: "Fisheries Product", "Special Fisheries Product" and "Traditional Fisheries Product". This certification scheme issues the certification document and a mark for each category to be used on the product. The accreditation marks are not only for quality control purposes but also for preserving and promoting traditional fisheries products in the food market.

They have not been very successful. In recent years provincial certification schemes (each with different inspection guidelines) for provincial producers to use in the national market have been more active and successful.

Figure 4: Some regional branding examples from Republic of Korea

Accreditation mark in Busan

Accreditation mark in Jeollanam-do

Outside Asia, an interesting branding exercise has been initiated by line fisherfolk in Brittany in **France**.[2] This scheme is not based on environmental issues, but uses a label, and is based around the concept that the label provides the consumer with

[1] Text adapted from *Synthesis paper on fisheries certification in Asia–Pacific* presented at the APFIC meeting in Bangkok, 30 March 2007.

[2] http://www.pointe-de-bretagne.fr/assoc.php

traceability information about the individual vessel that caught the fish, fishing methods, etc. It also strongly focuses on sanitary and quality aspects of the products. Other examples of quality brands in the European Union include "Quality Approved Scottish Salmon", and Label Rouge in France[3] (the latter not specific to fisheries products). In addition, many supermarkets in the EU have their own private labels to designate a range of product qualities they deem favourable to consumers.

Figure 5: The Pointe de Bretagne scheme

4. DEMAND FOR, AND BENEFITS OF, CERTIFICATION AND BRANDING

Any discussion on potential demand for certification and branding initiatives must be underpinned by the expected benefits that different interest groups anticipate; both the anticipated and the realized benefits are expressed through demand for such schemes/initiatives. Of course, the potential and actual benefits of any scheme will differ for different interest groups, and actual benefits may differ from hypothetical ones. Potential benefits are summarized in Table 1 and discussed in the following sections, especially with regard to evidence of the benefits being realized. It should be stressed however, the actual benefits resulting from any certification or branding scheme are likely to be very case-specific. It is very difficult to generalize about the type or scale of benefits resulting from different initiatives.

Table 1: Summary of expected benefits from certification and branding for different interest groups

Expected benefit	Retailers/ food service sector	Consumers	Producers
Price increases	✓		✓
Improved client relationships	✓ (with consumers)		✓ (with retailers)
Improved management resulting in longer term sustainability	✓ (for certification)	✓ (for certification)	✓ (for certification)
Improved quality of products	✓ (for branding)	✓ (for branding)	✓ (for branding)
Better knowledge of provenance/source	✓	✓	
Continued/improved access to markets			✓
Improved public image	✓		✓
Product differentiation and market segmentation	✓		✓

[3] The Label Rouge program (www.label-rouge.org/) focuses on high-quality products, mainly meat, with poultry predominating. It emphasizes quality attributes such as taste, culinary qualities, free-range production and food safety. It is not an ecolabel as such, except to the extent that good environmental practices and low stocking densities translate into better product quality. It is underpinned by criteria such as husbandry techniques, use of medicines, feed types, shelf life and transportation times and incorporates a full traceability system. It uses third party certification and a label. Label Rouge poultry accounts for over half of all consumer poultry purchases despite retail prices double those of standard poultry.

4.1 Demand by consumers

Environmental and social certification

Firm evidence of consumer demand for environmental and/or social certification is difficult to find. Studies of reactions to seafood ecolabels have generally assessed consumer choices when faced with two samples of the same species, for example two samples of salmon — one ecolabeled and the other not (Wessells *et al.* 1999; Johnston *et al.* 2001). Results have indicated that consumers prefer ecolabeled products, as long as the price premiums are not large. Jaffrey *et al.* (2001) investigated consumer preferences for ecolabeling in the UK and Denmark and varied the products over a wide range of fresh and processed products. Again, consumers generally preferred labeled to unlabelled products. Johnston *et al.* (2001) analysed consumer demand for ecolabeled seafood in the United States and Norway and found a demand for ecolabeled seafood when consumers were presented with choices between ecolabeled and non-ecolabeled products of the same species, although consumers in Norway were more price sensitive than those in the United States. Johnston and Roheim (2005) suggest that while consumers consider overfishing sufficiently important to cause them to contemplate changing the species of fish they buy, they are unwilling to choose a less-favoured species (i.e. to sacrifice taste) based solely on the presence of an ecolabel.[4]

When consumers are asked about their demand for, and willingness to pay for, products from certified sources, many will respond positively (see Box 1 and Box 2).

Box 1: Consumer responsiveness to environmental sustainability of seafood

In 2005, Seafood Choices Alliance undertook research of the European seafood marketplace, in partnership with Greenpeace, the Marine Conservation Society, WWF and the North Sea Foundation. In this first-ever poll of European consumers, supermarkets, chefs and restaurateurs on attitudes towards seafood and the ocean, 79 percent said that the environmental impact of seafood is an important factor in their purchasing decisions; 86 percent of consumers would prefer to buy seafood that is labeled as environmentally responsible; 40 percent are willing to pay 5–10 percent more for seafood identified as ecofriendly. And 95 percent of consumers and 85 percent of seafood professionals said they wanted more information about how to buy sustainable seafood. http://www.seafoodchoices.com/aboutus/EuropeanResearch2005.php

Box 2: Chinese consumer attitudes

In China the secretariat of the China Certification Committee for Environmental Labeling implemented the "Survey on Chinese Public's Environmental-protected Consumption" in 2004. This study did not focus on fisheries products. According to the statistics, at purchase, 58 percent of customers rated quality as the most important criteria; another 35 percent rated the environmental characteristics of the item. Factors related to brand recognition, service and price were less important. Of the environmental characteristics group, 69 percent chose ecofriendly products because they thought such products would have health benefits and 21 percent opted purely for ecological reasons. The survey results showed that at present the market is confused with genuine and fake ecolabeled products: 58 percent of interviewees could partly distinguish genuine ecoproducts and 27 percent could not distinguish them at all. When asked, "What do you think of the present state of the Chinese ecoproducts market?" 46 percent said they were not clear about it and 27 percent said the market was "very confused". This survey showed that 59 percent of Chinese consumers were willing to pay 10 percent more for environmentally-friendly goods. An important finding was the increasing number of consumers aware of ecolabeling, up from less than 20 percent in the past to 80 percent in 2004.

Source: http://www.sepacec.com/english/labelling/

[4] Dolphin Safe confers a very minor price benefit of around 1 percent (MSC, personal communication, 2007).

However, despite the demand expressed by consumers in some surveys, Boxes 3 and 4 indicate that stated demand by consumers and an actual willingness to pay is not always experienced in practice.[5] A survey referred to in a Nautilus/IIED report (2003) concluded that "in relation to decisions about food and shopping, consumers were unashamedly selfish. Most decisions are based on self-benefit, e.g. value for money, taste and convenience, rather than being driven by altruistic motivations".[6] There is also a widely recognized gap between what consumers *say* they do on ethical issues and how they *actually* act — a Cooperative Bank survey found that of the 80 percent of consumers who claim to shop or invest ethically, only 30 percent "practice what they preach".[7] Organic labels are recognized by consumers as highly differentiated brands which they can trust, especially in terms of health and safety (absence of chemicals) and for which consumers are prepared to pay a premium — commonly estimated at around 10 percent. However, this inclination is less based on ethical considerations and more on self-interest in terms of health. Of course, issues of self-interest do not apply to environmental or social certification, so the market demand for environmentally/socially certified products is likely to be smaller than for organic products, although it still offers potential for a distinct exploitable market segment.

Box 3: The case of Frosta in Germany

In early 2003 Frosta, a German supermarket, launched a marketing initiative promising that for all of their own-brand products they would only use fish certified as sustainable by the MSC. At that time, this effectively meant that the only fish they could use for their whitefish products was hoki from New Zealand. Frosta invested much time and money in developing hoki-based products and adjusting processes to accommodate the new fish. Although hoki is usually sold at a higher price in Germany anyway, the extra cost was passed on to the consumer as a 10 percent rise in the price of the end products.

Frosta calculated that consumers would be willing to pay a premium for fish that was not in danger of stock collapse and which came from well-managed fisheries. They miscalculated. The products were high quality, but Frosta's market share in Germany crashed by more than 50 percent and they almost went out of business.

Source: Porritt (2005)

An additional problem with both certification and branding is that in many cases, consumers can justifiably be considered to be relatively uneducated about different forms of seafood, issues of sustainability, different labels, and so forth. As Jodice found when examining the responsiveness of tourists in South Carolina to industry efforts to differentiate locally caught wild products from imported farmed products, "…coastal tourists have a low level of subjective knowledge about shrimp. Therefore, the ability of coastal tourists to discriminate among shrimp attributes (especially related to origin) may be limited" (Jodice *et al.* 2006).

What is clear is that consumer demand for certification is certainly not homogenous among countries. Given the increasing prevalence of MSC-labeled products in different countries, one can infer that demand by consumers (and retailers) is evident in many Northern European countries and in America, but less so in Southern European countries (the use of the MSC logo in Europe is most evident in three countries: Switzerland, the UK and Germany).[8] While MSC is to a certain extent demand-driven by fisheries approaching it, it may also be the case that existing demand is strongly orientated to those countries/

[5] MSC report (personal communication, 2007. With regard to the Birds Eye case, the company used cheap fish that did not have the fat line removed. Had they done this the fish would not have had a "fishy" taste and may have been more acceptable. Findus in Sweden has been far more successful at introducing hoki as an alternative to cod.

[6] IGD. 2003. *Consumer attitudes to 'eat the view'*. Report for the Countryside Agency, Watford, IGD.

[7] Key Note. 2002. *The green and ethical consumer.* Key Note Ltd.

[8] MSC-labeled products are traded in the following countries: Australia, Austria, Belgium, Canada, France, Denmark, Finland, Germany, Greece, Italy, Luxembourg, Malta, New Zealand, Norway, Portugal, Ireland, South Africa, Switzerland, Singapore, Spain, Sweden, UAE, Netherlands, UK and the United States.

Box 4: The case of Unilever in the UK

In early 2002, Birds Eye launched two hoki steak products in an attempt to switch from cod (heavily overfished) to MSC-certified hoki. The first, a pack containing six steaks, directly replaced the equivalent cod steak product, which was discontinued (discontinuing the cod steak six pack meant replacing a product line worth well over US$35 million). The second, a pack containing two steaks, was sold alongside the cod equivalent. Then, in July 2002, Birds Eye also started selling packs of ten hoki fish fingers. It conducted much market research in advance to see how shoppers would react, and all the messages came back indicating that, given the right incentives, shoppers would buy the product. But when the products finally appeared on the shelves, that is where they largely stayed. Hoki was marketed as "New Zealand hoki", aligning the exotic-sounding fish with a familiar place, similar in people's minds to Britain, and with a reputation for producing high quality food. The sustainability message was there on the pack too: on the front an "Ocean Friendly" logo, and the MSC logo with a short explanation on the back. Hoki was also described in big red letters as "an excellent alternative to cod".

Food producers like Unilever cannot determine the price at which food is eventually sold by retailers, but they can send strong signals. The recommended retail prices of the hoki products being provided by Unilever were significantly lower than those for Unilever's cod equivalents and the hoki fish fingers were promoted at a recommended price a full one-third lower than the cod product. But competition between supermarkets in the UK is very strong, and tends to focus on iconic products and brands. Cod fish fingers are one example. Price competition on cod fish fingers drove the prices on the shelves down so that they appeared to shoppers at the same level as the hoki. By 2004, in some supermarkets, cod fish fingers were actually cheaper than the more sustainable hoki option.

As of mid-2005, Birds Eye is not selling any hoki products to retailers in the UK because it found that consumers prefer the taste of cod. The experience shows that, even if sustainability is a concern for shoppers, it is still much less important compared to price and quality.

Source: Porritt (2005).

regions on which MSC has focused its attention to date. Demand in other countries may also be readily exploitable, and demand countries in Asia and the Pacific may also be growing; since November 2006 Japanese consumers have been able to choose a range of ten fish products carrying the MSC ecolabel,[9] and Australian and New Zealand MSC-certified products are sold domestically. A list of certified suppliers of MSC products in Asia and the Pacific is provided in Appendix . Recent steps in Hong Kong S.A.R. also indicate that assumptions about the lack of demand in developing countries may be misplaced.

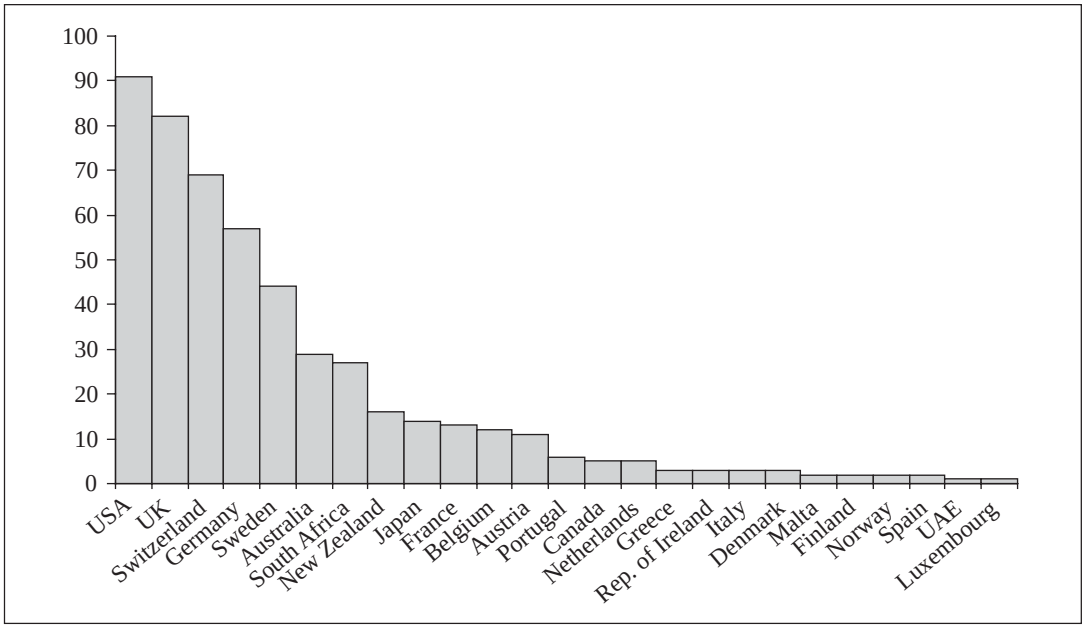
Nevertheless, the relative levels of demand as expressed in terms of sales values should be kept in mind. The MSC is certainly the most well-known and high-profile environmental certification scheme globally. The high *number* of MSC-labeled products (see Figure 6) should be seen in the context of the total value of sales of MSC-certified products (US$236 million in 2005/2006). This is equivalent to less than 0.5 percent of the value of imports[10] by the ten largest importers, 0.7 percent of the value of exports[11] by the ten largest exporters and 0.33 percent of the value of internationally traded seafood products (US$71.5 billion, which itself represents 38 percent of the liveweight production of fish).

[9] AEON (a Japanese supermarket) was the first major retailer to introduce sustainably-sourced seafood products in hundreds of stores across Japan.

[10] At 2004 values, and based on FAO data.

[11] At 2004 values. The share of developing countries in total fishery exports was 48 percent by value and 57 percent by quantity. The fishery net exports of developing countries (i.e. the total value of their exports less the total value of their imports) has shown a continuing rising trend in recent decades, growing from US$4.6 billion in 1984 to US$16.0 billion in 1994 to US$20.4 billion in 2004.

Figure 6: MSC labeled products by country, June 2007



Source: MSC, personal communication.

Branding

Demand by consumers for branded products (and by implication different qualities of product) can also be clearly inferred by visiting any supermarket in either developed or developing country markets and assessing the wide range of different brands of fish products on sale for different prices. In the canned tuna trade, branding is estimated to generate a 20 percent price premium approximately.[12] However price premiums may be evidenced more in processed/canned/frozen products than in fresh/wet products, which are rarely branded (although increasingly sold with more information about the country where the fish has been caught). The increasing trend for fresh fish sales could potentially reduce consumer demand for branded products; the higher prices paid for fresh products may mean that efforts by producers to generate price premiums from branding are not so strongly demanded by consumers as in the frozen/canned sector (where branding can therefore be more successfully used by producers to protect their market share/ access).

4.2 Demand by, and benefits for, retailers/the food service sector

Environmental and social certification

For retailers (and to a lesser extent the food service sector), increasing demand is primarily driven by long-term planning horizons and the need to ensure reliable supplies, a desire to avoid bad press related to sourcing from unsustainable supplies or suppliers with questionable employment practices and by their perceptions about potential consumer demand which in turn provides the potential for them to segment the market and establish price premiums (and therefore more profit) from sales to those consumers willing to pay. Many retailers may hope for a price premium but not view such a premium as essential. It is not consumer-driven willingness to pay that has driven the MSC growth in recent years, but the more intangible factors included in Table 1, particularly retailer credibility in relation to corporate social responsibility commitments. Whilst these are very difficult to quantify, they are nevertheless real benefits for retailers.

[12] Personal communication, FAO (FIIU), 2007.

Demand by retailers/food service sector is far from universal. It varies:

- Between corporations and sectors of the market in any one country, i.e. between retailers, between retail and the food service sector.
- For different species.
- Between countries (based on both demand and funding efforts by the schemes themselves).
- With regard to respective interest in environmental certification, social certification and branding.

One study (Macfadyen *et al.* 2003)[13] found that interest in environmental and social certification/branding varies significantly between the retail and catering sectors. In the catering sector, which for example consumes around two-thirds of EU shrimp consumption, demand for sustainable/ethical shrimp is limited because:

- Consumers are less concerned and discriminating about the origin of food served in restaurants — although they may be very concerned about quality.
- Caterers/restaurateurs are typically smaller companies for whom certification issues would represent a higher relative cost.

Likewise the study found that supermarkets in the EU vary in their support for certification schemes, and many believe that the majority of customers are more interested in other factors such as value for money, speed at check outs and the quality of products. The study also found little/no support from those interviewed in the retail sector for specific social branding, as retailers are concerned about many brands confusing consumers and adding costs. This finding is supported by the more recent experience of the Fair-Fish initiative (see Section 3.2), with the Migros supermarket chain in Switzerland recently having withdrawn from the project. There may be some support for linking social/ethical issues into other environmental certification schemes and traceability requirements, although the willingness of those running environmental schemes (with the exception of Naturland) to expand into social issues remains another question.

Certainly a key factor for retailers is that product volumes in a particular commodity have to be large enough to ensure a coherent and consistent market image. In the UK a problem for the MSC is that not enough species have been certified; the MSC brand has yet to make the necessary impact in the consumer "share of mind". As noted by Porritt (2005) the first point is probably the most critical, as it opens the way to addressing the second. Supermarkets need a guaranteed, consistent supply of the species that people want to buy. Tesco, the biggest UK supermarket and one of the biggest retailers in the world, has stocked seven of the 12 MSC-certified species, mostly as fresh packaged fish but also some frozen New Zealand hoki. Together, they make up a tiny proportion of total fish sales. Supply volumes have been low and inconsistent even when in season. David Oliver, Tesco's Technical Director for fresh fish procurement, has been reported as saying that the variability in supply makes it difficult for them to support (certified) fish on their shelves (Porritt 2005). This certainly appears to generate a circular problem for the MSC; while some claim there is insufficient demand to bother getting certified, without certified fish the demand cannot be generated.

As indicated in Table 1, a major anticipated benefit for some retailers, and by implication processors supplying them, is long-term sustainable supplies. This raises the interesting question as to the extent to which environmental certification results in better management, and the extent to which certification schemes are just certifying fisheries that are already well managed. The answer is not always clear. For

[13] The study examined exports of shrimp from Viet Nam to the UK and BeNeLux countries, and of ornamental fish from Indonesia and the Philippines to the UK and France.

many fisheries, management conditions are far from being certifiable under MSC processes and certification is therefore very unlikely. In other cases, the pre-assessment and assessment process can, and in some cases has, identified management changes that need to be realized for full certification to be likely (Box 5). For the Friend of the Sea Scheme, the use of published data as the basis for certification would seem to provide little direct incentive for improvements in fisheries management, at least in the short term, and improving fisheries management is not included within their mandate. The Friend of the Sea scheme has no leverage with a fishery (as it is a yes/no desk top analysis) and therefore has little ability to enhance fishery management. Moreover, potentially sustainable fisheries may be excluded on the basis of gear type or assumptions about bycatch risk.

Box 5: Reported benefits to producers of MSC certification

- SuthWest Handline Mackerel (certified in 2000), seven products: Reported that better market access in home market and new markets in Switzerland resulted in increased demand, price premiums up to 20 percent, disproportional to market price increase, and a more robust management plan.
- Wild Salmon (2000), 218 products: Used the MSC to distinguish their products as verification of good management and found better market access and increased market share in the EU market place, with anecdotal evidence of price premiums.
- Patagonian Toothfish (2005), two products: Used the MSC to strengthen traceability in the fishery to battle IUU fishing and as a risk management tool against falling prices and reputation problems. An improved reputation allowed it to regain market access in the United States and UK (2006); increased demand should result in increased prices.
- Alaska Pollock (2005), 120 products: Used the MSC as an answer to market demand, as proof of good management and to improve reputation; succeeded in increasing its market share in the EU market place and reported price premiums.
- Pacific Cod (2006), four products: 3–5 percent price premium, found new markets in the EU, several products under development.
- New Zealand Hoki (2001), 51 products: Has been very successful in finding new markets in the EU and United States market place, increased demand and reported price premium.
- North Sea Herring (2006), two products: Strong demand for MSC herring from German and Dutch retailers and processors, products under development, good for the reputation of PFA fishery.

Source: MSC, personal communication.

In sum, the actual impact of the MSC certification and Friend of the Sea schemes on promoting sustainable exploitation is not clear, at least for the moment as the MSC targets its efforts on fisheries most likely to be certified, so as to build up sales volumes of certified products. This being said, as the MSC scheme expands to encompass less straightforward fisheries, there are likely to be increasing opportunities for influencing management practices. For instance, when a small lobster fishery on the northeast coast of England recently failed an MSC assessment, the preconditions for eventual certification have formed the basis for the development of a fisheries management plan that specifically addresses the weaknesses exposed.

The MSC has also investigated the wider environmental gains resulting from the MSC assessment process (Agnew *et al.* 2006). Of the ten fisheries examined, 89 gains and eight no gains were identified. Most of the positive gains were institutional in nature, with research also receiving a significant improvement. In addition, a number of operational gains, e.g. real improvements in controlling the impact of fisheries on the environment, were particularly supported by quantitative evidence. Most of the positive gains were in

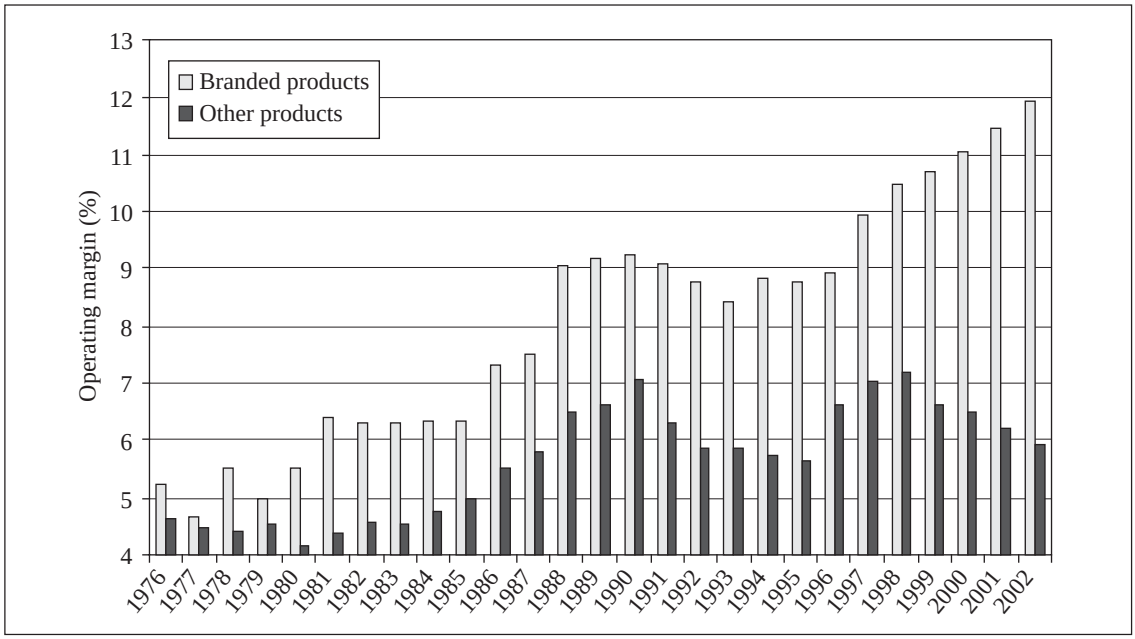
Principle 2.[14] As might be suspected, most of the environmental gains were linked to conditions attached to certificates. There is some evidence, although not described in detail in the fishery results, of environmental gains occurring in other unrelated fisheries as a result of certification of a specific fishery in that region. And there appears to be evidence that research and action in one certified fishery can have far reaching effects on both uncertified and certified fisheries on the other side of the world.

So what about expected price increases from environmental certification? As discussed in Section 4.1, empirical evidence of price premiums reflecting consumer demand is hard to find. This in turn suggests that the presence of environmentally certified products may be being driven by supermarkets more than by genuine consumer demand itself. Given the importance to retailers of large volumes of supplies to build consumer awareness, coupled with the need to ensure long-term sustainability of sources of product, it can also be expected that demand from retailers for environmentally certified products may be especially strong for high volume species, providing both opportunities and limitations for certification depending on the scale of the fishery.

Branding

With respect to branding schemes in general, evidence suggests that branding does indeed allow for market segmentation and different price levels/premiums. This assertion is supported by the fact that for some food products, production of identical products may take place in the same factory but be packaged differently and sold at different prices. In addition, Figure 7 shows the impact of selling branded products on operating margins.

Figure 7: Operating margin of food companies in the UK



Source: Investec Henderson Crosthwaite (in Tveteras *et al.* 2006).

[14] The MSC's Principles and Criteria for Sustainable Fishing (known as the MSC standard) are based upon three fundamental elements that contribute to sustainable fisheries: maintaining healthy target fish populations (Principle 1); understanding and maintaining the integrity of marine ecosystems (Principle 2); and implementing effective fisheries management systems (Principle 3).

However, a note of caution is that large retailers are certainly concerned about a plethora of logos/brands confusing the consumer. It is likely that for either a company or a country brand/logo to be supported in a developed country supermarket, the retailer would have to be assured of significant volumes of products so as to generate the "share of mind" referred to earlier in this publication. This in turn implies that the potential for sales of regionally or nationally branded products from Asia and the Pacific into EU markets may be limited, especially where further processing and packaging takes place in Europe.[15] As already noted, many retailers in the EU choose to use their own private labels/branding, rather than those of producers.

4.3 Demand by, and benefits for, producers

Environmental Certification

For producers, a wide range of potential benefits are fueling demand as suggested in Table 1. These include:

- Reputation and/or risk management.
- Response to customer/market concerns and expectations.
- Transition towards sustainable production.
- Product differentiation in competitive global markets.
- Improved traceability and marginalization of IUU products.
- Third party confirmation of good management.
- Identification of environmental issues, allowing management to effectively target resources (in addition to seeking funding to do this).

However, demand is most strongly linked to two main factors — market access and price premiums. Other factors are certainly important (as indicated below in the example of political motivations in South Africa), but the literature suggests that price increases and market access are the dominant drivers.

As noted by Roheim and Sutinen (2006) the "issue of market access issue is an important one for fisheries. If fisheries industries fear that without sustainable fishing practices they will be unable to sell their products to firms such as Frosta, Unilever, Sainsbury's, Whole Foods and Wal-Mart, then that presents a very real market reward for sustainable fishing, with or without a premium for sustainably harvested products. Wal-Mart's decision will force its supply fisheries to seek certification and will push many fisheries towards more sustainable practices, in order to remain suppliers to this retail giant".

Friend of the Sea claim[16] to have evidence of (1) unapproved fisheries/suppliers being dropped by the retail chains they work with (e.g. Moroccan octopus, Bangladesh shrimp, Spanish sardines) and (2) certified products being preferred when compared with uncertified ones. Discussion with the Norwegian Seafood Export Council (personal communication, 2007) confirmed that MSC certification of the Norwegian saithe fishery was primarily motivated by a concern about market access following certification of the Alaskan pollock fishery. And in South Africa, MSC certification of the hake fishery was also strongly motivated by a desire to ensure continued preferred supplier status following certification of the New Zealand hoki fishery which is also MSC certified. But other motivations, as Ponte notes (Ponte 2006), included expectations about higher prices and political support in a continuing debate between the relative sustainability of trawled and longline-caught hake.

[15] An occurrence made more common than it might otherwise be due to higher tariffs on many processed products than the tariffs on unprocessed product forms.

[16] Personal communication, 2007. Paolo Bray, Director, Friend of the Sea.

In the Pacific, there is increasing attention on the various tuna fisheries in both the northern and southern hemispheres, as a number of key stocks are in a more favourable condition compared to the Atlantic and Indian oceans. In the Pacific (North and South), a troll/jig and pole & line fishery for albacore tuna is currently undergoing MSC full assessment and there has been interest in looking at some of the tropical and temperate tuna stocks in the Western Pacific. Some of the interest has been driven by retailer demand from the EU and United States but it is also the case that producing nations are exploring the market opportunities.

Expected price benefits are also a strong factor in producer demand for engaging with both certification and branding schemes. However, disentangling price rises and their determinants make empirical proof of causation very difficult. As a recent UNEP report (2003) notes in its summary, "The research undertaken for this report has made it clear that there is not enough concrete evidence to determine what the effects of ecolabels are on the environment, trade flows or market access for particular products". Nevertheless, Box 5 does suggest some benefits to producers of the MSC certification scheme, in terms of both price premiums and other benefits.

However, Ponte (2006) argues that the prices paid to exporters in South Africa for MSC-certified fish have not changed as a result of certification. As the UNEP report makes clear through references to several studies in non-fisheries products, even if there are price and profit premiums, issues of transparency mean that principal gains to the retail sector in developed country markets from higher end prices are typically considerably greater than the gains experienced by producers. Unilever for example will not commit to pay a price premium, but it will give preference to suppliers of MSC-certified fish products.[17]

Furthermore, there is uncertainty over whether any initial price premiums will be maintained for MSC certified products, as more and more products become certified. Evidence from the organic banana sector and also for dolphin-safe tuna suggests this may not be so. Although the price of conventional bananas fluctuated by roughly 30 percent between 1997 and 2003 and remained roughly the same in real prices, during this period the price of organic bananas dropped by 73 percent. This price drop was due to the increase in supply outstripping increases in demand. A price premium is still paid for organic bananas, but it appears to be decreasing over time as the scarcity of organic bananas decreases (UNEP 2003). Benefits of fisheries certification may follow the same pattern, and if they do, it is therefore more likely in the long run that benefits will be derived from continued market access rather than from significant price premiums.

Social certification

With respect to social certification, as indicated earlier, there is virtually no involvement of fisheries with social certification/schemes. The one exception is the (small) Fair-Fish initiative. This initiative claims the following benefits to producers:

- Prices are fixed together with the fisherfolk, and are at least 10 percent above the price offered by local fish merchants, combined with the guarantee that Fair-Fish will buy the quantity ordered if fish conform with label prescriptions.
- A fair trade premium (an additional 10 percent of the fisherfolk price) given to local communities to help them create alternative incomes outside the fishery.
- Life-jackets for fisherfolk involved, as well as health insurance for them and their families.
- Exclusion of child labour in the fishery and control of school attendance of the children of involved fisherfolk.

[17] Personal communication, Lutz Asbeck, Managing Director, Frozen Fish International, and leader of Unilever's Fish Sustainability Initiative (FSI) Team as quoted by UNEP.

- Assistance in defining sustainable fishery criteria.
- Empowerment by training fisherfolk and women fish merchants to cope with the demands of food safety, hygiene and traceability and by integrating them in the decision-making of the local Fair-Fish licensee.

Branding

Producer demand for branding is based on expected price benefits, potentially in both national and export markets. When products are sold through retailers, consumer price increases from branding may be more likely to be passed on to producers; supermarket buyers have less market power to put pressure on the price development of branded products because they need a fairly constant product mix and are wary of changing between branded products for fear of confusing consumers. The increasing economic influence of large retailers over time has placed intense downward pressures on prices and the ability of producers to retain margins and profitability rests increasingly on consumer loyalty. Food/fish manufacturers in many sectors have therefore been forced to devote increased resources to the task of developing and protecting brands.

Few, if any, quantitative studies appear to be available in the seafood sector quantifying the benefits of seafood branding to producers. However, the Pointe de Bretagne scheme claims to have resulted in significant price benefits and some anecdotal evidence in Japan also suggests the potential benefits of branding to both traders and producers (Box 6). The same result may also occur as a result of simple labeling, either as a specific branding exercise, or through legislation. In Australia for example, retailers have been required to place country-of-origin labels on products and this has resulted in a marked drop in demand for imported products (generally from Asian developing countries for products such as shrimp and catfish) and this has increased the demand and price for local fish.[18]

Box 6: Anecdotal evidence of the benefits/importance of the source of fish products

In a conversation about fish marketing with the head of a seafood trading company, it was reported that the quality of Chinese eel was the same as Japanese eel because Japanese producers had gone to Japan and set up the industry using the same production methods to target the Japanese market. But "made-in-Japan" eel resulted in higher prices than the product "made-in-China".

To counteract this, traders would sometimes associate Chinese products with the specific part of China where production took place, e.g. eel grown in a famous tea-producing region (Fujian) was labeled as being from that region rather than from China as a whole, in the expectation of some benefit of association with the good tea reputation.

While "made-in-Japan" usually results in higher prices in Japan for fish, this is not always the case. It is reported that "the reason Norwegian salmon gained massive market share from domestic salmon in Japan was a marketing campaign by Norwegian salmon producers selling in Japan using images of clear snowy blue-sky landscapes with healthy Nordic people slinging salmon over their shoulders to create the image that the salmon's heartland was Scandinavia and that Norwegian salmon was the best".

Source: Personal communication, Kate Barclay, University of Technology Sydney, Australia.

In support of the anecdotal evidence in Box 6, Tveteras *et al.* (2006) presented an economic model to assess the impacts of a generic advertising campaign for Norwegian salmon. They concluded that "The NSEC generic advertising program had a positive and profitable effect on the global demand for fresh Norwegian salmon. The returns to the salmon industry substantially outweigh the costs of the program. We also find a positive spill-over effect on demand for UK salmon."

[18] MSC, personal communication, 2007.

Outside of the fisheries sector, Tveteras *et al.* (2006) also presented an excellent summary of a wide range of studies covering differing products that have been completed on commodity promotion campaigns, which while not specifically branding initiatives, have involved advertising in an attempt to increase sales. They concluded that "the large number of studies… on different commodities, destined both for the domestic market and for export markets, clearly indicate that investments in commodity promotion programs lead to higher sales. Only a few studies find that promotion has no or negative effect on sales. The average benefit-cost ratios (ABCRs), which measure the return on the total promotion expenditures, are overwhelmingly positive. Most ABCR estimates are in single digits but well over 1." But importantly they also note that "Unfortunately, it is harder to measure the effect of promotion programs on producer profits."

5. COSTS

Analysing, or generalizing about the potential costs of different forms of certification and branding, is extremely difficult because of:

- The different scale and complexity of fisheries and companies involved in certification.
- The private nature of previous certification and branding processes, and the corresponding and associated lack of documentation on costs.
- The differing levels of effort and resources that can be deployed when initiating and implementing a branding exercise.

Certification

With regard to the MSC certification process, fishery and chain-of-custody assessment and certification costs are paid directly to the independent third party certification body. The main elements of the assessment and certification process that carry a cost can be divided into five main components:

1. pre-assessment;
2. the fishery assessment;
3. re-assessment;
4. chain-of-custody assessment; and
5. logo license fees (not paid to the certification body).

The cost of pre-assessment, fishery assessment and periodic re-assessment depend on the size and complexity of the fishery and are typically paid for by the producers (although fisheries are largely assisted by other funding sources including NGOs, charitable funds, governments and retailers). MSC costs range from a few thousand dollars to US$20 000 for a pre-assessment (which determines the fishery unit for certification, the scope of the full assessment and likely issues that will need to be covered by both technical investigation and stakeholder assessment, and any gaps in management that may need improvement before gaining certification is likely) and US$10 000 to US$500 000 for full assessment, depending on the complexity and size of the fishery. Once a fishery is certified, it is required to undergo an annual audit to ensure that the fishery is operating within the parameters identified by the original assessment and that any conditions of certification have been met. The annual surveillance cost is usually low, unless there are significant issues that need investigation. After five years the fishery must undergo complete re-assessment, although re-certification costs will be lower than before, especially if stock impacts, bycatch and other environmental issues as well as management monitoring have been rectified as a result of the original certification (Peacey 2000).

Chain-of-custody assessments are commissioned and paid for by the companies that want to use the MSC logo. This also varies depending on the size and complexity of the supply chain. Companies wanting to

use the MSC logo must enter into an agreement with MSC International, the trading arm of MSC. The fee for on-product use of the logo has been set at 0.1 percent of product value with a minimum fee of US$500, and is set to increase to 0.5 percent from 1 April 2008. The fee for off-product use of the logo is set at a level required to cover the administrative costs of the license system.

The Friend of the Sea initiative profiled in Section 3.1 charges a yearly fee of just € 1 000 per approved product to cover audit costs (once every three years), logo licensing and promotion of products during Friend of the Sea events. This fee is expected to rise to € 1 500 to 2 000 in 2008. As noted the sustainability of this scheme is not known given the low charges involved.

In Section 3.1 presented a number of non-certification initiatives run and paid for by those establishing them. Appendix E profiles some of the many supermarket schemes, and a number of consumer guides. Producers in the Asia–Pacific region could pay to engage with those running such schemes, to lobby them about fisheries which they feel are sustainably managed. The costs of doing so could be minimal in terms of publication materials and perhaps some travel budgets to visit those implementing the schemes, but the potential impacts in terms of ensuring the benefits of market access (perhaps the main benefit of more costly certification schemes) could be significant. Some other Australian fisheries for example have convinced European retailers that their products are sustainable because they have a permit to operate and that the issuing of a permit is in accordance with a law that requires sustainability.[19] However, the limitations of this approach would be that:

- Fishing industries often claim/feel that their fisheries are sustainable when they are not.
- Certification and labeling could be badly undermined by self-claims and potentially misleading information to the public.
- It would not enhance fisheries management and sustainability.

In addition, one should also consider any costs involved with making the management improvements necessary for fisheries to successfully pass through the certification process, or for supermarket fish buyers and publishers of consumer guides to be convinced that fishing practices are sustainable. These could be considerable, depending on the management improvements required, and might for example include: increases in budgets for monitoring, control and surveillance; resources for improved stock assessment work; or decommissioning schemes.

With respect to the costs involved with the Statistical Certification system for exporting tuna to ICCAT countries, they are borne by the customer, although clearly governments in the producing country have to pay for the statistical/data collection actually required. For the United States' safeguards on shrimp fishing not being damaging to turtles, costs could relate to both those borne by governments in establishment of processes/procedures, and those borne by the catching sector in terms of new gear costs, as well as potentially reduced catch levels. ISO 14001 costs will obviously vary greatly depending on the size of the company involved, but could involve certification costs themselves as well as any costs required to comply with certification conditions and requirements. It has not been possible to access examples of specific costs for ICCAT and ISO 14001 certification as part of this study.

Of course, there may well be a strong relationship between costs, and benefits. Relatively expensive schemes such as the MSC may provide for greater benefits (in terms of both market access and resulting environmental improvements) than cheaper schemes such as the Friend of the Sea Scheme, because of greater levels of proof and up-to-date information required for certification, thereby increasing the value of the logo to retailers and consumers, and ultimately the benefits to producers. This is why the assessment of benefits alongside those of the costs, as discussed in Section 6 is so important. Low cost options for producers may not result in greater *net* benefits.

[19] MSC, personal communication, 2007.

Branding

Branding can be expected to have significant upfront costs, followed by continuing/ongoing costs to re-enforce the brand; *branding requires long-term efforts to be successful*, and can involve huge financial commitments depending on the characteristics of the market into which the product is being sold. Initial and ongoing costs might be expected to include:

- Logo/design costs.
- Marketing promotion (attendance at trade fairs, advertising budgets, etc.).
- New production/factory equipment for boxes and packaging.
- Any costs associated with product improvements necessary to protect the quality of the brand.

The consultants have not been able to identify any detailed studies identifying the costs involved with particular branding exercises. However, it is known that the Norwegian Seafood Export Council (discussed in previous sections) has a 185 million kroner (US$32 million) budget for 2006, with monies spent on market research; domestic and export marketing promotion; market information; market access issues; and provision of information to the public about seafood in Norway. The council is active in supporting market research and promotional activities in around 25 countries.

6. ASSESSING THE NET BENEFITS OF CERTIFICATION AND BRANDING

6.1 Introduction and some issues of methodology

How then should producers and governments in the Asia–Pacific region assess the relative merits of different certification and branding schemes? The previous sections have discussed the actual and hypothetical *benefits* and *costs* of different options that are available. It is important to note that in much of the literature there is often a failure to assess the benefits (in terms of both the market access/price benefits *and* the wider long-term benefits, e.g. sustainability) *and* the costs in an assessment of resulting changes to *net value-added/profit*. This section therefore describes how cost–benefit analysis can be used as a practical tool in the Asia–Pacific region to inform decision-making.

Cost–benefit analysis can be used to make rational economic decisions about the feasibility of investing in a particular scheme or initiative. It can also help to prioritize between different investment options. A key aspect of such analysis is that it considers not just the benefits (i.e. the common focus on potential *price* premiums), but also the wider benefits and the costs. This allows for an assessment of *value-added or profit* premiums.

A second key factor is that cost–benefit analysis compares the costs and benefits over a *time-period*. This is important because it means that decisions can be made based on the long-term stream of net benefits. As we saw from the example of organic bananas, long-term assessment of feasibility may be very different to a short-term assessment, if initial price premiums are not maintained.

6.2 Some issues of methodology

Before explaining how the steps in a cost–benefit analysis could be used in the Asia–Pacific region, the reader may find some brief methodological discussion to be of some benefit. A number of key points in conducting cost–benefit analyses are:

- The basis for assessing changes in benefits resulting from an investment is changes to value-added. This is the profit and labour earnings generated from the catching, processing or marketing activity. It should be assessed based on costs and earnings studies that examine

revenues, fixed and operational costs, share earnings schemes (in the case of the catching sector) and profits.

- Before commencing any cost–benefit analysis it is important to decide on the project area and scope of stakeholders involved. For example, with respect to a branding exercise, a cost–benefit analysis may be undertaken solely from the perspective of marketing/export companies. For an environmental certification scheme, analysis may just consider the producers who are paying for certification. Or it could also assess changes to value-added throughout the supply chain.

- Cost–benefit analysis requires an appreciation of the "time-value of money" i.e. the fact that an amount of money now is worth more than the same amount in later years, and the use of a discount rate.[20] In all societies, greater value is placed on investment and consumption now compared with that in the future. This is because resources available today can be invested to produce goods and services which will be available in the future. So if the same resources were made available two years later, the economy would have lost the benefit of two years of investment which would have been realized. Cost–benefit analysis therefore examines the Net Present Values (NPVs) of an investment by using a discount rate and comparing a series of future payments (negative values) and income (positive values). Analysis also typically includes assessment of an Internal Rate of Return (IRR). The IRR is the interest rate received for an investment consisting of payments (negative values) and income (positive values). Because of the use of a discount rate in the estimation of the NPV, the IRR and NPV are closely related — the rate of return estimated by the IRR is the interest rate corresponding to a zero NPV.

- It is of course important to remember that it is not always possible to quantify all costs and benefits. Cost–benefit analysis therefore typically also includes some supporting descriptive text outlining qualitative costs and benefits, which may include issues relating to social or socio-economic issues. However, standard investment appraisal methodology is not to consider any employment-related benefits which may result from the investment. This is because if the investment was not supported, it is assumed that the money would be available for use in other ways with equivalent consequences on employment.

- Because cost–benefit analysis has to make many assumptions about expected costs and benefits, it is also usual to include a sensitivity analysis. This analysis can be used to make changes in key variables so as to view the resulting impacts on NPVs and IRRs. Analysis typically provides information about which variables are most important (and which should therefore be particularly scrutinized for their validity). It also allows for various scenarios to be presented, e.g. a worst case scenario, a best case scenario.

- Due to the requirement to quantify benefits on the basis of information that is in some cases incomplete or only partially justified, it is useful to take the approach of defining the extent and scale of the expected benefits *prior to any calculation* of the NPVs. This ensures that analysis does not seek to justify the investment by scaling benefits accordingly, but rather, remains objective in the estimation of benefits resulting from the proposed investment.

6.3 Steps in cost–benefit analysis

Key steps in a cost–benefit analysis typically include the following:

- Explaining the strategic context and describing the objectives.
- Considering the options.

[20] Typically similar to the prevailing interest rates in a country.

- Assessment of costs and benefits.
- Numerical modeling and analysis of the results obtained for each option with summary tables and matrices to facilitate comparison.
- Discussion of the risks/assumptions and completion of a sensitivity analysis.
- Conclusion and identification of a preferred option.

Step 1: Explaining the strategic context and describing the objectives

The first step in a cost–benefit appraisal should be to explain the strategic context using a review of existing marketing and management arrangements and problems that could potentially be addressed through a certification or branding exercise. For example, such a review could include discussion of fisheries management problems that could be solved through engaging with an environmental certification process, a description of increasing requirements by supermarkets in a particular export market for fish to be sourced from sustainable supplies that are threatening market access and/or the successful use of branding by a competitor product which has resulted in reduced market share.

These problems should then be turned around into the specified objectives of engaging with a certification or branding scheme. These objectives should be as "SMART" as possible (Specific, Measurable, Agreed, Realistic and Time-dependent).

Step 2: Considering the options

In considering the options, a review should be completed of all the different schemes presented in Section 3 of this paper and any others that may not have been picked up during the research completed in preparing this paper. An assessment should be made of which scheme, or schemes, is most suitable in addressing the key problems and specified objectives.

In addition, the analysis should always consider a "do nothing option", which can be assumed to be no investment. The do nothing option is important as a base case against which the incremental differences of other options can be compared. As noted in the methodological discussion above, later steps in the analysis compare differences in value-added that can be expected when comparing different options against the do nothing option.

Options may also involve the different combinations of phasing investment/expenditure.

Step 3: Assessment of costs and benefits

In considering the costs of different schemes, estimations should be made of upfront and ongoing costs that can be expected over the time period of analysis. Some potential costs are discussed in Section 5. All costs should be separately itemized by year for subsequent use in the analysis.

Potential benefits are discussed in Section 4. They should be assessed in terms of the impacts of any price changes, market access, improved quality, etc. on changes to value-added. Attempts should be made to value benefits wherever possible, and benefits should be shown separately with an explanation of how the figures have been derived.

Discussion should also be presented on any non-quantifiable benefits; these can be very important in the final decision-making process, especially when the results of a cost–benefit analysis suggest that investment is only marginal in terms of net benefits.

Step 4: Numerical modeling and analysis of the results obtained for each option with summary tables and matrices to facilitate comparison

The appraisal should then compare the costs and benefits which can be valued in a discounted cash flow to calculate an NPV and a benefit: cost ratio for different options, using a discount rate as agreed (to reflect the "time value" of money). Two hypothetical examples are presented below. Stated costs and benefits are *in no way intended to reflect the actual costs that may be required, or the benefits generated*, and are purely intended to provide an example of the workings of a cost–benefit analysis.

Table 2: Hypothetical cost–benefit analysis of environmental certification

Discounted cash flow analysis — environmental certification

Year	0	1	2	3	4	5
Costs						
Pre-assessment costs	10 000					
Assessment costs		25 000				
Annual audit			5 000	5 000	5 000	5 000
Monitoring, control & surveillance (MCS) assets	50 000					
MCS running costs		10 000	10 000	10 000	10 000	10 000
Total costs	**60 000**	**35 000**	**15 000**	**15 000**	**15 000**	**15 000**
Benefits						
Price premium		10 000	5 000	0	0	0
Maintenance of market share		35 000	26 250	19 688	14 766	11 074
Increases in long-term catch rates		15 000	12 500	10 000	7 500	5 000
Total Benefits	**0**	**60 000**	**43 750**	**29 688**	**22 266**	**16 074**
Net Benefits	**-60 000**	**25 000**	**28 750**	**14 688**	**7 266**	**1 074**
NPV	**8 062**					
IRR	**1 286%**					
NPV of costs	142 053					
NPV of benefits	150 115					
B:C ratio	**1.06**					

Notes:

- The hypothetical analysis includes costs and benefits to both the catching and processing sectors.
- Benefits of maintained market share are the value-added for both catching and processing that would have been lost over time if certification had not taken place, and the product had to be sold into alternative markets with lower prices. i.e. the do nothing option.
- Price premiums are assumed to erode in year three, and represent the value-added changes resulting from premiums in years 1 and 2.
- Chain-of-custody and logo licensing costs are assumed to be paid for by organizations in destination markets.
- Costs for MCS equipment and running costs are those costs necessary for the fishery to comply with, and maintain, certification standards.
- Improved management is assumed to result in increased stock status, higher catches and therefore additional value-added through the supply chain from increases in long-term catch rates.
- A 6 percent interest rate is assumed.

Table 3: Hypothetical cost–benefit analysis of branding

Discounted cash flow analysis — branding

Year	0	1	2	3	4	5
Costs						
Logo and graphic design	5 000					
New packaging/processing equipment	25 000					
Changes to annual packaging costs		2 500	2 500	2 500	2 500	2 500
Attendance at trade fairs		5 000	5 000	5 000	5 000	5 000
Other marketing and PR initiatives		10 000	10 000	10 000	10 000	10 000
Total costs	**30 000**	**17 500**	**17 500**	**17 500**	**17 500**	**17 500**
Benefits						
Price premium		15 000	15 000	15 000	15 000	15 000
Increased market share		10 000	10 000	10 000	10 000	10 000
Total benefits	**0**	**25 000**	**25 000**	**25 000**	**25 000**	**25 000**
Net benefits	**-30 000**	**7 500**	**7 500**	**7 500**	**7 500**	**7 500**
NPV	**1 593**					
IRR	**7.93%**					
NPV of costs	103 716					
NPV of benefits	105 309					
B:C ratio	**1.02**					

Notes:

- Costs and benefits relate only to processing/marketing sectors.
- Marketing and public relations initiatives might include brochures, advertising, visits to clients, etc.
- Price premiums reflect increased value-added in the processing and marketing sector from both a) improved quality of products brought about by the branding exercise and greater attention to quality; and b) higher prices paid by consumers due to more attractive packaging and the aspirational qualities of a branded product.
- Increased market share reflects increased value-added from greater sales volumes/values.
- A 6 percent interest rate is assumed.

Step 5: Discussion of the risks/assumptions and completion of a sensitivity analysis

It is important in this step to consider and describe in detail the assumptions and risks to the project's costs and benefits. These risks may include factors such as:

- Higher than expected, or unforeseen costs.
- Lower than expected benefits.
- Externalities which might impact on either costs or benefits. For example, other producers may engage in branding exercises targeted at the same market, thereby minimizing the positive effect of the branding exercise being assessed for viability. Buyers may change purchasing decisions, and consumer demand may alter through factors that are completely outside the control of those considering engaging in certification or branding schemes.

A sensitivity analysis should also be conducted to quantify the importance of different costs and benefits assumed in the analysis. It is typically presented in numeric and graphic form showing the impact on NPVs of changes in costs and benefits. As a result, assumptions which appear to be prone to risk or uncertainty, and their potential implications, can be highlighted in the analysis, and double-checked for their validity.

Step 6: Conclusion and identification of a preferred option

Finally, based on all the proceeding analysis, in Step 6 rational decisions can be made using NPVs, IRRs, benefit: cost ratios and non-quantifiable benefits about whether a particular scheme should be taken fo*-rward, or if multiple schemes are being considered, and which one demonstrates the best performance.

7. POTENTIAL PROBLEMS FOR ASIA–PACIFIC PRODUCERS IN RELATION TO CERTIFICATION AND BRANDING

7.1 Potential problems with environmental certification

Concerns in the literature about environmental certification are based around a number of issues, as highlighted in many studies, and grouped in a recent study by Gardiner and Viswanathan (2004) into a classification of concerns that is considered useful, and therefore also used in this paper. These concerns, and some comment on them, are discussed below.

Legitimacy and credibility

Many schemes have largely been driven by retailers in developed country markets, with a lack of real participation by small-scale and poor producers in developing countries. This lack of involvement is claimed to have potentially negative impacts on developing country and small-scale producers. To a certain extent such claims may be true in terms of a lack of stakeholder consultation. While more could probably have been done by these developing schemes, access to all relevant stakeholders is both costly and time consuming.

A mismatch between certification requirements and the reality of tropical small-scale fisheries

The process of certification is claimed by many to be more relevant to developed northern countries, often with single species fisheries, than to tropical developing countries, many of which have mixed-species fisheries. Concerns stated often relate to both the limited data available in many developing country contexts necessary for certification and the fact that management issues are often more complex in developing country contexts from a biological point of view, although not necessarily more complex politically if one considers fisheries management in the EU. However, as noted earlier, the impression of greater suitability of developed country fisheries may in part be due to the fact that there has been greater targeted effort by schemes such as the MSC in such areas, mixed species fisheries have been certified and the ongoing work by the MSC to develop specific guidelines for certification in data-poor and small-scale fisheries (Guidance in Assessing Small Scale, Data Deficient Fisheries [GASS/DD] project). This work has not to date included any Asian countries, but could do so.

Potential distortions to existing practices and livelihoods

Domestic markets in developing countries tend to be more sensitive to prices than export markets, due to lower incomes of local populations and *if* ecolabeling results in, or requires price increases to make it justifiable to producers, increased sales to exports markets may reduce availability of fish for local consumption. Of course, whether this is really relevant to the food security of the poor in developing countries depends on the primary species being consumed in developing countries by the food insecure and the species considered for certification and whom it is being consumed by (i.e. the poor or the urban middle class). It should also be noted that the Asian middle class is already huge and still growing. Some estimates suggest that the middle class in India can be counted at around 250 million i.e. close to the population of Europe. It is also claimed that a shift in emphasis towards export markets could also potentially have significant impacts on who benefits from trade (Kurien 2000). Generally women comprise a significant proportion of postharvest employment in the fisheries sector, especially where

processing and marketing is small-scale and local in nature. Increased sales to export markets would be likely to have significant gender impacts, with larger-scale buyers (probably men) being able to outcompete small-scale female buyers at landing sites, due the higher prices being paid for certified products. And if certification did have the predicted price effects in developed country markets it would be likely to reward intermediaries and the postharvest chain-of-custody, but not necessarily the fisher (Kurien 2000; SEAFDEC 2001). This may happen, but if the market is competitive enough and the demand for certificated prices is high, market chains should/could also work more effectively in breaking down barriers for the poor, especially women who are often more able and suited than men to adapting to newer processes. In addition, it should be recognized that other factors, e.g. urbanization, macroeconomic conditions, etc. are probably far more important than the impacts of any ecolabeling on the distributional benefits of trade.

It is also claimed in some literature that price differentials for certified products may actually increase pressure on particular stocks and diminish sustainability. For non-MSC schemes this may be true. However, the MSC requires evidence that the management scheme can handle increased demand. A fishery's management must demonstrate a robust adaptive strategy that ensures that changes in the external environment do not impact on the long-term sustainability of the stock. If management were to fail and harvest levels became unsustainable, a fishery would lose its certificate.

Equity and feasibility

It is often argued that it may be harder for smaller enterprises in developing countries, exploiting lower value fisheries, to participate in certification, especially given the relatively high costs. This problem has two components.

First, smaller-scale fisheries are less likely to find that any benefits from certification outweigh the costs. But second, and in addition, certification costs must be paid in advance, while benefits will not accrue until after the product is caught and marketed. Small-scale producers in developing countries are less likely to be able to "front-up" the money required for certification due to difficulties in accessing credit and lower overall earnings/profits. Raising funds from the government and from stakeholders in developing countries, is likely therefore to be harder than in developed countries.

Secondly, the potential for certification may not be equitable or feasible if local fisheries administrations lack the capacity to effect management improvements and comply with certification requirements. Developing country managers are less likely to clear the main hurdles of certification than their counterparts in developed countries. Such concerns appear to be justified based on the experience of the Forestry Stewardship Council.[21] However while practical considerations in terms of limited budgets/ finance for improved management in developing countries should not be discounted, this in itself does not support an argument that fisheries in developing countries should not be better managed.

Perceived barriers to trade

It is claimed by some that ecolabeling can or will be used as a deliberate barrier to trade. It seems most unlikely that developed countries will, or indeed would be able under WTO rules, to ban any imports of a product unless it was certified under a particular scheme. Barriers to trade are therefore more likely to be presented when individual processors/retailers in developed country markets specify that they will only buy certified products within a certain period. However, one cannot argue against the choice of a buyer to purchase from wherever he/she chooses, in order to comply with any purchasing policy and to meet consumer demands, and producers have the freedom to comply with buyer requirements should they wish to do so, subject to the costs associated with required management changes. In addition, it is important to consider market segmentation in developed countries and who is supplying products into different

[21] FSC, the timber equivalent to the MSC.

markets, and from where. An MRAG/IIED (2000) study for example considers that given that the main exports from developing countries are tuna and shrimp, the impacts of certification may be minimal, because trade effects will be moderated by the limited degree of substitution towards competing products from certified fisheries in the developed world and because high sea migrations of the most valuable tuna species make them a difficult target for artisanal fisherfolk. Analysis of trade flows for the United States and Europe shows how infrequently imports from developing countries (and particularly low-income developing countries that are in the tropics) have close substitutes from developed countries where certification is perhaps more likely to occur.

The extent to which certification and labeling will, or could, be used to represent a barrier to trade ultimately depends on the demand for certified/branded product in different markets and the extent to which producers comply with buyer requirements. While there seems to be a general consensus that the most promising markets will be those in Northern Europe and North America where consumers are relatively affluent, sensitized to environmental/social issues and used to this form of product differentiation (Deere 1999; MacMullen 1998), there is actually no clear evidence on how big the environmental and social markets are likely to become in these markets, or indeed in other markets.

7.2 Potential problems with branding

High costs and economies of scale

Costs to develop and promote brands can be huge and a potential problem for individual firms, or even groups of firms acting together because single (or groups of) producer(s) may well not have sufficient capital to invest enough in advertising to have a perceptible effect on the demand for products. Evidence suggests (Tveteras *et al.* 2006) that companies with large resources in product development, market intelligence and distribution, which have long experience from promotion of many products and which are present in the market, have competitive advantages in brand promotion.

Risks and barriers

When a firm invests in promotion of its own branded product, the sales price can only increase if it has a sufficiently differentiated product. Critical questions in assessing the benefits of brand promotion and factors that may prevent benefits from being realized are:

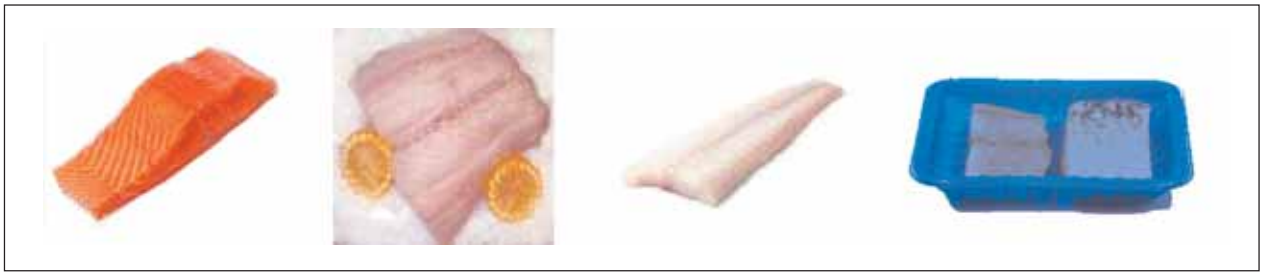
- Is the product *sufficiently differentiated*, in terms of taste, colours, shape, smell, packaging, etc., from other competing products that other firms offer?
- Are there *internal resources*, both human and financial, in the firm to undertake a promotion campaign?
- Does the firm *understand the consumer market for the product*? Does it have the internal capabilities and external partners with sufficient capabilities (e.g. market intelligence company, advertising agency), which can ensure that they obtain sufficient knowledge about markets to design and execute an efficient promotion campaign?
- Do firms have a *distribution system* that ensures that consumers who learn about products will be able to find it in the stores? Can they satisfy increasing demand as a consequence of a promotion campaign with sufficient products of high uniform quality in the stores at any time? The success of branding initiatives may be as much a product of the space given to branded product in stores, as the quality of the product and strength of the brand *per se.*
- Will *distributors cooperate*? Typically producers in Asia and the Pacific will be selling to other companies (processors, distributors, retailers) rather than directly to consumers. This means that they must be sure that the end-sellers are willing to engage with, and promote, products branded by producers. For example, will retailers provide shelf-space and acceptable locations

for the product? How will distributors, for example, retailers, respond to increased demand? Will they price it in a way that benefits producers?

- Do firms have access to *raw materials of uniformly high quality* that are used in the product, so that they can deliver the uniform high product quality that they promise?
- How *volatile are raw material prices* and how *sensitive is the cost of the product* to these prices? Will firms have a sufficiently stable price and price–cost margin?
- How hard is it for other producers to *copy products* if firms are successful with their promotion campaign? Is the product protected through secret production processes, recipes, patents, etc.? From Tveteras *et al.* (2006).

This list of questions makes it clear that there are many *risks* and *barriers* that can prevent the potential benefits, to both producers and suppliers/retailers in Asia and the Pacific, of branding from being realized. And the first question in the list of bullets above may be especially pertinent for producers of seafood; brand promotion is related to products that can be differentiated by consumers, and this may represent a challenge to producers who market fish products with little or no differentiation. Tveteras *et al.* (2006) ask how do you successfully brand products that resemble those in Figure 8 and they suggest that where differentiation is difficult, expense incurred in branding exercises by one producer/firm, may very well end up benefiting others. That is not to say that branding of fish products is not possible and the example of the successful promotion campaign for Norwegian salmon has already been mentioned. But it is important to consider the considerable amounts of investment that go into such branding; investment that may, or may not be available to Asia–Pacific producers/exporters.

Figure 8: Can products such as these be branded?



Source: Tveteras *et al.* (2006).

Distance from the consumer?

One of the risks also suggested above, is that the distributors of a product branded by producers or exporters in Asia and the Pacific may not be willing to cooperate; this is a risk worth exploring in a little more detail because it raises the importance of considering *who* is going to do the branding, and how far down the supply chain they are from consumers. For *retailers* or other businesses in Asia and the Pacific selling directly to consumers, branding exercises may be a very sensible method of trying to add value. But *producers* may face many difficulties in developing a brand and ensuring that they capture any economic benefits, unless they are able to work out branding strategies jointly with others in the supply chain closer to the end consumer. This is because in destination markets in the EU, United States and Japan, retailers selling products from the Asia–Pacific region may choose to use their own branding/logo. Monfort (2006) for example notes how in France many retailers label fresh salmon products with their own labels to designate a wide range of product attributes including quality, environment, traceability, etc. Retailers' use of their own private labels/brands may therefore preclude producers in Asia and the Pacific from marketing initiatives aimed at branding their own products with a logo or packaging specific to the Asia–Pacific country/fishery/product/producer concerned.

Producers may be better served therefore by engaging with the wide range of alternative methods of differentiating themselves from competing suppliers; these methods might include:

- Pricing strategies.
- Volumes and timing (flexibility, reliability, frequency) of deliveries.
- Improving quality aspects of the product.
- Widening product ranges.

7.3 Some solutions

It is now clear that many of the often-perceived problems of certification may be unfounded or exaggerated. However, the costs of both certification and branding schemes are certainly likely to pose problems in many countries in the Asia–Pacific region.

A number of possible solutions can be considered.

- With respect to funding, Asia–Pacific producers could seek non-governmental and governmental assistance in support of certification/branding costs. However, it should be appreciated that in the long term, engagement with certification or branding initiatives must generate net economic (as opposed to financial) benefits.
- Opportunities for joint fisheries certification or joint branding by groups of firms of different fisheries could be investigated, e.g. fisheries targeting a common stock and working under common management systems in the case of certification, or regional/country branding of products.
- Asia–Pacific countries could propose case studies in the region for inclusion in the ongoing analysis/work by MSC on GASS/DD. The MSC has completed the development of a trial methodology and presented it to certifiers at an Accreditation Services International training workshop in June 2007. The MSC plans to have the guidelines road-tested to help evaluate and review them. The outcome of the field trials will be a basis for consideration by the MSC's Technical Advisory Board for approval of the guidelines as part of MSC methodology.
- Governments/producers could continue to work to put in place better fisheries management conditions and strive for improved social conditions, through specification of standards, appropriate research and allocation of sufficient budgets.
- Producers could focus on other ways of improving business performance and demand for their products that have nothing to do with certification or branding, but instead focus on traceability, quality, reliability of supply, etc.

Table 4: Decision-making table for assessing fishery products for certification

Required characteristics	Fishery/ Product 1	Fishery/ Product 2	Fishery/ Product 3
Environmental certification requirements			
Already well-managed, and/or only small changes necessary and/or realistic			
Products sold to markets demonstrating demand for environmental certification (by either buyers or consumers)			
Important in economic or social terms			
Competitor products/fisheries are certified or will be soon			
Branding			
Branding could build on existing qualities of products/species, even if small changes/improvements might be necessary (as long as they are realistic)			
Product being considered for branding could be differentiated from other products			
Important in economic or social terms			
Products sold to markets demonstrating demand for branded products, i.e. by all in the supply chain, and by end consumers			
Competitor products/fisheries are branded or will be soon			
Volumes/values of products are likely to be sufficient to make potential costs viable, depending on the destination market			

8. A DECISION-MAKING TOOL FOR COUNTRIES IN THE ASIA–PACIFIC REGION

Section 3.2 suggests that currently there is perhaps less merit in engaging with social certification due to:

- The lack of established schemes dealing with fish products.
- Lower demand than in developed countries for environmental certification (from both buyers/ retailers and consumers). Note that supermarkets account for a dominant and increasing share of total fish sales in almost all developed country markets.
- A perception that there is also low demand for such certification in developing country markets.

A number of steps are therefore outlined hereunder to assist countries in the Asia–Pacific region to make decisions about whether to engage with environmental certification and/or branding initiatives. This decision-tree is intended for use when *short- to medium-term* net benefits are achievable (of course in the long-term one would wish all fisheries to move towards sustainable exploitation and resulting benefits). An important point to note about the decision-making tree with regard to environmental certification is that the need for better fisheries management in fisheries which are currently overexploited is taken as a given. This paper is attempting to provide a tool for decision-making about the net benefits of *certification*, not of improved management. We would therefore argue that in cases of overexploitation, if improved management would/could take place without certification and there would be no/few market benefits (access or price), then certification should not be considered, but rather improved management put in place without any certification.