Step 1: Consider the reasons for certification or branding

Environmental certification

The individual fishery is already well managed and/or main competitor products are certified; certification would exploit potential benefits (market access/market price, and other benefits such as improved client relationships, niche marketing, and public relations, which themselves could be expected to translate into price or market access benefits). *Go to Step 2*

The individual fishery is not well managed and/or main competitor products are certified, but the fishery is important economically/socially, and embarking on a certification process would help to ensure sustainability and result in potential benefits (bio-economic benefits from more sustainable fishery *that would otherwise not be realized, plus* market access/market price). It is realistic (based on political realities, the extent of overexploitation, the size of the fishery etc.) to expect that the necessary improvements in fisheries management could be achieved *in the short term*, such that certification would then be likely.

If yes, go to Step 2.

If no, stop the process, initiate longer term plans for improvement management and re-evaluate after longer term improvements in management have begun to make meaningful changes.

Branding/quality schemes

Existing awareness of the product/species from the fishery/country by buyers/consumers is already high and quality is perceived to be good. The product/species is important in economic/social terms for job creation and income generation. Potential appears to exist (i.e. the product/species appears to have unique characteristics that could be exploited) to use branding or quality marks to realize potential benefits. *Go to Step 2*

The product/species is important in economic/social terms for job creation and income generation. Potential appears to exist to use branding or quality marks to realize potential benefits, but current aspects potentially associated with the brand, e.g. quality, are poor. It is realistic to expect that improvements could be made in the short term, such that effective branding would be possible, e.g. if the emphasis of the brand is on quality, quality can be improved.

If yes, go to Step 2.

If no, stop the process and re-evaluate after longer term improvements have begun to make meaningful changes.

Step 2: Consider demand/potential for certification/branding in destination markets²²

Environmental certification

Are products from the fishery being sold to countries/markets where there are certified suppliers, or there is likelihood of existing suppliers wanting to engage in chain-of-custody certification? (This may require consultation with suppliers.)

This should include both international, regional and domestic markets.

If yes, go to Step 3.

If no, stop the process and re-evaluate at a later date as supplier response to environmental certification changes over time

Are products being sold into countries/markets that already demonstrate demand through sales of certified products from other fisheries, there is stated demand from supermarkets (see Section 3.1) and/or general consumer concern for environmental issues (see Section 4)? This may require consultation with existing retail/wholesale outlets in destination markets and literature reviews.

If yes, go to Step 3.

If no, stop the process and re-evaluate at a later date as market response to environmental certification changes over time.

Branding/quality marks

Are products from the fishery/country being sold to countries/markets where consumers are generally thought to be responsive to branding/quality, and where there is potential for branding to differentiate products from those of other suppliers/countries? This may require assessments of macroeconomic conditions (e.g. economic cycles/depressions), price elasticities of demand, consultation with retailers and consumer surveys about demand for branding/quality marks, consideration of issues related to economies of scale, etc. Assessment of potential at this stage should carefully include all the potential risk factors and barriers identified in Section 7.2

If yes, go to Step 3.

If no, stop the process and re-evaluate at a later date as market response changes over time.

Steps 1 and 2 could be completed, at least in an initial and participatory way, during the APFIC meeting. The authors of this paper do not presume, based on the small desk-study exercise to complete this paper, to have sufficient information on fisheries/products in the Asia–Pacific region to enable identification of suitable candidates for certification/branding. We therefore suggest Table 4 as a starting point for use in the APFIC meeting. Additional rows could be added to the table as necessary based on the views of participants as to key requirements for either certification or branding. Then once agreed, participants from each country could insert a number of fisheries or products in the columns, tick boxes where these fisheries/products are thought to comply with the required characteristics and then assess whether the fisheries/products appear to be good candidates for certification or branding. As such it would represent the tentative completion of Steps 1 and 2, noting that additional research would be required.

Step 3: Consider the type of certification/branding to be pursued

Environmental certification

Based on the species concerned, production method, views of buyers and a review of certification requirements and likely costs, choose between:

- The MSC
- Friend of the Sea
- Dolphin-free
- MAC

- ISO
- US turtle-free
- Others...
- Simply demonstrating sustainability to supermarkets or consumer guides which have their own internal assessment processes, in an attempt to generate benefits

Branding

Consider whether branding:

- Should be country-, region- or fishery-specific
- Should be based on a product or a species
- Should only emphasize quality, and/or other aspects, e.g. environment, social aspirations, etc.

Step 4: Conduct a cost-benefit analysis (see Section 6)

Environmental certification and branding

- Consider costs
- Consider benefits
- Conduct cost–benefit analysis
- Consider non-quantifiable benefits
- Assess all risks and assumptions through a sensitivity analysis

If the cost-benefit analysis produces favourable results, go to Step 5.

If not, stop the process and re-evaluate later.

Step 5: Initiate the certification or branding process

Environmental certification and branding

This final step represents a crucial stage in successful engagement with certification or branding. Too often in the fisheries sector, policy or management decisions are made, without sufficient attention to the detailed planning required for implementation. Key implementation steps should include:

- Conduct stakeholder analysis, i.e. who should be consulted, what do different groups have to gain/lose from the process, etc.?
- Engage with scheme managers if using a third party scheme.
- Specify details and standards of own scheme/brand.
- Allocate sufficient budgets.
- Plan timelines for all detailed activities envisaged.
- Allocate responsibilities and tasks to individuals or organizations.

The five certification evaluation steps are presented in Figures 9 and 10.

Figure 9: Decision-tree — environmental certification

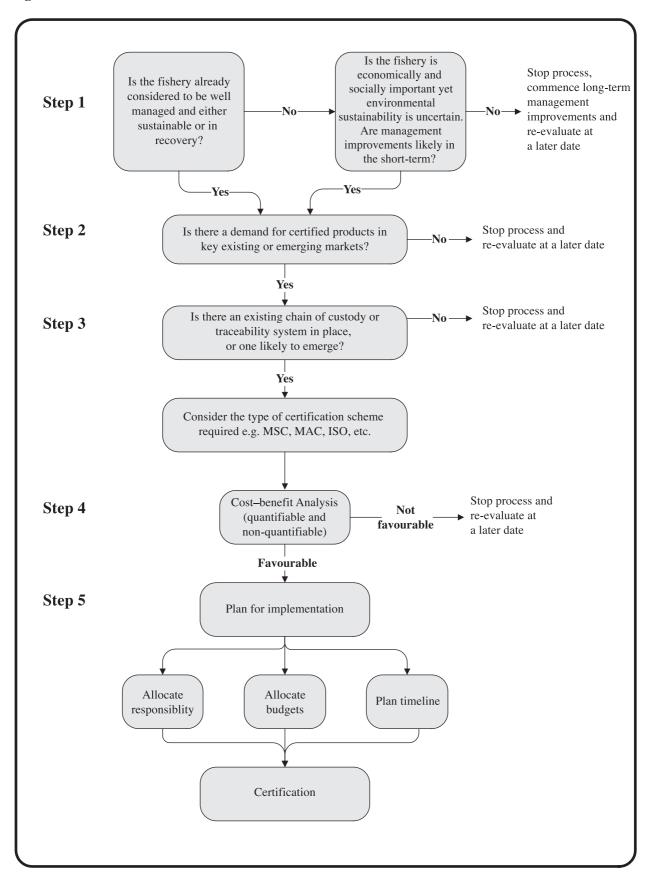
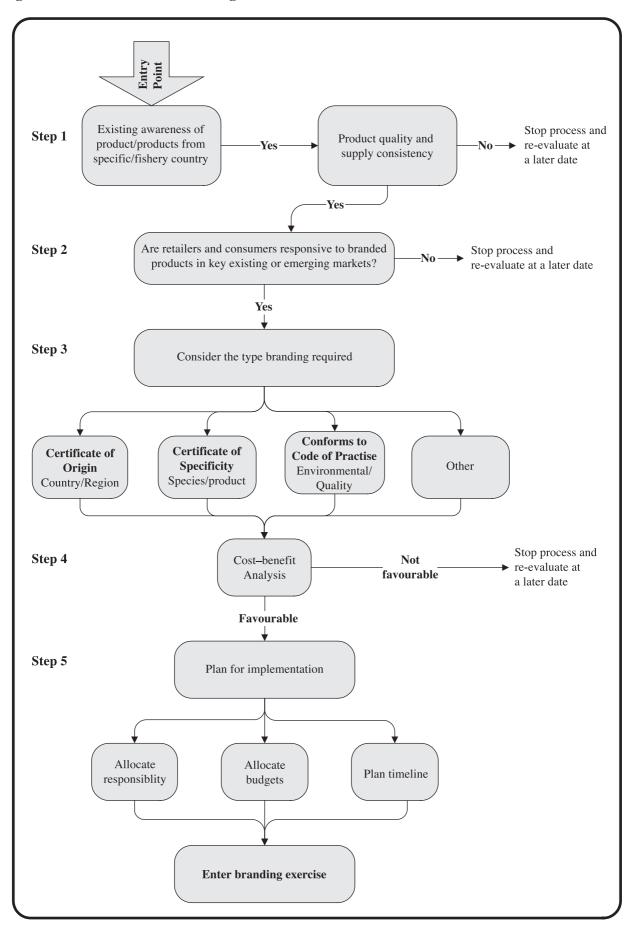


Figure 10: Decision-tree — branding



9. CONCLUSIONS

This study has included a review of environmental certification schemes, social certification schemes and branding initiatives of relevance to marine capture fisheries.

With respect to environmental certification, the review suggests that some are mandatory, some just guidelines/codes of conduct, some assessments made by others, e.g. consumer guides, supermarkets and those that are specific to the Asia–Pacific region are environmental schemes that are strongly focused on manufacturing products without the involvement of fisheries products. There are therefore relatively few third party voluntary environmental certification schemes with which Asia–Pacific producers/exports could choose to engage. Certainly the volume, value and number of products that are MSC-certified are growing rapidly, but the MSC and other schemes such as the Friend of the Sea still represent a small proportion of the total global sales of fish products.

With regard to social certification, there is even less involvement of fisheries with existing social certification schemes, and no global schemes which are specific to fisheries. A number of recent attempts to involve fisheries in social certification have not been successful due to a lack of consumer demand and various logistical problems, perhaps compounded by the fact that attempts at social certification have to date not been supported by sufficient funding levels.

With respect to branding of fisheries products, trends appear to suggest greater levels of branding over time, as producers strive to be competitive in an increasingly competitive business environment, and an environment in which retailers have increasing economic power.

The study has also considered demand by different interest groups for environmental certification, social certification and branding. The demand shown by different interest groups is based on expected or actual benefits that do, or might, result, and are typically related to expectations about: price increases; improved/continued market access; increased market share; better knowledge of the provenance/source of products; public relations and improved client relationships; improved quality; and/or improvements in the characteristics of production (e.g. more sustainable, more socially equitable). A key finding is that generalizing about both the demand for such schemes/initiatives, and the benefits, is problematic. For retailers for example, demand for environmentally certified products differs between retailers in any one country, between retailers in different countries and for different products they purchase and sell, based on both their own demands and the expected demands of their consumers. Demand also differs between retailers and the food service/catering sectors and between/for environmental and social certification. Therefore, to a considerable extent, the potential benefits to any interest group (producer, exporter, retailer, or consumer) will depend on the specific product being sold to a specific market in a specific country. Having said this, the literature review completed for this paper does seem to suggest that:

- There is considerably less demand by retailers/the food service sector and consumers for social certification schemes than for both environmental certification and branding initiatives.
- There is often a significant difference between how consumers say they will behave in their purchase decision-making and how they actually behave. Typically while they say they are prepared to pay more for environmentally and socially labeled products, a willingness to accept price premiums is more generally confined to organically labeled products because of the perceived health benefits to consumers themselves.
- Benefits to producers from environmental certification may well come in the form of continued
 or improved market access rather than increased prices. Given high demand for fish by
 retailers/producers, there is only little evidence to date that not being certified may reduce
 market access, but as some supermarkets increasingly base their purchases on guarantees about
 sustainability, or their own assessments, market access benefits may become increasingly
 important.

- Longer term benefits from sustainable fisheries exploitation are also likely to be very considerable (but could in some cases be achieved without environmental certification).
- Branding can be an effective way to sustain price differentials and market access/share.

In considering the costs of certification or branding, again a key conclusion is that generalizing is difficult. Costs of certification can vary considerably based on the scheme chosen, the complexity and location of the fishery concerned and potentially unknown costs associated with management improvements that might need to be made for the fishery to pass the assessment process (in cases where improvements would otherwise not be made and costs not incurred, i.e. in situations where the certification process itself would act as the reason for improved management). Likewise, the potential costs of branding fishery products will depend on the volumes being sold, the particular characteristics of the destination market and the specific marketing/branding initiatives most appropriate for the destination market. But certainly it appears that costs involved in branding exercises can be very considerable and necessary over a long period of time so as to re-enforce the brand identity.

It should be stressed that this publication does not attempt to "judge" or rank different certification schemes in terms of their impact on environment or on social conditions, or in the case of environmental schemes against compliance with the FAO (or any other) guidelines on ecolabeling. Rather the publication attempts to provide decision-makers with facts, scarce as they are to date, about the evidence for the costs and benefits of different types of certification schemes. While there are questions about the extent to which the MSC and the Friend of the Sea schemes actually result in management improvements as opposed to certifying fisheries in which good management practice is already in place, the objectives of such schemes should of course be commended. And it is taken for granted that improved fisheries management with all the resulting benefits, whether as part of a certification process or not, should be the objective of all producers/governments. However, it is important to remember that improved management and all the resulting long-term bio-economic and social benefits, can be achieved without necessarily needing to embark on a certification processes. If improvements can be made irrespective of certification, then the benefits of certification in such cases are likely to be limited to market issues of improved access and/or price (and other factors such as public relations, client relationships and niche marketing, which would themselves be expected to result in better access/price). Only where these market benefits exceed the costs, should certification then be pursued. However, there may also be cases in which certification itself acts as the stimulus to better management; improved management would otherwise not result. In such cases, the assessment of benefits of certification can/should include the longer-term bio-economic and social benefits, and wider non-quantifiable benefits resulting from sustainable production, as well as any market-related ones.

Given that this study considers branding as well as certification, one could also ask the question whether successful branding initiatives might have the potential to result in unsustainable fishing practices through increased demand. This may also apply to some certification schemes. The Friend of the Sea scheme for example provides no certainty that fishing practices will not become unsustainable as a result of market demand following certification.

What does seem clear is that there is often a failure to consider the benefits and costs together, to estimate the *net* benefits (if any) to profit/value-added. There certainly seem to be very few studies which quantitatively assess the net benefits to the fisheries sector of either certification or branding. This is only partly because of business interests wishing to protect commercially sensitive information. Equally important is a failure by many to consider costs *and* benefits in a quantitative manner (to the extent that is possible and acknowledging the importance of non-quantifiable factors). It is imperative for any government, producer, exporter or retailer in Asia and the Pacific to base decision-making on whether to engage with certification or branding, on a rational assessment of the relative costs and benefits over time. This paper has therefore presented some guidance on how to conduct cost–benefit analysis.

Cost-benefit analysis however only represents one step in a number of steps that must be taken when deciding whether to engage with certification or branding, and then actually doing so. Therefore this paper also presents a decision-making tree to assist those in the Asia–Pacific region with the decision-making process. It is suggested that the APFIC workshop in Viet Nam could undertake an initial assessment of the suitability of individual fisheries/products for different certification or branding initiatives. The paper also stresses that there are practical problems in relation to both certification and branding that could potentially face those in the Asia–Pacific region wishing to engage with such initiatives and that decisions about whether to proceed must include a proper investigation of the risks. The decision-making tree could usefully be tested in selected countries, with appropriate market research and cost–benefit analysis.

In conclusion, it should be noted that certification and branding only represent aspects of a wider range of possible product promotion initiatives as far as Asia–Pacific producers and exporters/marketers are concerned. It is almost certainly more important to comply with the basic mandatory requirements of food safety and hygiene (i.e. in terms of HACCP compliance), and certainly many countries in Asia and the Pacific still have plenty of room for improvement in this regard. But there are also many other ways (e.g. quality improvements, pricing strategies, new product ranges and packaging 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. Improving traceability of fish products is expected to become increasingly important in this regard.

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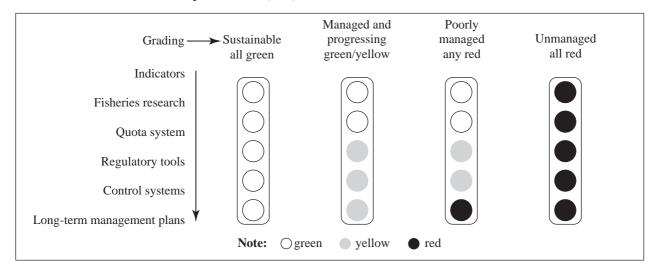
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APPENDIX B: ADDITIONAL INFORMATION ON INITIATIVES

GEN Members

Organization(s)	Program delivered	Standards/ criteria sets	Licenses issued to companies	Certified products/services
Asociacion Espanola de Normalizacion y Certificacion — AENOR [Spain]	AENOR Medio Ambiente	13	52	275
Associascao Brasileira de Normas Technicas — ABNT [Brasil]	Certificado do Rótulo Ecológico ABNT – Qualidade Ambiental	_	_	_
Australian Environmental Labelling Association – AELA, Inc.	Australian Ecolabel Program	24	26	280
Central Pollution Control Board — CPCB [India]	Ecomark Scheme of India	16	6	9
Clean & Green Foundation, Inc. [Philippines]	Green Choice Philippines	7	2	2
DG Environment (DG3), European Commission + AENOR [Spain]/Department for Environment, Food and Rural Affairs [United Kingdom]/Ecolabelling Denmark/ Ecolabelling Norway/Ministere de l'Environment, Luxembourg/Ministry of the Environment, Czech Republic/Ministry of the Environment and Physical Planning, Greece/SIS Ecolabelling AB [Sweden]/ Umweltbundesamt [Germany]	European Eco-label/ "The Flower"	23	231*	
Ecolabelling Denmark/Ecolabelling Norway/SIS Ecolabelling AB [Sweden]	Nordic Swan	59**	~700 companies/ 1 067 licenses**	>3 000**
Environment and Development Foundation — EDF [ROC (Taiwan)]	Green Mark	88	551	2 556
Federal Environment Agency [Germany]	Ecolabel Blue Angel	86	571	3 359
Green Council [Hong Kong]	Hong Kong Green Label	41	7	20
Green Seal Inc. [USA]	Green Seal	43	99	493
Hong Kong Federation of Environmental Protection (HKFEP)	Environment Label Certification	16	6	16
Japan Environment Association — JEA	Eco Mark Program	45	1 765	5 074
Korea Environmental Labelling Association — KELA	Environment Labelling Program	102	448	1 765
Living Planet [Ukraine]	Program for Development of Ecological Marking in Ukraine	13	68	63
Ministry of Environmental Protection and Physical Planning, Republic of Croatia	Environment Label of the Republic of Croatia	40	12	18
Ministry of the Environment & Czech Environment Agency, Czech Republic	National Program of Labelling Environmentally Products	39	72	176
The New Zealand Ecolabelling Trust — NZET	Environmental Choice New Zealand	23	13	207
Singapore Environment Council — SEC	Singapore Green Labelling Scheme — SGLS	35	32	130
Swedish Society for Nature Conservation — SSNC	Good Environmental Choice	13	223	786
TCO Development [Sweden-based; international]	Quality and Ecolabelling Program	10	67	2 302
TerraChoice Environmental Services, Inc. — TESI [Canada]	Environmental Choice ^M Program	160	230	>3 000
Thailand Environment Institute — TEI	Thai Green Lable Program	39	30	162

Unilever's Fish Sustainability Initiative (FSI)



Fish banned under Marks & Spencer's (UK) sourcing policy

Common name	Species name	Stock
Atlantic salmon	Solmo solar	Scottish wild-caught
Bluefin tuna – northern	Thunnus thynnus	All
Bluefin tuna – southern	Thunnus maccoyii	All
Patagonian toothfish	Dissostichus eleginoides	All
Skates and rays	Raja and Dipturus species	All
Roundnose grenadier	Coryphaenoides rupestris	All
Orange roughy	Hoplostethus atlanticus	All
Sharks	All species	All
Cod	Godus morhua	North Sea, Irish Sea
Swordfish	Xiphias gladius	All except managed fisheries operating on-board observer programmes

Dolphin-safe tuna in the UK

Brand	Dolphin logo	Label statement	Certification
ASDA	Dolphin Friendly (on some tins)	None	None
Со-ор	Dolphin Safe	None	Ell-certified
Glenryck	None	'Dolphin Friendly'	Ell-certified
Iceland	Dolphin Friendly	None	None
John West/Heinz	None	'Dolphin Friendly'	Ell-certified
Marks & Spencer	Dolphin Friendly	None	None
Princes	Dolphin Friendly (on some tins)	None	Ell-certified
Safeway/Morrisons	Dolphin Friendly (on some tins)	None	None
Sainsbury's	Dolphin Friendly	Some labels state: 'We are fully committed to fishing methods which protect marine life' on 'Sainsbury's tuna is caught by using a pole and line, avoiding danger to other marine life.'	None
Somerfield	Dolphin Friendly (on some tins)	None	None
Waitrose	None	'Waitrose tuna is caught using only fishing methods which do not harm dolphins or other marine mammals'	None
Tesco	Dolphin Friendly	'Dolphin friendly: Tesco is fully committed to fishing methods which protect the marine environment and its species'	Ell-certified

APPENDIX C: MSC-CERTIFIED SUPPLIERS IN THE ASIA-PACIFIC REGION (AS AT NOVEMBER 2006)

Company	Country	Alaska Pollock – BSAI and/ or GOA	Alaska Salmon	Australian Mackerel Icefish	BSAI Pacific Cod	New Zealand Hoki	Pacific Halibut	South African Hake	South Georgia Patagonian toothfish	Western Australian Rock Lobster	US North Pacific Sablefish
AEON Co., Ltd.	Japan		х		x						х
Amaltal Corporation Ltd.	New Zealand					х					
Asia Legend (H.K.) Ltd.	China		х								
Austral Fisheries Pty Ltd.	Australia			х							
Bluewater Grill	Australia			х							
Clancy's Fish Pub	Australia			х							
Dalian Hongxing Food Co., Ltd.	China	x									
Dalian New Haiyang Foods Co., Ltd.	China		х		х						
Dalian Rich Seafood Co., Ltd.	China		х								
Dalian Tongyuan Foodstuffs Co., Ltd.	China	х	х								х
Dalian Yanjie Foods Co., Ltd.	China	х	х								
Dalian Yonghe Seafoods Co., Ltd.	China		x								
Dalian Zhongtai Aquatic Products Co., Ltd.	China		х								
Festival Fish Market (Herdsman Fresh)	Australia			х							
Golden Fresh	Malaysia							X			
Hakata Marukita Co.	Japan	x									
Haneuo Syokuhin Co.	Japan	x									
Independent Fisheries Ltd.	New Zealand					x					
James Bowes Pty Ltd.	Australia					Α				v	
•										х	
Kailis Bro (Restaurant)	Australia			Х							
Kailis Bros (Retail Store)	Australia			х							
Kailis Bros Pty Ltd.	Australia									Х	
Kamewa Shouten Co., Ltd.	Japan		Х								Х
Kyokuyo Co., Ltd.	Japan		Х								
Lobster Australia Pty Ltd.	Australia									Х	
Maruichi Foods Co.	Japan	Х									
Meads	Australia			х							
Must Winebar	Australia			х							
Nippon Suisan Kaisha Ltd.	Japan					х					
Ocean Stone (Dalian) Foodstuff Co.	China	х	х								
Pacific Andes Food Ltd.	China		х		x						
Pacific Andes Food Ltd. (Rushan Huagreat Aquatic Products Co., Ltd.)	China		х		х						
Port Lincoln Tuna Processors Pty Ltd.	Australia		х								
Pyramid Pacific, Ltd.	China		х								
Qingdao Fusheng Foodstuffs Co., Ltd.	China		х								
Qingdao Honfu Yingshui Foods Co., Ltd.	China	х	х								
Qingdao Kangbao Foodstuffs Co.	China	х	х								
Qingdao Longyuan Aquatic Products Co.	China	х	х		х	х					
Qingdao Unibond Premium Seafood Processing Ltd.	China	х	х		х						
Qingdao UZP Foods Processing Ltd.	China	х	х		х						
Rizhua Changhua Aquatic Foodstuff Co., Ltd.	China	х									
Sanford Ltd.	New Zealand					x			x		
Sanford South Island Ltd.	New Zealand					x					
Seafood Secrets	Australia			х		-					
Seafresh Fish Market (Claremont)	Australia			x							
Seafresh Fish Market (Innaloo)	Australia			x							
Sealord Group Ltd.	New Zealand			A		x					
*						^					
Shangdong Sanfod Group Co., Ltd.	China	х	Х		Х						

APPENDIX D: COMMENT ON WILD CAUGHT FISH AND ITS COMPLIANCE WITH ORGANIC LABELS

Source: Article from StarNews.Com/New York Times, 28 November 2006

Wild fish, whose living conditions are not controlled, are not likely to meet the requirements for an "organic" label. Buying a pork chop labeled "organic" is relatively straightforward: it comes from a pig that ate only organic food, roamed outdoors from time to time and was left free of antibiotics. But what makes a fish organic? That is a question troubling the United States Agriculture Department, which decides such things. The answer could determine whether Americans will be able to add fish to the growing list of organic foods they are buying, and whether fish farmers will be able to tap into that trend and the profits that go with it.

Organic foods, which many people believe to be more healthful (though others scoff), are grown on farms that shun chemicals and synthetic fertilizers and that meet certain government standards for safeguarding the environment and animals. An organic tomato must flourish without conventional pesticides; an organic chicken cannot be fed antibiotics. Food marketers can use terms like "natural" and "free range" with some wiggle room, but only the Agriculture Department can sanction the "organic" label.

To the dismay of some fishermen — including many in the Alaskan salmon industry — this means that wild fish, whose living conditions are not controlled, are not likely to make the grade. And that has led to a lot of bafflement, since wild fish tend to swim in pristine waters and are favored by fish lovers. "If you can't call a wild Alaska salmon true and organic," asked Senator Lisa Murkowski, a Republican from Alaska, "what can you call organic?" Instead, it appears that only farm-raised salmon may pass muster, as may a good number of other farm-raised fish — much to the delight of fish farmers.

But a proposed guideline at the Agriculture Department for calling certain farmed fish "organic" is controversial on all sides. Environmentalists argue that many farm-raised fish live in cramped nets in conditions that can pollute the water, and that calling them organic is a perversion of the label. Those who catch and sell wild fish say that their products should be called organic and worry that if they are not, fish farmers will gain a huge leg up. Even among people who favor the designation of farmed fish as organic, there are disputes over which types of fish should be included. Trying to define what makes a fish organic "is a strange concept," said George H. Leonard, science manager for the Seafood Watch Program at the Monterey Bay Aquarium, which offers a consumer guide to picking seafood. "I think the more you look at it, particularly for particular kinds of fish, it gets even stranger."

The issue comes down largely to what a fish eats, and whether the fish can be fed an organic diet. There is broad agreement that the organic label is no problem for fish that are primarily vegetarians, like catfish and tilapia, because organic feed is available (though expensive). Fish that are carnivores — salmon, for instance — are a different matter because they eat other fish, which cannot now be labeled organic. The Agriculture Department panel that recommended adding farmed fish to the organic roster was willing to work around the issue, and offered various ways that fish-eating fish could qualify. But those work-arounds have infuriated some environmentalists, who take issue with the idea that a fish could be called organic if it ate meal made from wild non-organic fish. This constituency complains, among other things, that demand for fish meal is depleting wild fisheries.

"When it comes to carnivorous fish, it seems to be a complete deception of what organic means," said Andrea Kavanagh, director of the Pure Salmon Campaign, an advocacy group working to improve conditions for farm-raised fish. "Organic is supposed to be on 100 percent organic feed."

As the purists balk, the market for organic foods grows. Consumer sales reached \$13.8 billion in 2005 compared with \$3.6 billion in 1997, according to the Organic Trade Association. What started as a farming technique for crops has expanded into everything from processed foods to flowers and cosmetics. There was even a federal task force to evaluate organic pet food.

Fish farmers and retailers are painfully aware of what they are missing, and some of them are taking matters into their own hands. As things stand, a limited amount of seafood is being sold as organic at stores in the United States, usually because it was certified by other countries or by third-party accreditation agencies. A company in Florida called OceanBoy Farms is selling what it says are organic shrimp to Wal-Mart, Costco and some other retailers. And at the Lobster Place, a seafood store in Manhattan, "organic" king salmon from New Zealand is offered for \$13.50 a pound, compared with \$22.95 for wild king salmon and \$9.95 for farm-raised salmon. "People will go for organic salmon when wild king salmon isn't available," said Todd Harding, director of wholesale operations for the Lobster Place. He said that the taste of organic salmon was more consistent, but that he generally preferred wild salmon. While most consumers say they prefer wild-caught fish, 72 percent would buy organic fish at least some of the time, according to a recent survey by the New Jersey Department of Agriculture and Rutgers.

If the Agriculture Department ultimately approves organic fish, it would certainly complicate the debate about what types of seafood are best in terms of taste, nutrition, price and environmental impact. Farm-raised? Wild-caught? Or farm-raised organic?

There is plenty of history to the debate. In 2000, when the Agriculture Department sought to weed out some of the food industry's murkier organic claims, it named a task force to evaluate requests from fish farmers for organic eligibility. The farmers argued, then as now, that with demand for seafood growing and many wild fisheries being depleted, farm-raised seafood should have a competitive edge. On farms, they said, the number of fish remains stable, and the quality of water and feed are controlled. One thing the task force did was rule out the possibility that wild fish could be labeled organic.

"It takes some thinking about," said Rebecca J. Goldburg, a senior scientist at the advocacy group Environmental Defense, who was on the advisory panel. "What it comes down to it organic is about agriculture, and catching wild animals isn't agriculture." The task force recommended that farm-raised fish could be labeled organic as long as their diets were almost entirely organic plant feed. The Agriculture Department shelved those recommendations and let the issue lie fallow. In 2005 a second task force was convened — this time, with more members affiliated with the aquaculture industry.

This year, the group recommended far less stringent rules, including three options for what organic fish could eat: an entirely organic diet; non-organic fish during a seven-year transition period while fish farms shift to organic fish meal; or non-organic fish meal from "sustainable" fisheries. Sustainable fisheries are those that ensure that their fish stocks do not become depleted. Even if the recommendations are adopted, it will still take several years before USDA-certified organic fish appears in stores or restaurants. But domestic fish farmers say that new rules cannot come soon enough. While the aquaculture industry has experienced rapid growth, the vast majority of it has been overseas — mainly in China — and much of the growth in seafood sales in the United States, which had a wholesale value of \$29.2 billion in 2004, has come from imports. Rodger May, a Seattle businessman who sells wild and farm-raised salmon, is preparing for the day when he can sell his fish as organic. For now he refers to some of his farm-raised salmon — which live in ocean pens, as opposed to man-made ponds — as "natural," a designation that does not carry the same marketing punch as would "organic." Mr May says he believes that he has created the perfect environment for organic fish. His "natural" fish are raised in pens that hold fewer fish than those for his regular farm-raised salmon, and they live in a body of water where fast-moving currents constantly provide fresh water and flush away waste. His fish eat a mixture of oily brown pellets that resemble dog food and contain protein in the form of ground-up fish; other farm-raised salmon are fed protein from chicken and other land animals, he said. "How can a wild fish be cleaner than one of these?" he asked. "What can be more organic than something that comes out of the sea, that has no chemicals near it, no antibiotics and is fed fish?"

The Agriculture Department may ultimately agree with Mr May. But even if it does, it could then face another round of difficult questions. For instance, what is an organic clam? An oyster? A scallop? "How do you make conventional mollusk production different from organic mollusk production?" asked Ms Goldburg, the Agriculture Department panelist, who noted that mollusks filter water for food. "They are all just sucking up water. Is it cleaner water?"

APPENDIX E: ENVIRONMENTAL CERTIFICATION SCHEMES AND INITIATIVES

Third-party fisheries environmental schemes of potential relevance to all APFIC countries

Scheme	Comment
Marine Stewardship Council (MSC)	Scope: Assessment of capture fisheries resource sustainability, ecosystem impacts and management system robustness.
Council (MSC)	Now perhaps the best known of the environmental schemes for capture fisheries. Incorporates third party certification of fisheries and supply chains, and the use of labels. The MSC is an independent, global, non-profit organization whose role is to recognize well-managed fisheries and to harness consumer preference for seafood products bearing the MSC label of approval.
	Twenty-two fisheries are already certified, including the Australian Mackerel Icefish (<i>Champsocephalus gunnari</i>), the Australian western rock lobster (<i>Panulirus cygnus</i>), the New Zealand Hoki (<i>Macruronus novaezelandiae</i>) and the Japanese snow crab and flathead flounder resources in the Kyoto Offshore Area. A community-based clam fishery that operates in Ben Tre Province in the Lower Mekong (Viet Nam) has entered the full assessment phase of the MSC process. There have also been discussions with an anchovy fishery in Phu Quoc, Viet Nam, as it supplies premium fish sauce to Unilever in Europe. In the wider Pacific, the Forum Fisheries Agency (FFA) has almost completed a pre-assessment of all the tuna fisheries in the waters of FFA member states. This has evaluated four species, six gear types and 15 management zones to provide advice on those fisheries that may be good certification candidates.
	Fisheries currently undergoing certification also include the Australian multispecies Lakes and Coorong Fishery. In order to use the MSC logo on seafood products it is first necessary to be certified for chain-of-custody. This involves an independent certification body assessing the applicant's traceability systems and ensuring they are sourcing from certified suppliers. A list of certified suppliers in the Asia–Pacific region is provided in Appendix .
	The MSC states that there are currently 30 fisheries worldwide currently undergoing full assessment. Additional information on the value of MSC sales is provided later in this paper. The MSC has spent US\$30 million on developing the standard and it is the only such scheme to be fully compliant with FAO's guidelines for the ecolabeling of fish and fishery products from marine capture fisheries. www.msc.org
Friend of the Sea	Scope: Sustainable fisheries (and aquaculture) production based on published data.
	The Friend of the Sea scheme was initiated in 2005; it works closer to the point of sale than production by approving products if: (a) target stocks are not overexploited; (b) fisheries use fishing methods that do not impact the seabed; and (c) they generate less than 8 percent discards (the global average according to recent FAO publications). Products/fisheries are audited and certified against published information/data, following application by fisheries using a standard application form.
	Fisheries are assessed against FAO data on stock status in different fisheries areas; the IUCN Red List of Endangered Species; fishing gear felt to be harmful to the seabed; IUU and Flags of Convenience; compliance with TACs, use of the precautionary principle and national legislation. It is reported on the initiative's Web site that "several Friend of the Sea approved products are on the shelves of main supermarkets worldwide".
	A number of retail chains are now participating in the scheme through certification of their own private label products. These include COOP Italia, GS, Diperdì, Finiper and UNES in Italy and Eroski in Spain. Several companies are reported to be changing their packaging

Scheme	Comment
	and including the Friend of the Sea logo with explanations. Bureau Veritas (www.bureauveritas.com) checks chain-of-custody (traceability and documental evidence) and actual fishing methods (including legal compliance, e.g. minimum size, TAC, IUU, FOC, mesh size, etc.)
	With limited costs imposed on producers and the relatively small number of fisheries/products certified, the extent to which this scheme will be sustainable is not yet clear. www.friendofthesea.org
Marine Aquarium Council (MAC)	Scope: Assessment of aquarium animal resource sustainability, including impacts of collection and postharvest quality of care.
	The MAC is an international, not-for-profit organization that brings marine aquarium animal collectors, exporters, importers and retailers together with aquarium keepers, public aquariums, conservation organizations and government agencies. The MAC's mission is to conserve coral reefs and other marine ecosystems by creating standards and certification for those engaged in the collection and care of ornamental marine life from reef to aquarium.
	The MAC Core Standards outline the requirements for third party certification of quality and sustainability in the marine aquarium industry from reef to retail. MAC Certification covers both practices (industry operators, facilities and collection areas) and products (aquarium organisms). For Certification of Practices, industry operators at any link in the chain-of-custody (collectors, exporters, importers, retailers, etc.) can seek to be certified by being evaluated for compliance with the appropriate MAC Standard. For Certification of Products, MAC Certified marine ornamentals must be harvested from a certified collection area and pass from one certified operation to another, e.g. from collector to exporter to importer to retailer.
	MAC certified marine organisms bear the MAC Certified label on the tanks and boxes in which they are kept and shipped. A member of the International Social and Environmental Accreditation and Labeling Alliance. www.aquariumcouncil.org
Naturland	Scope: Proposed scheme for certification of sustainable wild fisheries production.
Association	Naturland promotes organic agriculture and has to date only been involved with certification of aquaculture operations. However it is planning to establish a wild fisheries certification scheme. Standards are currently under preparation; an important aspect of the standards is that they will also address social aspects.
	An important element of the certification process is the establishment of a local Round Table of Expert, which will set the specific standards for the respective fishery, subsequently to be adopted by Naturland. www.naturland.de/naturland_fish.html
"Dolphin-safe/ dolphin-friendly"	Scope: Determines the level of interaction with dolphins and other cetaceans in the capture of tuna.
labeled tuna	This label is meant to certify that the tuna was caught in a way that protects dolphins, either based on the Agreement on the International Dolphin Conservation Programme (AIDCP), a multilateral agreement under the IATTC Regional Fisheries Organization, or in line with a programme promoted by the Earth Island Institute (EII), a US-based NGO. The EII has no observers or monitors on any boat around the world — it only checks administration and boats arriving in port.
	The label is controversial for several reasons: (1) It is also used in Europe, where most of the tuna eaten is of the skipjack variety, rather than yellowfin. Skipjack tuna do not school with dolphins and so the label would seem rather superfluous, although the EII defends it as

Scheme	Comment
	a pre-emptive strike against cheap, "dolphin-unfriendly" yellowfin tuna being dumped on Europe from the USA. ²³ (2) The label has encouraged fishing with fish aggregating devices which can lead to a much higher bycatch of not just dolphins, but a range of other endangered and vulnerable species. (3) The label does not take into account any assessment of the size of tuna populations and whether they can withstand the very significant fishing pressure that they are currently experiencing.
Marine Eco-Label (Japan)	A domestic Japanese fisheries certification approach, the MEL-Japan scheme targets small-scale fisheries under an existing co-management arrangement. It aims at allowing an affordable eco-labeling of Japanese seafood products, mainly for export markets.
	Certification is independently reviewed and the process is overseen by various technical and trustee councils (Mitsutaku Makino, personal communication).
International Standards Organization (ISO) Environmental Management System	Scope: Assesses corporate environmental management systems. The ISO provides certification of <i>companies</i> against different standards. ISO 14000 is actually a series of international standards on environmental management. It provides a framework for the development of both the system and the supporting audit programme. ISO 14001 is the cornerstone standard of the ISO 14000 series. It specifies a framework of control for an Environmental Management System against which an organization's performance and practices can be certified by a third party. ISO 14001 was first published in 1996 and specifies the actual requirements for an environmental management system. It applies to those environmental aspects over which the organization has control and over which it can be expected to have an influence. ISO 14004, also published in 1996, provides guidance on the development and implementation of environmental management systems and principles; also their coordination with other management systems. ISO 19011 offers guidelines for quality and/or environmental management systems auditing. Certification is used through third parties but no label is provided. <i>Certification is not a product guarantee</i> , only a statement about the company concerned.

 $[\]overline{^{23}}$ The label can also be found on other species such as hoki and salmon.

Mandatory import/export schemes/initiatives relating to sustainability

Scheme	Comment
DS2031 for	Scope. All shrimp imports to the United States.
export to US markets	The scheme is intended to ensure the use of turtle excluder devices in wild shrimp fisheries. Exporters/importers are required to sign a form (DS2031). Exporting nations have to put in place procedures, and the United States has a TED (Turtle Excluder Device) accreditation team that reviews these procedures and inspects fishing gear in exporting countries. Eligible exports include:
	 Shrimp harvested in an aquaculture facility in which the shrimp spend at least 30 days in a pond prior to being harvested.
	Shrimp harvested by commercial shrimp trawl vessels using TEDs comparable in effectiveness to those required in the United States.
	3. Shrimp harvested exclusively by means that do not involve the retrieval of fishing nets by mechanical devices, such as winches, pulleys, power blocks or other devices providing mechanical advantage, or by vessels using gear that would not require TEDs.
	4. Shrimp harvested in any other manner or under any other circumstances that the Department of State may determine, following consultation with the National Marine Fisheries Service, which does not pose a threat of the incidental taking of sea turtles.
ICCAT Statistics Certificate	Scope: Requires the provision of certain information for fisheries management purposes.
	The Statistic Certificate for exporting tuna (bluefin, southern bluefin, bigeye) and swordfish is mandatory for those who export tuna to ICCAT countries.
	The certificate requires member countries to provide statistical information of importance for stock management purposes. No use of logo on products.
Australian export requirements	Scope: Management of all export fisheries.
requirements	The Australian Government (national environmental legislation) requires that all export fisheries pass an assessment of the ecological sustainability of their management arrangements.
CITES	Scope: Trade in endangered species.
	CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. CITES is an international agreement to which states (countries) adhere voluntarily. States that have agreed to be bound by the Convention ("joined" CITES) are known as Parties. Although CITES is legally binding on the Parties — in other words they have to implement the Convention – it does not take the place of national laws. CITES works by subjecting international trade in specimens of selected species to certain controls. All import, export, re-export and introduction from the sea of species covered by the Convention has to be authorized through a licensing system. Each Party to the Convention must designate one or more Management Authorities in charge of administering that licensing system and one or more Scientific Authorities to advise them on the effects of trade on the status of the species.
	The species covered by CITES are listed in three Appendices, according to the degree of protection. www.cites.org

Supermarket/processing sector fisheries initiatives

Scheme	Comment
Unilever's Fish Sustainability Initiative	Unilever deals exclusively in products that have been processed to a greater or lesser extent. Four-fifths of the Unilever fish business is focused on the European market. Unilever sells fish under the brand name "Iglo" in Austria, Belgium, France, Germany, the Netherlands and Switzerland, "Birds Eye" in Ireland and the United Kingdom, "Findus" in Italy, "Frudesa" in Spain and "Knorr" in France and Spain. Whitefish species make up 95 percent of the fish sold by Unilever in Europe. Outside Europe, Unilever's Indian subsidiary, Hindustan Lever, annually buys and processes about 70 000 tonnes of fish, from 50 to 60 species, to make fish mince or <i>surimi</i> for fish sticks, fish paste and other products. In Viet Nam, about 2 000 tonnes of fish go into fish sauce for Unilever each year. The company has made a commitment to source all fish from sustainably managed fisheries. Unilever writes to suppliers asking them to confirm that their fish are legally caught in specified FAO catch areas and that they are not involved in species threatened with extinction. It uses a "traffic light" assessment tool for suppliers (see Appendix). This is a behind the scenes assessment, rather than a consumer branding/logo exercise.
Wal-Mart (US)	In February 2006, the global player Wal-Mart announced that it intended to shift its entire supply of wild caught fresh and frozen fish for the North American market to MSC certified fisheries by 2009–2011.
Sainsbury's (UK supermarket)	In 2002, Sainsbury's committed to sourcing all its wild fish from sustainable sources by 2010 and works closely with the MSC. Sainsbury's is looking at working with its suppliers to develop a custom-built framework to assess the relative sustainability of different stocks. This could operate alongside the MSC scheme, either as a consumer-facing "silver standard" below the MSC's "gold standard", or would operate behind the scenes, so that Sainsbury's could ensure that the sustainability of its fish supply was improving independently of the processes of the MSC.
Marks and Spencer's (M&S, UK supermarket)	According to its sourcing policy, each M&S seafood product must be obtained from reputable producers, operating within relevant regulations and with respect for the environment. Where possible, fisheries will have been certified as sustainable by an independent organization such as the MSC, and be managed in accordance with the FAO Code of Conduct for Responsible Fisheries. All fisheries that supply M&S are audited in detail to ensure that they comply with the policy. Suppliers are required to maintain reference data on each source of raw seafood including scientific advice from the relevant organization for the stocks in question (e.g. International Council for Exploration of the Sea [ICES] for North–East Atlantic stocks), to verify that the fishery is not causing stocks to decline, damaging the environment, or generating significant quantities of discards. All seafood must be traceable back to the vessel which caught it, with evidence that the catch was within the quota where applicable. Fish from undeclared (illegal) landings are prohibited. M&S maintains a "Banned Species List" of seafood species. M&S had already ceased to stock 19 of the initial top 20 species or groups to avoid when the MCS published its list. M&S has committed to source 100 percent of its fish from sustainable sources (MSC certified or equivalent) by 2012.
Carrefour (France)	"Peche Responsible", or Responsible Fish initiative, of Carrefour.
Young's (UK) Fish for life	The largest seafood processor in the UK, Young's Bluecrest, supplies chilled and frozen products to supermarkets, restaurants, pubs, fish and chips shops, schools and hospitals. Supplies come from 33 countries and include more than 60 species. The company is using a specific seafood purchasing policy, <i>Fish for life</i> , which is based on
	ten principles for responsible fish procurement.

Scheme	Comment
Royal Ahold (Netherlands) — owners of Stop &	Stop & Shop established the "Ecosound" project in 2001 to distinguish itself as a thorough, trustworthy provider of seafood in its market (Ahold, n.d.).
Shop Supermarkets (USA)	The project, a partnership with the New England Aquarium, uses the results of independent research on wild-harvested species to give preference to suppliers of sustainably harvested species, delisting suppliers with inadequate traceability systems. Source: Roheim and Sutinen (2006)

Note: The information in this table is not an exhaustive list of supermarket schemes/policies on sustainable sourcing, but provides examples only.

Fisheries-specific codes of practice or guidelines

Scheme	Comment
The International Standard for the Trade in Live Reef Food Fish	The Live Reef Food Fish Trade (LRFFT) is used to describe the trade in live reef fish for consumption, mainly in Hong Kong S.A.R. and southern China, involving more than 20 supply countries. With the support of the 21 member economies of the APEC Fisheries Working Group, the Marine Aquarium Council and The Nature Conservancy a voluntary standard and toolkit have been produced covering the capture of wild live reef food fish, their aquaculture and their handling, holding distribution and marketing. No certification or labeling as yet, but this is under discussion. http://www.livefoodfishtrade.org
European Commission work on ecolabeling of responsible fishing	The EC has mandated a Group of Experts to define minimum requirements for "responsible fishing" ecolabel schemes run by other groups. A final decision must be adopted by the European Parliament and the Council of the European Union, but it is likely that the EC will propose that, in accordance with the FAO Guideline for the Eco-labeling of Fish and Fishery products from Marine Capture Fisheries, five criteria for minimum standards for all schemes should include:
	Precise, objective and verifiable technical criteria.
	An independent third party accreditation process.
	An ecolabeling scheme must be open to all operators, without discrimination.
	 In addition to accreditation/certification procedures, ecolabeling schemes must be properly controlled to ensure that they comply with the minimum requirements.
	 Transparency. Consumers should know which criteria are covered by an ecolabel and should thus have easy access to information on the certification standard.
FAO Guidelines on Eco-labeling	The FAO guidelines include the need for reliable, independent auditing, transparency of standard setting and accountability and the need for standards to be based on good science. They also lay down minimum requirements and criteria for assessing whether a fishery should be certified and an ecolabel awarded, drawing from FAO's Code of Conduct of Responsible Fisheries. www.fao.org

Non-fisheries-specific associations/networks

Scheme	Comment
Global Eco- labeling Network	The Global Eco-labeling Network (GEN) is a non-profit association of third party, environmental performance labeling and certification organizations and pro-ecolabeling "associates" founded in 1994 to improve, promote and develop the ecolabeling of products.
	It has around 30 members (see Appendix). It has no certification or labels, but many of its member schemes do. www.gen.gr.jp
International Social and Environmental Accreditation and Labeling Alliance (ISEAL)	An association of leading international standard-setting, certification and accreditation organizations that focuses on social and environmental issues. Taken individually, the standards and verification systems of ISEAL members represent efforts to define issue-specific elements of social and environmental sustainability. Taken together, they represent a holistic movement, with ISEAL providing the framework. Members include: Fairtrade Labeling Organizations; the FSC, the MSC, IFOAM, the MAC, SAI, and the Sustainable Agriculture Network.
	While not a responsible trade/production initiative in its own right, it is relevant given its role as a lobby and information-sharing group for its members. www.isealalliance.org

Fisheries-specific schemes outside Asia and the Pacific

Scheme	Comment
KRAV	KRAV is the Swedish certification organization for organic products. In September 2002, KRAV decided to draft a standard for certifying organic wild fish. The project is focusing on frozen cod fillet, tinned herring, fresh shrimp and fresh crabs in Scandinavian waters; therefore it is not relevant to APFIC countries. The goal is to develop regulations that will be used to certify wild caught fish and shellfish. There is potential for label use.
	www.krav.se/english.htm
United States organic	See Appendix for discussion on why wild caught fish cannot be considered or labeled as "organic" in the United States. In essence, because of the lack of control over wild fish diets (to be organic all feed/fish must be organically certified), it is unlikely that any wild products in other countries could ever be sold as organic products, restricting the potential use of organic certification to farmed fish products.
Ocean Wild Frozen at Sea	The Frozen at Sea Fillets Association (FASFA) was formed in 2000 to promote the high quality of frozen-at-sea fillets of cod and haddock. FASFA created the Ocean Wild Frozen at Sea assurance mark for fillets of cod and haddock frozen at sea off Iceland and in the Barents Sea. Members of FASFA include vessel owners from Norway, Iceland, the Faeroe Islands, the Russian Federation and the United Kingdom, as well as importers and distributors in the UK, so strictly speaking it is not relevant to APFIC countries.
	While the Ocean Wild logo does not denote a sustainable fishery, it does provide the consumer with more information on the source of the fish than is required by law.
Seafish Responsible Fishing Scheme	A scheme prepared by the UK's Sea Fish Industry Authority (Seafish) with the British Standards Institution (BSI). It provides a means of recognizing responsible fishing practices for individual vessels operating in a mixed fishery, controlled under international agreements.
	It is meant to develop, promote and bring reward for good practice.

Scheme	Comment
European Eco-Management and Audit Scheme (EMAS)	EMAS is a site-based registration system with due consideration provided to off-site activities that may have a bearing upon the products and services of the primary site. EMAS requires an Environmental Policy in an organization, fully supported by senior management, and outlining the policies of the company, not only to the staff but to the general public and other stakeholders. The Environmental Management System requires a planned comprehensive periodic audit of the Environmental Management System to ensure that it is effective in operation, is meeting specified goals and the system continues to perform in accordance with relevant regulations and standards. Under EMAS the minimum frequency for an audit is at least once every three years. Certification but no label. EMAS is not relevant to AFPIC countries. www.quality.co.uk/emas.htm

Fisheries-specific consumer guides and organizations/alliances

Scheme	Comment
New Zealand Best Fish Guide	Forest & Bird (F&B) produced its <i>Best fish guide</i> in June 2004. This guide comprises a thorough report on the ecological rankings of New Zealand commercial fisheries, with summaries in the form of a pocket guide (downloadable from the Web site) and a Web site-based guide. The <i>Best fish guide</i> profiles 62 commercial species, ranking each aspect of the fishery from A (best) to E (worst) and then giving an overall rank for sustainability. This ranking takes into account the state of fish stocks, management and research, bycatch, the damage done to marine habitats and other ecological effects caused by the fishery. No certification or labeling. It should be noted that not one species is on the green list and F&B believes that no New Zealand fisheries are managed sustainably. www.forestandbird.org.nz/bestfishguide/index.asp
Seafood Choices Alliance (SCA)	Seeks to bring ocean conservation to the table by providing the seafood sector — fisherfolk, chefs and other purveyors — with the information they need to make choices about seafood and provide the best options to their customers. Seafood Choices encourages the sale and consumption of ecofriendly seafood by raising awareness of current issues among its subscribers and individual consumers. The initiative is US-based and focuses on environmental, rather than social issues, but there is now also a European Campaign. The MCS is now working with the SCA and others to develop a common methodology for compiling fish lists. No certification or use of labels. www.seafoodchoices.com
Marine Conservation Society (MCS)	The UK-based Marine Conservation Society manages a Web site, www.fishonline.org, featuring 124 species in total; it recommends 41 for consumption based on sustainable production and 43 to be avoided. The MCS rates species on a one-to-five scale, based on a fairly detailed method of assessment including species characteristics, level of stock exploitation, capture method and so forth. No certification or use of labels.
FishWatch	The National Fisheries Institute (NFI) supports a new Internet-based tool called "FishWatch – US Seafood Facts." The Web site provides the latest facts about the sustainability and health benefits of fish. According to NOAA Fisheries, 80 percent of domestic fish stocks are sustainably managed. FishWatch provides profiles including sustainability status, nutrition facts and role in the ecosystem of at least 30 domestic seafood species. The data provided in this consumer-friendly format are developed from NOAA Fisheries scientific stock assessments, fisheries surveys, management plans, environmental analyses and cooperative research.

Scheme	Comment
	The information on FishWatch prides itself on being the latest and most accurate information available on US fisheries. www.nmfs.noaa.gov/fishwatch/
The USA Fish List	The Blue Ocean Institute (BOI), the Environmental Defense Network (EDN) and Monterey Bay Aquarium (MBA) all produce online fish guides and pocket guides.
	They have also worked with the Seafood Choices Alliance to produce a collaborative guide called <i>The fish list</i> , which consists of a list of 14 "enjoy" and 14 "avoid" species or groups of seafood.
The Responsible Fishing Alliance (RFA)	The Responsible Fishing Alliance was publicly launched during the Economic Business Summit in Brussels on 15 March 2007. It brings together fisherfolk associations, public and private organizations and businesses. The organization currently has 11 members including NGOs, universities, Europe's largest retailer, Carrefour and its newest member, the packaging company Multivac. The RFA complements other seafood initiatives such as the MSC by focusing not on certifying but on responsible business-to-business seafood trade. Its members work in development and supply-chain projects that strive to create environments where fishing and fish farming are done in ways that protect the environment, support the socio-economic health of small fishing communities, are economically viable and help to meet the increasing demand for fish. The aim is to increase cooperation, environmental awareness and mutual understanding along the seafood value chain.
	The RFA is active in several locations through concrete projects in the field:
	• Cooperation with the European Commission's work on a Responsible Fishing Ecolabel, Brussels.
	Responsibly Produced Nile Perch from Lake Victoria, Africa (working with the Carrefour Group and local groups in Uganda and Tanzania).
	 Integrated Coastal Management for Small-Scale Fisheries and Aquaculture, Chile. Reacquisition of Individual Transferable Fishing Quotas for Artisanal Fishers, Iceland.
	www.sustainablefood.org/fisheries/
Australia's sustainable seafood guide	The Australian Marine Conservation Society (AMCS) released <i>Australia's sustainable seafood guide</i> in 2004. As well as providing a background on fishing methods, problems with aquaculture, and imported seafood, the guide includes a "3-Step Guide" (also available in a wallet-sized version) to choosing sustainable seafood. This contains a list of 13 species to avoid, questions to ask the fishmonger about other seafood, and a recommendation to avoid all imported seafood. The guide also comes with a pocket booklet called the <i>Sustainable fish finder</i> .
	This provides pictures and more detailed information on the sustainability of fish and shellfish with ten "say no", five "say no to some species" and 19 "better choice" categories. www.amcs.org.au/
WWF guides	A guide for Hong Kong S.A.R. has recently been released by WWF which ranks many Asian fish species (www.wwf.org.hk). A similar guide has also been produced for Japan.
	The WWF has a full list of its guides at www.panda.org/about_wwf/what_we_do/marine/our_solutions/sustainable_fishing
Other guides	A number of other NGOs and US aquariums also have fish-buying guides. In addition the Sustainable Fisheries Partnership has recently set up a Web site targeting fish buyers that provides information on the environmental performance of fisheries www.fishsource.org/
	Additional information on a range of other consumer guides is also available on the aforementioned WWF Web site.

Non-fisheries-specific environmental initiatives in APFIC countries and in the Asia–Pacific region

Scheme	Comment
Good Environmental Choice, Australia	The Australian Ecolabel Program has been developed for general compliance to ISO 14024 and is managed by a not-for-profit organization utilizing a national network of registered assessors. The Good Environmental Choice Label indicates the environmental performance of consumer goods.
	The label is awarded to products that meet voluntary environmental performance standards which have been created and assessed in conformance with international environmental labelling standards. No fisheries products. www.aela.org.au
Thai Green Label Scheme	The Green Label is an environmental certification awarded to specific products that are shown to have minimum detrimental impact on the environment in comparison with other products serving the same function. The Thai Green Label Scheme applies to products and services, <i>not including</i> foods, drinks and pharmaceuticals. Products or services which meet the Thai Green Label criteria can carry the Thai Green Label.
	Participation in the scheme is voluntary. No fisheries products. www.tei.or.th/greenlabel
Taiwan Green Mark –	The Green Mark Program of R.O.C. (Taiwan) was launched in August 1992 by the Environmental Protection Administration.
Environmental Protection Administration Government of the Republic of China	Uses logo under license. Emphasis on manufactured products. No fisheries products. www.greenmark.org.tw/english/
Republic of Korea	The Korea Eco-labeling Program is a voluntary certification programme that has a logo.
Korea	3 176 products of 790 companies had a license under 107 product groups in May 2006 — but no food/drink; focuses on consumer and industrial goods, construction materials, office supplies, etc. No fisheries products. www.koeco.or.kr/eng/index.asp
Environmental Choice New Zealand	The New Zealand Eco-labeling Trust is a voluntary, multiple specifications-based environmental labeling programme, which operates to international standards and principles. It has certification and licenses to use a logo.
	The focus is on paper products, cleaners and detergents, and flooring. Some 700 products now bear this sole government-backed certification of being environmentally preferable. No fisheries products. www.enviro-choice.org.nz/index.html
GreenTick TM	GreenTick TM is an independent, performance-based certification system for conventionally produced goods and services in the country. GreenTick TM certification proves to markets and consumers that a company's claims of sustainability have been independently tested and shown to be genuine. GreenTick TM conforms to ISO 14000 and 17000 series for sustainability and environmental management.
	GreenTick TM is not fisheries-specific and none of the New Zealand fisheries companies has the GreenTick TM certification.
Japan Environment Association (JEA) Eco Mark Program	A committee composed of academics, governments, consumer groups and experts from various industries sets standards and carries out the certification. The Eco Mark is labeled on products with relatively less environmental impact compared to similar products, during the entire life cycle, from exploiting and collecting the product materials, to the manufacturing, distribution, use and consumption, disposal and recycling. After screening ecofriendly

Scheme	Comment
	products submitted for approval by manufacturers, the JEA certifies and publicizes products qualifying for the Eco Mark. As of 31 March 2006, there were 46 product categories and 4 832 certified products.
	There is a focus on manufactured goods. No fisheries products are addressed. www.ecomark.jp
China Environmental	Uses the ISO 14000 series as a basis. Certification and use of a label are in place.
United Certification Center Co., Ltd. (CEC) Environmental Labeling Programme	No fisheries products are addressed. www.sepacec.com
Hong Kong Green Label Scheme (HKGLS)	The HKGLS is an independent, not-for-profit and voluntary scheme for the certification of environmentally preferable products launched in December 2000 by the Green Council (GC) and the Hong Kong Productivity Council (HKPC). The scheme sets environmental standards and awards the "Green Label" to products that are qualified regarding their environmental performance. The aim is to encourage manufacturers to supply products with good environmental performance and inform consumers about labeled products that are more environmentally responsible, thus promoting a more sustainable pattern of consumption. In establishing the standards, the HKGLS draws from relevant international standards and is benchmarked with well-developed ecolabels to ensure standards' credibility. An Advisory Committee, composed of members from the academe, industrial and commercial associations and environmental groups, oversees the policy and operation of the HKGLS. As with most ecolabeling programmes, the HKGLS is an ISO 14024(1) Type 1 label, which involves third party certification that requires considerations of life cycle impacts.
EcoMark scheme of India	A scheme set up by the Indian Government in 1991 for easy identification of environmentally friendly products; it does not include fisheries products.
	Uses a logo and has various committees to assess general and product-specific, performance requirements.

APPENDIX F: SOCIAL CERTIFICATION SCHEMES AND INITIATIVES

Scheme	Comment
The Fairly Traded Fish and Seafood Initiative	Launched by German Fair Trade e.V. at the Bremen 2000 Seafood Fair, the Fairly Traded Fish and Seafood Initiative was geared towards improving the living and working conditions of marine artisanal fishworkers through economic incentives provided by a more direct linkage with Fair Trade buyers. ²⁴
	The initiative failed because the partner organizations ²⁵ experienced a wide range of problems related to maintaining the quality of fresh fish exports; logistics/transport; documentation; matching supplies of products/species demanded in Europe and irregular supplies. ²⁶
Fair-Fish	Fair-Fish is domiciled in Switzerland and was founded in January 2000 by animal welfare organizations. It is currently (since 2004) involved with a project in Senegal to export "fair fish" from Senegalese coastal fisherfolk to Europe. The first small imports from Senegal began in March 2006 for direct marketing to Migros in Switzerland. In April 2007, the Fair-Fish labeled fishery in Senegal was certified against Fair-Fish directives (a mix of social and animal welfare criteria) by the Société Générale de Surveillance (SGS), and by Friend of the Sea. Fair-Fish has been concentrating its efforts in the disadvantaged region of the Saloum area, in the far south of Senegal, next to the northern border of Gambia.
	The scheme has not been financially self-sustaining and recent developments suggest that the project could be abandoned during 2007. www.fair-fish.ch
The Max Havelaar Foundation	The foundation awards a quality label to products that have been produced according to principles of fair trade. Through fair trade, it contributes to improving the living and working conditions of small farmers and agricultural workers in disadvantaged regions.
	It is a member of the Fairtrade Labelling Organizations (FLO) and complies with their international fair trade standards. Reported ²⁷ to be interested in fish products. www.maxhavelaar.ch
Naturland	See Appendix E.
Social Accountability International (SAI)	SAI strives to improve workplaces and combat sweatshops through the expansion and further development of the international workplace standard, Social Accountability 8000 (SA8000) and the associated S8000 verification/certification system. www.sa-intl.org/
International Labor Organization	The International Labor Organization (ILO) has a Declaration of Fundamental Principles and Rights at Work. At the 92 nd Session of the International Labor Conference (ILC), the Committee on the Fishing Sector debated the issue of a new fishing standard. This was within the context of revising pre-1985 ILO Conventions (binding for countries that ratify them) and Recommendations (not binding, but providing guidance), in order to update and strengthen the standards-setting system of the ILO. The ILO Conventions relevant to fishing were adopted in 1959 and 1966, while the relevant Recommendations were adopted in 1920 and 1966. On 14 June 2007, The ILO adopted new rules to ensure adequate conditions for the estimated 30 million workers involved in the fisheries industry. The convention adopted by an overwhelming majority at the ILO's conference covers improved safety and health care at sea, sufficient rest, proper social protection and living conditions on board vessels.

²⁴ Mathew, S. 2000. Sustainable development and social well-being: Which approach for fish trade? Bridges Magazine. Geneva, ICTSD.

25 SIFFS (India) and CNPS/CREDETIP (Senegal).

²⁶ Source: The International Collective in Support of Fishworkers (ICSF) and the South Indian Federation of Fishermen Societies (SIFFS).

²⁷ Personal Communication, ICSF, 2007.

Scheme	Comment
	The convention will come into effect when it is ratified by ten of the ILO's 180 members, including eight coastal nations. ²⁸
Ethical Trade Initiative (ETI)	A multistakeholder alliance in the UK. It has a tripartite structure in which NGOs, unions and the private sector are represented. The ETI focuses on ethical sourcing by companies, in particular retail chains. Members of this initiative are "committed to business ethics and corporate responsibility, promotion of worker rights and human rights in general. In employment, ethical business includes working towards the ending of child labor, forced labor, and sweatshops, looking at health and safety, labor conditions and labor rights". The ETI is relevant where firms selling fish have adopted the ETI base code; Companies that are members of ETI are expected to adopt and implement the code and monitor and report their use of it in their supply chain.
	Codes of practice are in place but there is no certification. www.ethicaltrade.org
The International Federation for Alternative Trade (IFAT)	This is an international network of Fair Trade organizations. IFAT's membership includes some 111 producer groups, export marketing organizations and brands in 35 Latin American, African and Asian countries. It includes 15 Fair Trade organizations in the United States and Canada, Australia, New Zealand and Japan; in Europe it includes 3 000 Fair Trade shops ("World Shops") affiliated to the Network of European World Shops ³⁰ (NEWS!) and 53 Fair Trade organizations in 11 European countries, including the European Fair Trade Association (EFTA).
	EFTA is a network of 11 Fair Trade organizations in nine European countries. Most schemes involve certification. www.ifat.org
Fairtrade Labeling Organizations International (FLO)	Established in 1997, this is an association of 20 labelling initiatives that promote and market the Fairtrade Certification Mark in their countries.
	FLO members currently operate in 15 European countries as well as in Australia and New Zealand, Canada, Japan, Mexico (associate member) and the United States. www.fairtrade.net
Dow Jones Sustainability Indices (DJSI)	Launched in 1999, the Dow Jones Sustainability Indices were the first global indices to track the financial performance of leading sustainability-driven companies worldwide. Based on the cooperation of Dow Jones Indices, STOXX Limited and SAM they provide asset managers with reliable and objective benchmarks to manage sustainability portfolios. Currently 56 DJSI licenses are held by asset managers in 14 countries to manage a variety of financial products including active and passive funds, certificates and segregated accounts. In total, these licensees presently manage over 4 billion based on the DJSI. The indices are based on a weighted score of a wide range of criteria that include economic, environmental and social issues; in the case of the latter in the form of corporate citizenship/philanthropy, stakeholder engagement, labour practice indices, human capital development, social reporting, standards for suppliers etc. Member companies are almost exclusively those based in the developed world.
	www.sustainability-indexes.com/
ISEAL	See Appendix E

Source: ICSF.
 Retail members include ASDA, J. Sainsbury, Marks & Spencer and Tesco.
 None containing fish products as far as we are aware.