

Private standards and certification in fisheries and aquaculture

Current practice and emerging issues



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Current practice and emerging issues

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by

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Preparation of this document

The Food and Agriculture Organization of the United Nations (FAO) Sub-Committee on Fish Trade was established by the FAO Committee on Fisheries (COFI) at its sixteenth session (1985) to provide a multilateral forum for consultations on technical and economic aspects related to international trade in fish and fishery products, including pertinent aspects of production and consumption. The work of the COFI Sub-Committee on Fish Trade includes:

- periodic reviews of the situation and outlook of the principal fishery commodity markets;
- on the basis of special studies, discussion of specific fish trade problems and possible solutions;
- discussion of suitable measures to promote international trade in fish and fishery products and formulation of recommendations to improve the participation of developing countries in this trade, including trade-related services;
- in conjunction with the FAO/WHO Codex Alimentarius Commission, formulation of recommendations for the promotion of international safety and quality standards and the harmonization of safety and quality control and inspection procedures and regulations; and
- consultation and formulation of recommendations for economically viable fishery commodity development, including processing methods, the upgrading of products and production of final products in developing countries.

Whereas the promotion of food safety and quality standards has been a standing agenda item from the early sessions of the Sub-Committee on Fish Trade, interest of the Sub-Committee on Fish Trade in private standards and certification schemes commenced in the early 2000s, first in relation to the development of the FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries. It then expanded to aquaculture certification and to the other areas covered by private standards along the supply chain. A main task of FAO in this respect was to monitor developments and trends and report to the Sub-Committee on Fish Trade for recommendations.

In 2006, the FAO Fisheries and Aquaculture Department published an issues paper on the subject in the FAO flagship publication *The State of World Fisheries and Aquaculture*. This paper highlighted the need to conduct a study of private standards and certification in fisheries and aquaculture and their implications for fish trade from developing countries. Various research projects, desk studies and consultation with stakeholders interested in fish export, fish trade policies, sustainability, ecolabelling and market access followed. In addition, FAO and the Organisation for Economic Co-operation and Development (OECD) organized a Conference on “Globalization and Fisheries” in 2007 and a Roundtable on “Ecolabelling and Certification in the Fisheries Sector” in 2009.

This Technical Paper was written by Sally Washington, Consultant, and Lahsen Ababouch, Chief, Products, Trade and Marketing Service, Fisheries and Aquaculture Department, FAO. It draws on work undertaken since 2006, including studies conducted by the former of the two authors, the outcomes of the two FAO/OECD events, and a preliminary survey of the importance of private standards for European retailers undertaken by Marie Christine Monfort. William Emerson, Senior Fisheries Officer, FAO, provided comments throughout. Thanks are extended to the many individuals from the fishing and aquaculture industries, the retail and processing

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Abstract

Private standards and related certification schemes are becoming significant features of international fish trade and marketing. They have emerged in areas where there is a perception that public regulatory frameworks are not achieving the desired outcomes, such as sustainability and responsible fisheries management. Their use is also becoming more common in efforts to ensure food safety, quality and environmental sustainability in the growing aquaculture industry.

Private standards are now a key mechanism for large-scale retailers and commercial brand owners wishing to translate requirements—both product and process specifications—to other parts of the supply chain. This is especially important as supply chains become more vertically integrated. Indeed, from the perspective of the firm, private standards and the certification sitting behind them can serve as mechanisms for safety and quality assurance. They can also facilitate traceability, standardization of products from a range of international suppliers, and transparency of production processes.

Attachment to an environmental standard or ecolabel provides retailers and brand owners with insurance against boycotts from environmental groups and negative media coverage. Moreover, it also helps them tap into and grow consumer demand for ethical products. Consequently, the fisheries procurement policies of most large retailers typically include a significant sustainability component, often with targets for wild-caught fish to be certified to an ecolabel, and for farmed fish and seafood to be certified to an aquaculture certification scheme. Suppliers working at the post-harvest level are increasingly required to be certified to a private food safety management scheme. Therefore, the onus is increasingly on suppliers to verify that their products meet certain standards. Certification provides this “burden of proof”.

Although the impact of private standards is not uniform across markets, species or product types, it is likely to increase, including in developing countries, as supermarket chains consolidate their role as the primary distributors of fish and seafood products, and as their procurement policies move away from open markets towards contractual supply relationships. As the leading retail transnationals extend their global reach, their buying strategies are likely to progressively influence retail markets in East Asia, Africa, Eastern Europe and Latin America. Key issues related to the overall impact of private standards in fisheries and aquaculture and how they affect various stakeholders require resolution.

The compliance costs associated with certification to a private standard represent another contentious issue. These costs are borne disproportionately by those upstream in the supply chain rather than those downstream where the demands for certification generate. However, arguably more problematic is the distribution of those costs: Is some redistribution of costs possible, and using what levers?

Furthermore, the multiplicity of drivers for the traceability aspects of private standards schemes, which retailers and brand owners find most compelling, requires integration to meet the multiple requirements relating to food safety, catch certification, illegal, unreported and unregulated (IUU) fishing and the chain-of-custody aspects of private voluntary certification schemes, as well as public regulatory requirements.

Most importantly, the proliferation of private standards causes confusion for many stakeholders: fishers and fish farmers trying to decide which certification scheme will maximize market returns; buyers trying to decide which standards have most credence in the market and will offer returns to reputation and risk management; and

governments trying to decide where private standards fit into their food safety and resource management strategies.

This technical paper analyses the two main types of private standards affecting fish trade, namely ecolabels and food safety and quality standards, and their importance for a range of stakeholders. It addresses issues that are driving their development and examines *inter alia* their policy and governance implications, their impact on costs, their role in traceability, the assessment of their credence, and the challenges and opportunities for developing countries.

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Contents

Preparation of this document	iii
Abstract	v
Tables, figures and boxes	ix
Abbreviations and acronyms	x
Executive summary	xii
1. Introduction	1
1.1 Fisheries and aquaculture production, utilization and trade	1
1.2 State of the resource	3
1.3 Proliferation of private standards in global fish trade and marketing	4
1.4 Issues arising from the proliferation of private standards	5
2. Private standards: relevant definitions and a typology	7
2.1 Standards – some relevant definitions	7
2.2 Public and private standards	7
2.3 A typology of private standards in fisheries and aquaculture	8
2.4 Product and process standards	9
3. The context: what is driving the development of private standards?	13
3.1 Perceived failures in public governance	13
3.2 Consolidation and coalitions in the food business	15
3.3 Increasing vertical integration and complexity of supply chains	17
3.4 A shift in responsibilities for food safety from government to business	17
3.5 Product liability and due diligence	18
3.6 Private labels – processed products	18
3.7 Consumer demand and corporate social responsibility policies	19
4. Ecolabels and marine capture fisheries	21
4.1 International and national measures for fisheries sustainability	21
4.2 Market penetration of ecolabelled products	29
4.3 International responses to the ecolabelling phenomenon	36
4.4 Ecolabels and trade	56
4.5 Future scenarios and issues for attention	58
5. Private standards and certification for food safety and quality in fisheries and aquaculture	67
5.1 Public frameworks for food safety and quality	67
5.2 The emergence of private standards for food safety and quality	71
5.3 Types of private safety and quality standards in fisheries and aquaculture	71
5.4 Private in-house buyer guidelines of large retail firms	72
5.5 Collective private standards developed by regional or national producers organizations	73

5.6	Public certification schemes	75
5.7	NGO-driven standards and certification – aquaculture	75
5.8	The need for harmonization	82
5.9	Calls for international guidance	85
5.10	Market importance of private standards	86
5.11	Pressure on developing countries to meet private standards	89
5.12	Costs and benefits of private standards – stakeholder analysis	91
5.13	Protection or protectionism? Impacts of private standards on global trade	103
5.14	Future scenarios and areas for attention	107
6.	Key policy and governance issues	113
6.1	How can the quality and credence of private standards and related certification be assessed?	113
6.2	A “fair” distribution of costs and benefits	116
6.3	Integrated traceability	118
6.4	The specific challenges and opportunities private standards pose for developing countries	121
6.5	The effects of private standards on international trade and their relationship to WTO mechanisms	122
6.6	The interface between private standards and national public regulation and policy frameworks	124
	References	127
	Appendixes	
1	– Guidelines for the ecolabelling of fish and fishery products from marine capture fisheries, revision 1, 2009	131
2	– Draft guidelines for certification in aquaculture	151
3	– Definitions relevant to private standards and certification	175

Tables

1.	World fisheries and aquaculture production and utilization	1
2.	Standards and certification schemes operating in fisheries and aquaculture	8
3.	Ranking of sustainability of supermarkets' seafood, United Kingdom	33

Figures

1.	Utilization of world fisheries production, 1961–2008	2
2.	International export of fish and fishery products (in value)	3
3.	Global trends in the state of world marine stocks since 1974	4
4.	Theoretical schematic representation of requirements related to types of products	88
5.	Traceability drivers in the food sector	119

Boxes

1.	Major food scares	14
2.	Who is responsible for fisheries sustainability?	16
3.	Consumer demand – reliable?	31
4.	Foodvest Ltd – responsible fish procurement	34
5.	McDonald's Sustainable Fisheries Programme	35
6.	Chain-of-custody certification	43
7.	Sainsbury's sustainability strategy	44
8.	The case of Nile perch	54
9.	The MSC's Risk-Based Framework (RBF)	56
10.	No to regulating non-product PPMs, voluntary labels OK	58
11.	Alaska salmon re-certification	60
12.	The Codex Alimentarius	68
13.	Product versus process control	70
14.	Aquaculture production and trade	76
15.	The HACCP system	79
16.	ISO Technical Committee ISO/TC 234, Fisheries and Aquaculture	84
17.	Thai Quality Shrimp	102
18.	India – clustering fish farms to improve production and market access	104
19.	Viet Nam and SQF 1000	104
20.	Zero tolerance	108
21.	WWF benchmarking study of certification programmes for aquaculture	110
22.	Buyers' wish list for certification schemes	114
23.	Existing public traceability systems – some examples	120

Abbreviations and acronyms

AB	accreditation body
ACC	Aquaculture Certification Council
AQS	Alaska Quality Seafood
ASC	Aquaculture Sub-Committee
ASEAN	Association of Southeast Asian Nations
ASMI	Alaska Seafood Marketing Institute
B2B	business-to-business
B2C	business-to-consumer
BMP	best management practice
BRC	British Retail Consortium
BSE	Bovine spongiform encephalopathy
CAC	Codex Alimentarius Commission
CCvD–HACCP	Netherlands National Board of Experts–HACCP
CEO	chief executive officer
CJD	Creutzfeldt-Jakob disease
Code	FAO Code of Conduct for Responsible Fisheries
COFI	FAO Committee on Fisheries
CSR	corporate social responsibility
EFM	effective fisheries management
EU	European Union
FAM	Fisheries Assessment Methodology
FAO	Food and Agriculture Organization of the United Nations
FDA	Food and Drug Administration (the United States of America)
FMI	Food Marketing Institute
FOS	Friend of the Sea
FSIG	Fish Sustainability Information Group
FSMS	Food Safety Management Scheme
GAA	Global Aquaculture Alliance
GAP	good aquaculture practice
GFSI	Global Food Safety Initiative
GHP	good hygienic practice
GTZ	German Agency for Technical Cooperation
HACCP	Hazard Analysis and Critical Control Point (system)
IAFI	International Association of Fish Inspectors
IFFO	International Fishmeal and Fish Oil Organisation
IFS	International Food Standard

IPPC	International Plant Protection Convention
ISEAL	International Social and Environmental Accreditation and Labelling Alliance
ISO	International Organization for Standardization
IUU	illegal, unreported and unregulated (fishing)
MEL	Marine EcoLabel-Japan
ML	maximum limit
MRL	maximum residue limit
MSC	Marine Stewardship Council
NGO	non-governmental organization
NMFS	National Marine Fisheries Service
OECD	Organisation for Economic Co-operation and Development
OIE	World Organisation for Animal Health
PCB	polychlorinated biphenyl
PPM	production and processing method
RBF	risk-based framework
RFMO	regional fisheries management organization
SeaFIC	Seafood Industry Council (New Zealand)
SIGES	Integrated Management System
SOP	standard operating procedure
SPS Agreement	Agreement on the Application of Sanitary and Phytosanitary Measures
SQF	Safe Quality Food
SSPO	Scottish Salmon Producers' Organisation
TBT	technical barrier to trade
TBT Agreement	Agreement on Technical Barriers to Trade
UNCLOS	United Nations Convention on the Law of the Sea
URI	University of Rhode Island
WHO	World Health Organization
WTO	World Trade Organization
WWF	World Wide Fund for Nature

Executive summary

Private standards and related certification are becoming significant features of international fish trade and marketing. In the food safety area, private certification schemes emerged to verify compliance with government-mandated requirements for firms to introduce Hazard Analysis and Critical Control Point (HACCP) food safety management systems. These apply to food generally, including fish and seafood. The more recent proliferation of private standards schemes in fisheries and aquaculture has emerged in areas where there is a perception that public regulatory frameworks are failing to achieve desired outcomes, such as sustainability and responsible fisheries management, or to ensure food safety, quality and environmental sustainability in the growing aquaculture industry. A relatively new development is governments themselves utilizing private market certification schemes to gain traction in their own policy frameworks. The public-private interface is changing and private standards and certification schemes are an important part of that dynamic.

There is scant empirical evidence on the market significance of private standards. This report analyses the two main types of private standards affecting fish trade and their implications for a range of stakeholders, as well as their overall policy and governance implications. It concentrates on:

- “Ecolabels”, or private standards and certification schemes related to the sustainability of fish stocks (Chapter 4), designed to incentivize responsible fisheries practices and to influence the procurement policies of large retailers and brand owners, as well as the purchasing decisions of consumers.
- Private standards and certifications related to food safety and quality (Chapter 5). Quality and safety criteria apply to fish and seafood from both marine capture and farmed sources. Private certification schemes specific to aquaculture have also emerged over the last decade. Aquaculture now accounts for almost half (47 percent) of fish for food supply. Private standards respond to concerns about aquaculture by offering guarantees related to quality, safety, environmental impacts, social responsibility, traceability, and transparency of production processes.

WHAT IS DRIVING THE DEVELOPMENT OF PRIVATE STANDARDS IN FISHERIES AND AQUACULTURE?

Large-scale retailers and food services now drive the demand for certification to private standards schemes, in both the food safety/quality and sustainability areas. Private standards are a key mechanism for large-scale retailers and commercial brand owners to translate requirements – both product and process specifications – to other parts of the supply chain. This is especially important as supply chains become more vertically integrated. From the perspective of firms, private standards and the certification sitting behind them can serve as mechanisms for safety and quality assurance, traceability, standardization of products from a range of international suppliers, and transparency of production processes. Attachment to an environmental standard or ecolabel provides insurance against boycotts and “bad press” from environmental groups and in the media, but it also helps retailers and brand owners tap into and grow consumer demand for ethical products. Corporate social responsibility policies now regularly include references to a range of private standards. The fisheries procurement policies of most large retailers typically include a significant sustainability component, often with targets for wild-caught fish to be certified to an ecolabel, and for farmed fish and

seafood to be certified to an aquaculture certification scheme. Suppliers working at the post-harvest level are increasingly required to be certified to a private food safety management certification scheme. The onus is therefore increasingly on suppliers to verify that their products meet certain standards. Certification provides this “burden of proof”.

ECOLABELS AND MARINE CAPTURE FISHERIES

Despite national and international mechanisms to improve the sustainability of fish stocks, the state of some of the world’s fisheries remains fragile. Disappointment with progress on sustainability has led to the development of ecolabelling certification schemes to influence the purchasing decisions of consumers and the procurement policies of retailers and food services selling fish and seafood products, as well as to reward fisheries engaging in responsible fishing practices. A range of ecolabelling and certification schemes exists in the fisheries sector, each with its own criteria, assessment processes, levels of transparency and sponsors. What is covered by the schemes can vary considerably: bycatch issues, fishing methods and gear, sustainability of stocks, conservation of ecosystems and even social and economic development. The sponsors or developers of standards and certification schemes for fisheries sustainability also vary – private companies, industry groups, non-governmental organizations (NGOs), and even some combinations of stakeholders. A relatively new development is government-sponsored national ecolabels (e.g. in France and Iceland). The range of schemes is described in Chapter 4, as are the FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries. The Guidelines set substantive minimum criteria and have become the international reference for ecolabelling schemes.

While it is difficult to estimate the volume of ecolabelled certified products on the international market, the two largest international schemes (both NGO-sponsored), claim to cover 7 percent and 10 percent, respectively, of the world’s capture fisheries. However, together this amounts to less than one-fifth of wild capture landed product. Probably only a small percentage of certified raw material ends up as a labelled product. Moreover, despite the exponential growth in the number of ecolabelled products on the market overall, they are also concentrated in certain species (salmon, white groundfish) and certain markets. The main demand for ecolabelled products appears to be in pockets of the European market (Germany, the Netherlands, the United Kingdom of Great Britain and Northern Ireland), and the United States of America (especially in the food service industry).

The costs and benefits of ecolabelling and certification accrue differently to different stakeholders. Retailers are the main drivers of the ecolabelling phenomenon and reap the most rewards in terms of value-addition to their brand and reputation, risk management, ease of procurement, and potential price premiums, at relatively low or no cost (relating to chain of custody certification or licence fees). In contrast, fishers assume the main cost burden. The actual costs of certification, including experts’ fees, can range from a few thousand United States dollars to up to US\$250 000 depending on the size and complexity of the fishery, and on the scheme chosen. In terms of benefits to fishers, there is some evidence of more secure supply relationships based on certification, consolidation of position existing markets, and of new niche markets for environmentally friendly products. However, there is only spotty evidence of price premiums accruing to certified fish and seafood.

At present, fisheries in developing countries represent a small minority of certified fisheries, most of which are large-scale. This is because developing countries have a limited presence in the markets, species, types of products, and supply chains where pressure to be certified is greatest. In addition, ecolabelling schemes do not translate well into the typical fisheries environment in developing countries (insufficient

fisheries management regimes, data deficiencies, small-scale multispecies fisheries), while the high costs of certification are often prohibitive for small-scale or resource-poor operators.

In the future, the procurement policies of large international food firms with targets for ecolabelled fish are likely to drive demand and spread it to new markets. More fisheries will need to be certified to meet that demand. Yet despite exponential growth in certification, some retailers have already had to downgrade their procurement targets owing to a lack of supply. Future supply gaps could also be caused by quota reductions in certified fisheries and debates over re-certification in significant fisheries. There are currently no indications that any new international private schemes are imminent. The emergence of national schemes (e.g. in France and Iceland) might affect that equation. National ecolabels, alongside regional and local quality marks based on sustainability claims, will add further complexity to international markets for ecolabelled products. The underlying rationale for any label or claim based on provenance is to promote the quality of those products over similar products from other geographical areas, a different motive than trying to improve the sustainability of the world's fisheries. In any case, whether public or private, the quality of ecolabelling schemes is crucial – they must be transparent, robust and consistent with the FAO Guidelines. A mechanism for judging the credibility of schemes is required.

There appears to be a fledgling sense of the limits of private certification. Industry representatives from some areas are starting to question the value of certification to an independent scheme, arguing that their reputations for good fisheries management are well established and that there should be another way to “prove” good management without resorting to costly certification to a private scheme. They are calling for alternative mechanisms to verify good fisheries management, perhaps based on the implementation of the FAO Code of Conduct for Responsible Fisheries. If these calls gain greater traction, they could affect the future viability of private ecolabelling schemes, and put pressure on governments to enhance global governance and regulatory frameworks for sustainable fisheries.

PRIVATE STANDARDS AND CERTIFICATION FOR FOOD SAFETY AND QUALITY IN FISHERIES AND AQUACULTURE

National and international regulatory frameworks to ensure food safety systems that function across national borders are well entrenched. The joint FAO/World Health Organization (WHO) Codex Alimentarius Commission (Codex, or the CAC) is the global reference for national food safety and quality strategies. However, fish exporters still face safety and quality-control regimes that vary from one jurisdiction to the next, as well as a growing proliferation of standards being introduced by the private sector. In addition to their firm-specific product and process specifications, many large retailers, commercial brand owners and food service industry firms require their suppliers of processed fish and seafood to be certified to a national or international food safety management scheme (FSMS), and for aquaculture products to be certified to one or other scheme that merges quality and safety with environmental protection, animal health and even social development. These, along with some public certification schemes, are described in Chapter 5.

The pressure on producers (fish farmers) and processors (of both wild capture and farmed fish) to comply with private standards depends on the market, how that market is structured, and on the type of product being sold. As in the ecolabels arena, large-scale retailers and food firms are not equally demanding of all their suppliers or product lines. Requirements are more stringent for private-label and highly processed fish and seafood products than for basic commodity fish and seafood. For fish and seafood processors producing brand products or private-label products, certification would be essential. The pressure to comply with private standards is more intense for suppliers

to markets in northern Europe, where a higher proportion of fish and seafood is sold in supermarkets, where there is a greater predominance of processed and value-added products, and where there are more private-label products. In terms of requirements for certified aquaculture, the market in the United States is also important. The more direct the supply relationship and the more integrated the supply chain, the more private standards are likely to enter the equation.

The cost of certification to an FSMS could range from several thousand to hundreds of thousands of United States dollars, depending on the size of the company, the type of operation, and the gap between current systems and those required by the private standard schemes. Some costs are direct (licensing fees, audit fees to certification companies) while others are indirect, e.g. management time spent in planning and implementing any improvements required, developing new systems, and the costs of actual plant or gear upgrades. Fish farmers and processors bear a disproportionate share of the costs of certification compared with those at the retail end of the supply chain where demands for certification generate. The costs of compliance are disproportionately higher for small operators where there are few economies of scale. Retailers, alongside commercial brand owners, stand to reap the main benefits of private standards, in terms of traceability, risk management, product consistency and protection against litigation related to food safety failure.

The costs of certification can be prohibitive for developing country operators. However, with the exception of farmed shrimp or processed seafood (e.g. canned tuna, frozen hake fillets), developing countries have so far had relatively little exposure to the pressure to comply with private safety and/or quality standards. They supply proportionately smaller volumes into markets where private standards are most prevalent. They typically supply non-processed or minimally processed fish, while private standards apply mainly to processed value-added products for brands or private labels. In addition, most of the fish from developing countries is traded via commodity trade arrangements rather than direct supply contracts, so they have a limited direct interface with retailers and private standards schemes.

While there have been some attempts at harmonization in FSMSs (described in Chapter 5), there is little evidence to suggest that retailers are prepared to give up their own mix of specifications and requirements for certification. Instead, it appears that global schemes sit over national collaborative schemes, which individual retailers sign up to and then add on their own individual product and process specifications (related to safety and quality as well as other aspects of their corporate social responsibility [CSR] policies). This is perhaps the clearest evidence that private standards are not only designed to provide guarantees against food safety failures, they are also tools for differentiating retailers and their products.

Private standards relating to food safety reflects the need of buyers to be assured that good practices have been implemented properly throughout the supply chain, rather than a lack of confidence in public food safety management systems, including the lack of direct access to audit reports on individual operators. This is particularly irksome for governments in exporting countries that have been certified by food inspection authorities in importing countries – as is the case in the European Union (EU) certified “competent authorities” – as having an effective food safety and quality management regime and the competence to verify compliance with food safety standards. For developing countries, it is increasingly clear that the main barrier to increased exports is no longer import tariffs but quality- and safety-related import requirements in import markets. The range of private standards adds to that challenge.

POLICY AND GOVERNANCE IMPLICATIONS OF PRIVATE STANDARDS

The impact of private standards – ecolabels, safety and/or quality or aquaculture certifications animals – is not uniform across markets, species, or types of products.

However, overall, the impact of private standards in the trade and marketing of fish and seafood is likely to increase as supermarket chains consolidate their role as the primary distributors of fish and seafood products, and as their procurement policies move away from open markets towards contractual supply relationships. As the leading retail transnationals extend their global reach, their buying strategies are likely to progressively influence retail markets in East Asia, Africa, Eastern Europe and Latin America. Key issues related to the overall impact of private standards in fisheries and aquaculture and how they affect various stakeholders require resolution.

Assessing the quality and credence of private standards and related certification

The proliferation of private standards causes confusion for many stakeholders: fishers and fish farmers trying to decide which certification scheme will bring the most market returns; buyers trying to decide which standards have most credence in the market and will offer returns to reputation and risk management; and governments trying to decide where private standards fit into their food safety management and resource management strategies. Transparency and good governance in private voluntary schemes is imperative. A mechanism for judging the quality of schemes is required.

The FAO Guidelines on Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries provides minimum substantive criteria and an agreed international reference for capture fisheries, as will the recently agreed FAO aquaculture guidelines for aquaculture. However, debate continues as to assessment methodologies, who should carry out any benchmarking exercise, and for what purpose (as an assessment tool, a formal benchmark, or to achieve mutual recognition). Benchmarking might only provide a snapshot in time, and there is a lack of consensus on key definitions such as “sustainability” (or even more complex concepts like “social sustainability”).

Reducing and/or redistributing compliance costs

Harmonization would help to reduce compliance costs, especially those associated with multiple documentation and audits (public and private). Issues related to the quality, consistency and capacity of certifiers also need to be addressed. These issues are discussed in Chapter 6.

Arguably more problematic than the actual costs of certification is the distribution of those costs. At present, the compliance costs associated with certification to a private standards scheme are borne disproportionately by those upstream in the supply chain rather than those downstream where the demands for certification generate. Yet the most robust evidence of price premiums suggests that they accrue to the retailers who demand certification. Should these retailers help foot the bill for certification? Is some redistribution of costs possible, and using what levers? Some governments already allocate public funds to help their industry offset the costs of private certification. Further international dialogue and sharing of experiences are needed.

Integrated traceability

It is the traceability aspects of private standards schemes that retailers and brand owners find most compelling – they provide valuable guarantees and a risk-management function when there is a lack of information on public systems and when governance in some exporting countries is perceived to be weak. Audit reports from private certifiers provide detailed evaluations on individual operators, whereas inspection reports by food control authorities are accessible to other public institutions rather than to individual buyers. Traceability is especially important in the context of increasingly complex supply and distribution systems and where products pass through multiple hands and even multiple countries before reaching the final consumer. Robust traceability and chain-of-custody mechanisms also prevent fraud, or non-certified

products (of inferior quality or different origins) being passed off as certified product.

There is a multiplicity of drivers for traceability in the food sector generally. Multiple mandatory traceability systems already operate in the fisheries and aquaculture sector (Codex document CAC/GL 60-2006, catch certification, country of origin, and mechanisms for combating illegal, unregulated and uncontrolled [IUU] fishing). These drivers are discussed in Chapter 6, as is the feasibility of designing one system that would meet multiple requirements: food safety, catch certification, IUU and the chain-of-custody aspects of private voluntary certification schemes, as well as public regulatory requirements.

Challenges and opportunities for developing countries

Fish and seafood are important income earners for many developing countries. Developing countries are crucial for current and future global supplies of fish and seafood products. They account for around half by value, and about 60 percent by volume, of all seafood traded internationally. However, certification to private standards schemes is problematic for many developing countries. Developing country operators remain underrepresented particularly among the ranks of certified fisheries (ecolabels) and certified fish processors (FSMSs). They are better represented in aquaculture, where there have been proactive strategies to organize small-scale farmers into associations, self-help groups or “clusters”. In general, certified operators from developing countries tend to be those that are large-scale and involved in more integrated supply chains with direct links to developed country markets (through equity or direct supply relationships).

While some developing countries have argued that private standards pose a barrier to trade, there is no solid evidence of markets “drying up” as a result of demands for certification. Demands for certified products tend to be concentrated in markets and species that are not the main species traded by developing countries. Moreover, evidence suggests that meeting and maintaining equivalence to mandatory public standards of developed country markets currently poses more of a barrier to trade than do requirements to meet private standards. For developing countries to take advantage of the opportunities presented by private standards, they must first be able to meet the requirements of mandatory regulatory requirements in importing countries. This would create the foundations for future responses to private standards, if and when demand spreads to typical developing country species. Any technical cooperation in developing countries would be best focused on ensuring that the public systems are appropriate.

While certification is problematic for many developing country fishers, farmers and processors, it might also provide a tool for engagement with large-scale buyers. The challenges and costs of certification need to be weighed against the potential opportunities to access high-value and/or niche markets in key importing countries, and to participate in direct supply relationships, with less price volatility than selling through traditional auction markets. There is also potential for more value-addition in developing countries that have a competitive advantage in lower labour costs.

Impacts on international trade and World Trade Organization mechanisms

The impact of private standards on international trade has been raised for discussion in relation to two World Trade Organization (WTO) agreements: the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement); and the Agreement on Technical Barriers to Trade (TBT Agreement).

Some countries have argued that private standards go beyond relevant international public standards, have no particular scientific rationale, and are therefore inconsistent with the obligations of the SPS Agreement. Some countries fear that private standards could allow developed countries to impose their domestic policy frameworks either

related to fishing methods and/or other standards (labour, human rights), offering grounds to discriminate against developing country products. Similarly, public sector financial support for private certification could be considered a “subsidy” to local industry. Further analysis is required to determine the consistency or otherwise of private standards with international standards and obligations of the SPS and TBT Agreements.

While governments have the right to challenge the actions of other governments within the context of the WTO, the grounds for challenging non-governmental actors is less clear. Requirements for only ecolabelled fish and seafood could mean that products could be excluded from certain markets because of perceptions of buyers and/or retailers about whether governments (from exporting countries) have lived up to their obligations for good fisheries management. What recourse governments have to challenge these assessments and their implications is still largely unknown. Further enquiry and evidence of the actual effects of private standards on trade opportunities, especially for developing countries, are needed. While volumes of certified products remain modest, the impact on trade is likely to be slight. However as the boundaries between public and private standards and requirements start to blur, there are implications for trade that need to be closely monitored.

Do private standards complement, duplicate or undermine public regulation and policy frameworks?

Private standards pose a key question for governments: Do they duplicate, complement, or undermine public regulatory frameworks for food safety assurance and sustainable fisheries and aquaculture.

After over a decade of experience, there is some evidence of improvements resulting from ecolabelling and certification, but these are mainly indirect, such as reductions in bycatch, fewer impacts on ecosystems, improved surveillance and changes in data management. Certification methodologies are also being used as self-assessment tools for fisheries, as a means to define gaps in performance and to set a roadmap for improvement. However, in terms of overall fisheries management and stock status, it is difficult to document evidence of improvements resulting from certification. Most of the fisheries certified to date were already well managed prior to certification.

Governments need to determine how private market mechanisms fit into the overall governance framework for sustainable fisheries. Some governments have allocated funds to industry to offset the costs of certification as a mechanism for gaining traction in their own policy objectives. Others countries have co-opted the concept but under public management and ownership (national ecolabels), while still others see ecolabels more as a marketing tool. In any case, voluntary certification schemes are no substitute for good public management. Governments must continue to actively embed the FAO Code of Conduct for Responsible Fisheries into their national management strategies to ensure that fish stocks are available for future generations. The role of aquaculture needs to be part of this equation. Ecolabels may have highlighted the lack of any international framework by which governments can assess and monitor their own progress in fisheries governance, a situation that needs to be addressed.

Private safety and/or quality standards are typically based on mandatory regulation and, therefore, are not likely to conflict with public food safety regulation. Duplication is more likely to be an issue, if not in relation to the content of requirements, then in methods of compliance and verification (including multilevel documentation). There is little evidence to suggest that compliance with private standards facilitates the implementation of public standards. Rather, compliance with public standards provides a baseline for, and is therefore essential for, meeting the additional requirements included in private standard schemes. Like fisheries certified to an ecolabelling scheme, operators that achieve certification to a private FSMS are mainly those that already

run effective food safety management systems. Under this scenario, it is unlikely that certification incentivizes better food safety management. In short, efforts to improve food safety governance either at the national level or internationally are more likely to be effective if they concentrate on ensuring that the public systems are appropriate.

Private standards overall are unlikely to conflict with public regulatory systems. They are typically either based on public requirements or include compliance with public requirements as part of the criteria for certification. They may duplicate public systems (food safety) or expose gaps in governance (lack of an international framework to assess fisheries sustainability), but they are unlikely to undermine them. Whether or not private standards incentivize better management remains unclear. Moreover, the issue of whether profit-maximizing private sector firms or NGOs are the best agents for incentivizing better food safety management and sustainability in fisheries and aquaculture also requires further debate. Are private standards an efficient mechanism for achieving public policy goals of food safety assurance and the sustainable use of natural resources? If they are compensating for perceived shortfalls in public governance, then they might be simply treating the symptoms when a more effective solution would be to invest in strategies to improve those public systems. Governments need to determine, both individually and collectively, how private market mechanisms fit into public policy frameworks for fisheries and aquaculture, and how they will engage with them.

1. Introduction

1.1 FISHERIES AND AQUACULTURE PRODUCTION, UTILIZATION AND TRADE

1.1.1 Production, consumption and utilization

Fisheries and aquaculture are vital for global food security. While fish supply from wild capture fisheries has stagnated over the years, the demand for fish and fish products continues to rise. Consumption has more than doubled since 1973. The perceived health benefits of fish and technological developments enabling its increased availability in the form of convenience products suited to more modern and affluent lifestyles are key reasons for this rise in consumption.

Increasing demand for fish and seafood has been met by a robust increase in aquaculture production, with an estimated average annual growth rate of 8.5 percent in volume in the period 1990–2005. As a result, the contribution of aquaculture to fish food supply has increased significantly, reaching almost half (47 percent) in 2008 from a mere 8 percent in 1970. This trend is projected to continue, with the contribution of aquaculture to fish food supply estimated to reach 60 percent by 2020 (Table 1).

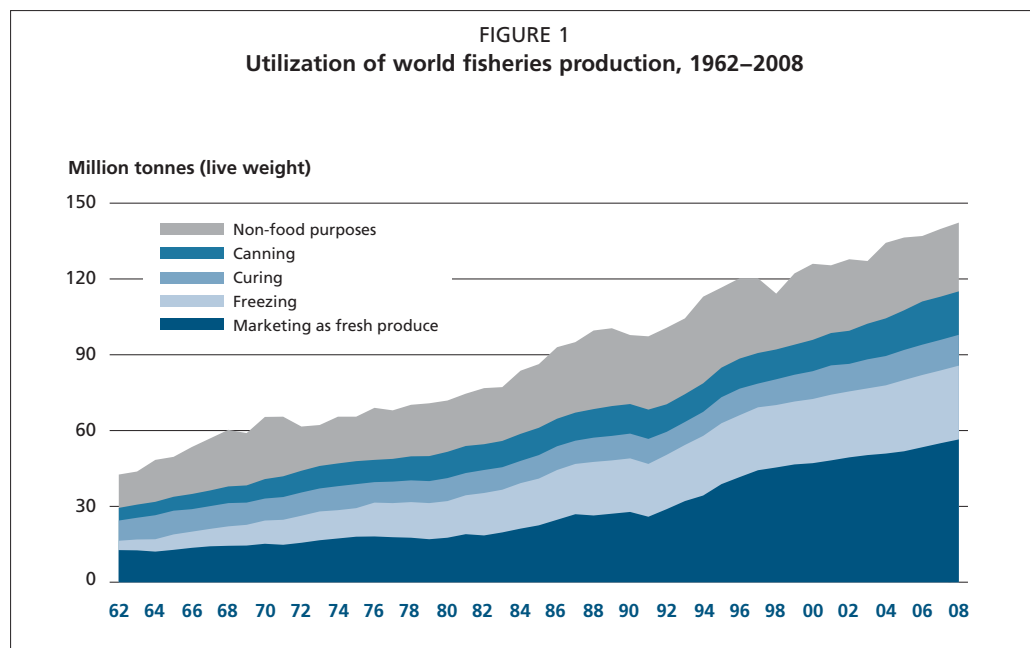
TABLE 1
World fisheries and aquaculture production and utilization

	2003	2004	2005	2006	2007	2008	2009
	(Million tonnes)						
PRODUCTION							
Inland:							
Capture	9.0	8.6	9.4	9.8	10.0	10.2	10.1
Aquaculture	25.5	25.2	26.8	28.7	30.7	32.9	35.0
Total inland	34.4	33.8	36.2	38.5	40.6	43.1	45.1
Marine:							
Capture	81.5	83.8	82.7	80.0	79.9	79.5	79.9
Aquaculture	17.2	16.7	17.5	18.6	19.2	19.7	20.1
Total marine	98.7	100.5	100.1	99.6	99.2	99.2	100.0
TOTAL CAPTURE	90.5	92.4	92.1	89.7	89.9	89.7	90.0
TOTAL AQUACULTURE	42.7	41.9	44.3	47.4	49.9	52.5	55.1
TOTAL WORLD FISHERIES	133.2	134.3	136.4	137.1	139.8	142.3	145.1
UTILIZATION							
Human consumption	103.4	104.4	107.3	110.7	112.7	115.1	117.8
Non-food uses	29.8	29.8	29.1	26.3	27.1	27.2	27.3
Population (billions)	6.4	6.4	6.5	6.6	6.7	6.8	6.8
Per capita food fish supply (kg)	16.3	16.2	16.5	16.8	16.9	17.1	17.2

Note: Excluding aquatic plants. Data for 2009 are provisional estimates.

Source: Adapted from: FAO. The State of World Fisheries and Aquaculture 2010, Table 1. Rome, FAO. 2010. 197p.

Fish utilization has also changed significantly in the last few decades. Advances in technology and logistics, in particular improvements in storage and processing capacity, together with major innovations in refrigeration, transportation, food-packaging and fish-processing equipment have enabled product diversification. Vessels incorporating processing facilities are able to stay at sea for extended periods, and permit the distribution of more fish in fresh or frozen forms as well as higher yields from the available raw material. The proportion of fish marketed in live or fresh form increased from 25 percent in 1980 to more than 39.7 percent in 2008. The proportions represented by frozen, canned and cured product have remained relatively static over that period although frozen fish still represents about half of total fish processed for human consumption (Figure 1).



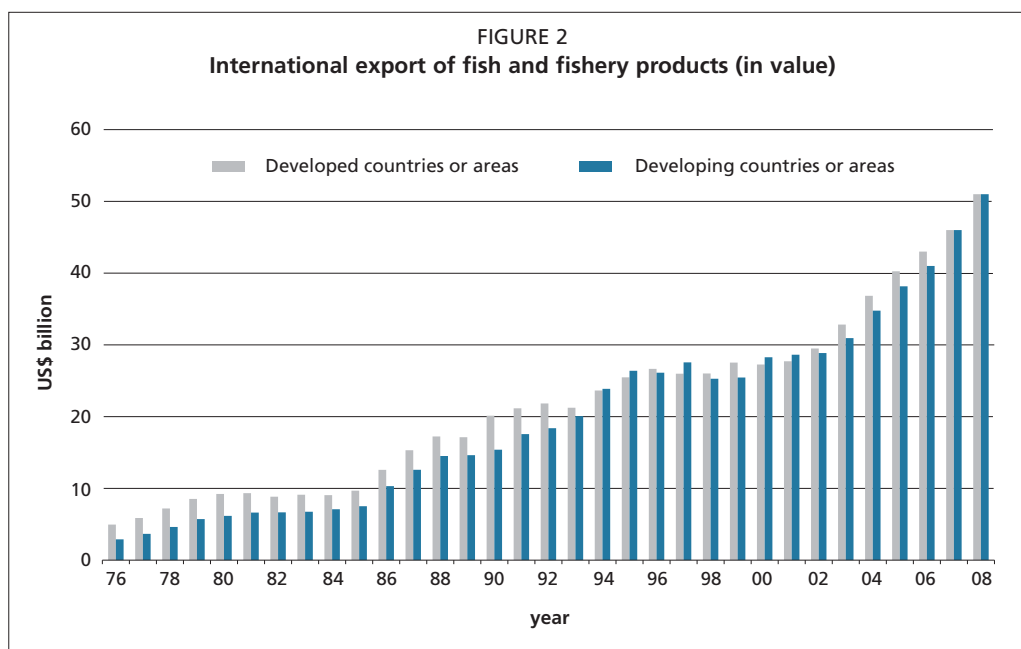
Source: FAO. The State of World Fisheries and Aquaculture 2010, Figure 20. Rome, FAO. 2010. 197p.

1.1.2 Fish trade

Fish and fish products are the most traded food commodity. World fish trade has developed rapidly in the last three decades, increasing from a US\$8 billion in 1976 to US\$101.8 billion in 2008. In real terms (adjusted for inflation), fish exports increased by 104 percent between 1985 and 2008, including a 50 percent increase in the period between 1998 and 2008. Indeed, more than one-third (39 percent live weight equivalent) of total annual production enters international trade. About 50 percent (US\$50.6 billion) of that international fish trade by value originates in developing countries (Figure 2), where it represents an important source of foreign exchange earnings and employment opportunities. Net fish exports (i.e. the total value of exports less the total value of imports) from developing countries have increased significantly in recent decades, growing from US\$1.8 billion in 1976 to US\$26.5 billion in 2008.

However, the bulk of fish and seafood products from developing countries end up in developed countries. Three-quarters (75 percent) by value of the fisheries exports from developing countries ends up in developed country markets (FAO, 2010). Three main

markets dominate: the European Union (EU), Japan and the United States of America. China is also playing an increasingly important role as both a fish importer and exporter (often re-exporting value-added imported product). These markets dominate international fish trade in terms of prices as well as market access requirements.



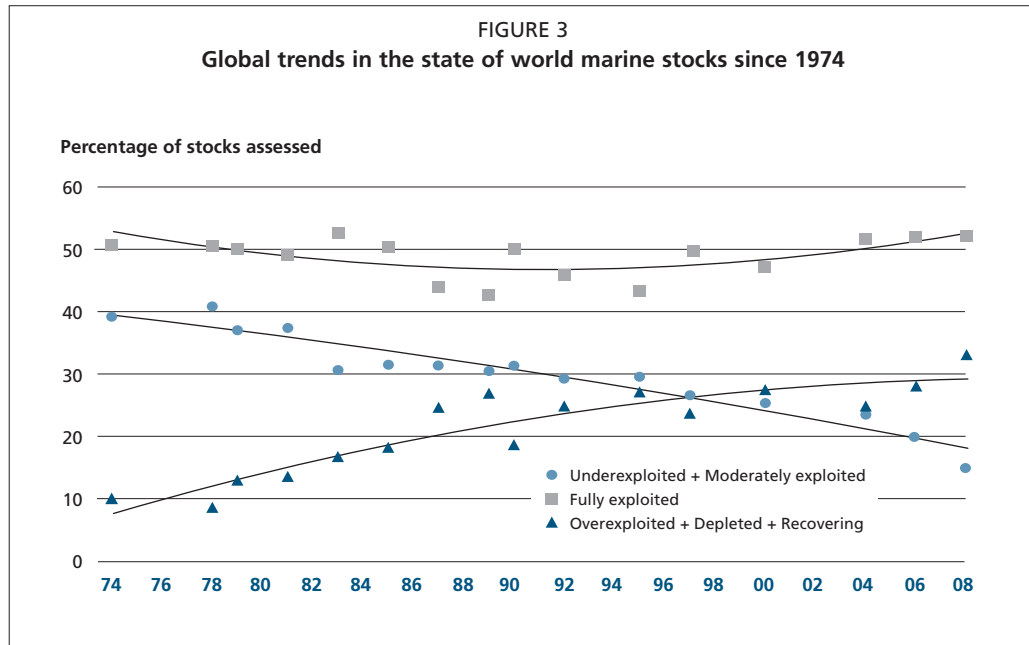
Source: FAO Globefish (www.globefish.org).

Globalization of fish supply chains means that a significant amount of fish and seafood is caught or farmed in one part of the world, transported to another for processing and finally consumed in yet another country. Systems to enable international market access and to ensure food safety that function across national borders are therefore vital. A range of national and international regulatory frameworks has been developed accordingly. Consumers expect their food to be safe and of acceptable quality regardless of how and where it is produced, processed or ultimately sold. While safety and quality are of primary concern – consumers' interests tend to be strongest where the potential impact (such as a threat to their personal health) is most direct – consumers in developed countries are also increasingly interested in the social or environmental impacts of the food they consume. This trend is also starting to take hold in emerging and developing countries. In terms of fish and seafood, this means that more and more consumers are concerned that capture stocks are managed sustainably, that wider ecosystems and related plant and animal life are protected, and that social responsibility is exercised throughout the value chain, from production through to distribution.

1.2 STATE OF THE RESOURCE

In the past few decades, serious concerns have been raised about the state of the world's marine resources. In its regular publication *The State of World Fisheries and Aquaculture*, FAO updates the international community on the status of global fish stocks. In its latest report (based on 2009 figures) it stated that more than half (53 percent) of the stocks were fully exploited (FAO, 2010). This means that they are producing at or close to their maximum sustainable limits with little or no potential for catch increases. Slightly more than one-quarter are either overexploited

(28 percent), depleted (3 percent) or recovering from depletion (1 percent), and hence need rebuilding and protection from further stock declines. Only about one-fifth of stocks monitored by FAO currently have the potential to produce more (Figure 3). Despite the introduction of a range of national and international mechanisms aimed at managing the sustainability of marine resources, these proportions have remained fairly stable in the last decade or so (FAO, 2010).



Source: FAO. The State of World Fisheries and Aquaculture 2010, Figure 19. Rome, FAO. 2010. 197p.

While aquaculture production has increased to meet some of the increased demand for fish and seafood, it is not a panacea. Fish from some marine capture stocks is used as feed for farmed fish. Despite increases in feed conversion efficiencies and attempts to find alternative sources of fish feed, some 20 percent of world fish production goes into fishmeal and fish oil.

Increases in supplies of farmed fish and seafood do not reduce the need for measures to restore fisheries and to ensure the sustainability of wild fish stocks and related ecosystems. Moreover, aquaculture has posed some challenges to the increasingly positive image of fish and seafood as sources of healthy food. Concerns relate to the use of veterinary drugs and the risks of contamination and tainted feed, as well as other environmental concerns associated with fish farming (e.g. marine ecosystems, farmed fish escaping into wild aquatic environments, and destruction of mangroves).

1.3 PROLIFERATION OF PRIVATE STANDARDS IN GLOBAL FISH TRADE AND MARKETING

In addition to the range of public regulatory frameworks for food safety and quality and for the protection of natural resources, including fisheries, a range of related standards has been introduced by the private sector. Private standards and related certification are becoming significant features of international fish trade and marketing. The standards relate to a range of objectives including sustainability of fish stocks, environmental protection, food safety and quality, as well as to aspects such as animal health and even social development. They are increasingly linked to private firms' corporate social responsibility (CSR) strategies.

The proliferation of private standards is partly a response to perceptions that public regulatory frameworks have been inadequate to ensure the sustainability of fisheries and food safety. However, they are perhaps even more a result of attempts by private firms to differentiate themselves and their products in increasingly competitive markets. They also serve as a means of protecting corporate reputations from negative publicity driven by civil society.

The food industry overall has undergone considerable consolidation and concentration in industrialized countries, resulting in some markets being dominated by fewer but increasingly powerful food firms, typically large-scale processors and retailers. These firms have significant influence over other businesses in the food chain, including in terms of setting environmental, quality and safety requirements. These requirements are particularly prevalent where they relate to a firm's "private label" or house brand products, a growing trend in fish and seafood marketing (albeit to a lesser extent than other food commodities). Moreover, some private standards are in essence becoming international standards as they come to define the relationships between these globalized firms and their suppliers. From the perspective of the firm, private standards and the certification sitting behind them can serve as mechanisms for safety and quality assurance, traceability, standardization of products from a range of international suppliers, and transparency of production processes.

1.4 ISSUES ARISING FROM THE PROLIFERATION OF PRIVATE STANDARDS

The proliferation of private standards raises a range of issues:

- What role do private standards play in overall governance for fisheries sustainability and food safety?
- What value-addition do they and their related certification schemes offer? How do they interact with public regulation? Do they complement, duplicate or undermine public regulatory frameworks?
- Do they impose deadweight compliance costs for the various stakeholders in the supply chain or can they facilitate market opportunities? How are the costs and benefits distributed?
- Can they help facilitate international trade by encouraging good practices and by compensating for local institutional shortfalls or, instead, do they amount to a significant barrier to trade that threatens to undermine the internationally binding agreements of the World Trade Organization (WTO)?
- What are the implications for exporting developing countries and for small-scale fisheries and aquaculture?

There is currently a lack of empirical evidence on the growing market importance of private standards and in particular on their impacts on the various actors in the fish and seafood supply chain. The effects on markets and international trade are equally difficult to quantify. This technical paper outlines the context in which private standards are developing, including the increasing globalization of the food industry. It aims to sketch current practice and to shed some light on the issues arising in relation to the two main types of private standards that affect fish trade and marketing:

- "Ecolabels" or private standards and certification schemes related to the sustainability of fish stocks. Ecolabels are seals of approval given to products that are deemed to have fewer impacts on the environment than functionally or competitively similar products¹. Ecolabelling is a market-based tool to promote the sustainable use of natural resources by rewarding those in the fishing industry practicing responsible fisheries. The international debate around

¹ For a discussion of the theoretical foundations, institutional and legal aspects of ecolabelling, see Wessells *et al.* (2001).

ecolabels applies mainly to marine capture (and inland) fisheries, although the environmental impacts of aquaculture are also relevant.

- Private standards and certifications related to food safety and quality (from retailers in-house specifications to international food safety management schemes (FSMSs) designed for food generally but increasingly applied to fish and seafood. Private standards related to quality and safety criteria apply to fish and seafood from both marine capture and farmed sources, although prior to the processing stage of the supply chain their impact is mainly in aquaculture. A range of private standards schemes specific to aquaculture has also emerged in the last decade. Most aquaculture certification schemes include multiple standards criteria (safety, quality, environmental, social, animal health), and are used in order to market farmed fish as a safe, sustainable and environmentally sound alternative to fish and seafood from dwindling marine capture stocks.

Other types of private standards, such as organics, fair trade, or social and labour standards, have limited application in fisheries and aquaculture and are only considered for comparative purposes and where they are included as an aspect of a wider ecolabelling or food quality and/or safety scheme. Ecolabels and quality and/or safety standards schemes are covered in two separate chapters (Chapters 4 and 5). Each of those chapters:

- reviews the range of standards and certification schemes operating in relation to fish and seafood;
- attempts to define the characteristics of markets or segments within markets where the pressure to comply with those standards will be more or less intense;
- discusses the opportunities and challenges those private standards present for the various stakeholders in the fish and seafood supply chain (including governments, fishers and/or farmers, processors and retailers);
- examines the specific impact on international trade;
- discusses the interface between private standards and national public regulation and policy frameworks; and
- suggests areas requiring further investigation and attention.

The technical paper then examines key policy issues arising from the application of private standards generally in fisheries and aquaculture, including:

- opportunities for reducing and/or redistributing the costs of multiple standards and certification;
- the specific challenges and opportunities private standards pose for developing countries;
- the effects of private standards on international trade and their relationship to WTO mechanisms; and
- the extent to which private standards add value to global food safety governance, and global governance for fisheries and aquaculture sustainability.

The report draws on current literature and recorded debates in international fora and includes anecdotal evidence from market players. It attempts to describe private standards generally, and specifically as they apply to fish and aquaculture products.

2. Private standards: relevant definitions and a typology

2.1 STANDARDS – SOME RELEVANT DEFINITIONS

Standards, and related certification, are developed by a variety of public and private organizations, target variety of objectives and cover a variety of industrial activities. Consequently, the terminology is varied and rich and can lead to confusion. Therefore, it is important to define clearly the context and scope of standards and certification schemes as they apply to fisheries and aquaculture.

In fisheries and aquaculture, the relevant definitions and terminology derive from:

- the International Organization for Standardization (ISO) Guide 2: Standardization and related activities – General vocabulary (ISO, 2004);
- binding agreements of the WTO – the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), and the Agreement on Technical Barriers to Trade (TBT Agreement); and
- relevant food standards, guidelines and codes of practice issued by the Codex Alimentarius Commission (Codex, or CAC).

According to the ISO (2004), a standard is: “A document established by consensus and approved by a recognized body, that provides for common and repeated use, rules, guidelines, or characteristics for activities or their results, aimed at the achievements of the optimum degree of order in a given context.” It also notes that: “Standards should be based on the consolidated results of science, technology and experience, and aimed at the promotion of optimum community benefits.”

The TBT Agreement distinguishes mandatory standards (or technical regulations) from voluntary standards as: “A standard is a document approved by a recognized organization or entity, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory under international trade rules. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.”

In contrast, a technical regulation is defined as: “a document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.”

Other key definitions relevant to fisheries and aquaculture, such as certification, conformity assessment, audit, verification and many others are provided in Appendix III.

2.2 PUBLIC AND PRIVATE STANDARDS

Standards set by public authorities, usually referred to as “technical regulations”, are typically mandatory. Private standards by definition are voluntary, although as discussed later, they may in practice become de facto mandatory where compliance is required for entry into certain markets. Private standards and certification schemes have emerged for a number of reasons (described below). In the food safety area, private certification schemes emerged to verify compliance with government-mandated requirements for firms to introduce Hazard Analysis and Critical Control Point (HACCP) food safety management systems. In terms of fisheries and aquaculture, the

more recent proliferation of private standards schemes appears most evident in areas where there is a perception that public standards or regulatory frameworks are failing to achieve given outcomes (sustainability and responsible fisheries management, food safety assurance [especially for imported food], robust traceability) and/or where there is a desire to differentiate certain products or operators in the market.

Standards and the certification systems sitting behind them, whether public or private, are a means of assuring buyers of the quality of products or the conformity of processes and production methods. Quality aspects can be related to the product itself or the process by which it was produced. Standards and certification are especially useful where there is *information asymmetry*, that is, where buyers and consumers cannot easily judge certain quality aspects of products or production processes. These quality aspects include what are termed *credence goods*. Food safety and the environmental friendliness of products are both examples of credence goods because consumers cannot practically assess either aspect and use that assessment to inform their purchasing decisions (FAO, 2001). Standards, and certification against those standards, are a way of compensating for information asymmetry. Certification (and related labelling of certified products) offers verification or a “burden of proof” that given standards have been complied with.

2.3 A TYPOLOGY OF PRIVATE STANDARDS IN FISHERIES AND AQUACULTURE

Table 2 shows the wealth and range of standards and certification schemes (public and private) applying to fisheries and aquaculture. It is not an exhaustive list.

Private standards differ in terms of content, certification and verification methods, standards developer, and focus.

TABLE 2
Standards and certification schemes operating in fisheries and aquaculture

	Type ¹	Main market orientation	Market access issues addressed				
			Food safety	Animal health	Environment	Social/ethical	Food quality
Codex Alimentarius	S, C, G	Global	√	–	–	–	√
World Organisation for Animal Health (OIE)	S, C, G	Global	√	√	–	–	–
GLOBALG.A.P	S, CS	Europe	√	√	√	–	√
Global Aquaculture Alliance (GAA)/ Aquaculture Certification Council (ACC)	CS, L	United States	√	–	√	√	–
Naturland	CS, L	Europe	√	–	√	√	√
Friend of the Sea	C, S	Global	–	–	√	–	–
Seafood Watch	C, L	United States	–	–	√	–	–
Alter-Trade Japan (ATJ)	C, L	Japan	–	–	√	√	?
Federation of European Aquaculture Producers (FEAP) code of conduct	C	Europe	√	√	√	√	√
Safe Quality Food (SQF)	S, L, CS	Global	√	–	–	–	√
British Retail Consortium (BRC)	S, L, SC	Global	√	–	–	–	√
Quality Certification Services (QCS)	CS, L	Global	√	–	–	–	√
Fairtrade	L	Global	–	–	–	√	–
ISO 22000	S	Global	√	–	√	–	√
ISO 9001/14001	S	Global	–	–	√	–	√
Marine Stewardship Council (MSC)	C, S, L	Global	–	–	√	–	–
Fair-Fish	S, L	Switzerland	–	√	√	√	–
International Social and Environmental Accreditation and Labelling Alliance (ISEAL)	S, C, L	Global	–	–	√	√	–
Scottish Salmon Producers' Organization (SSPO), Code of Good Practice (COGP)	C, L	Global	√	√	√	–	√

TABLE 2 (continued)

	Type ¹	Main market orientation	Market access issues addressed				
			Food safety	Animal health	Environment	Social/ethical	Food quality
Pêche responsable Carrefour, France	C, L	Global	–	–	√	–	–
SIGES Salmon Chile	CS, L	Europe, United States	√	√	√	–	√
Shrimp quality guarantee ABCC, Brazil	CS, C, L	United Kingdom, Europe	√	√	√	√	√
Thai quality shrimp, GAP, Thailand	S, L	Europe, United States	√	–	–	–	√
COC-certified Thai shrimp, Thailand	S, L	Europe, United States	√	√	√	√	–
International Federation of Organic Agriculture Movements (IFOAM)	S, L	United Kingdom, Europe	√	√	√ Organic	√	√
Soil Association	S, L	United Kingdom	√	√	√ Organic	√	√
Agriculture Biologique	S, L	Europe	√	√	√ Organic	–	–
Bioland, Germany	CS, L	Europe	√	√	√ Organic	–	–
Bio Gro, New Zealand	S, L	Global	√	√	√ Organic	–	–
Debio, Norway	CS, L	United Kingdom, Europe	√	√	√ Organic	–	–
KRAV, Sweden	C, L	Europe	√	√	√ Organic	–	–
BioSuisse	C, L	Switzerland	√	√	√ Organic	–	–
National Association for Sustainable Agriculture, Australia (NASAA)	C, L	Global	√	√	√ Organic	–	–
Irish Quality salmon and trout	C, L	Europe	√	√	√ Organic	–	√
Label Rouge, France	C, L	France, European Union	√	–	–	–	√
La truite charte qualité	C, L	France, European Union	√	–	–	–	√
Norway Royal Salmon	S, L	Europe	√	√	–	–	√
Norge Seafood, Norway	S, L	Europe	–	–	√	–	–
Qualité aquaculture de France	S, L	France, European Union	–	–	√	–	√
Shrimp Seal of Quality, Bangladesh	S, L	Global	√	–	√	√	√
China GAP	C, CS	Global	√	√	–	–	√
Fishmeal and fish oil Code of Responsible Practice (CORP)	C, CS	Global	√	–	√	–	√
The Responsible Fishing Scheme	C, CS	United Kingdom	–	–	√ Sustaina- bility Responsible fishing	√ Safety of fishers	–

¹ S = standard, C = Code, G = guidelines, L = label, CS = certification scheme.
Source: Adapted from FAO (2009a).

2.4 PRODUCT AND PROCESS STANDARDS

In terms of content, standards can relate to products themselves (specifications or criteria for product attributes) or to processes (outlining criteria and practices for the way products are made). Food safety standards typically focus on process aspects with the overall goal of improving the safety of final products. However, they can also define product standards related to residues of additives, contaminants or in terms of microbiological criteria. Ecolabels focus on where fish and seafood come from and how they are harvested or farmed (and/or the impact of that harvest on related fauna and flora) rather than on aspects of the products themselves. Process standards might relate to performance criteria that establish verifiable requirements for the production process, or management criteria relating to documentation and monitoring.

In the fish and seafood area, some schemes are concerned with marine capture fisheries, some with aquaculture, and some with both. Recently, a standards scheme has been developed that deals exclusively with fishmeal² (and includes both safety and environmental considerations).

² The International Fishmeal and Fish Oil Organisation's Global Standard for Responsible Supply. See www.iffonet.net.

2.4.1 Focus linked to standards developer

Some standards and certification schemes cover a range of aspects but their primary focus is to a large extent determined by the interests of the developer. Standards developers include a range of actors:

- Buyers (individual retailers, processors, food service operators, etc.) – standards are internal to the company and might simply reflect product and process specifications required of suppliers and/or requirements for certification to an independent third-party certification scheme.
- Groups of producers and/or industry bodies – usually reflecting their quality claims, sometimes based on geographical origins, and often referred to as codes of conduct or codes of practice.
- Coalitions of retail firms – for food safety standards.
- Independent non-profit organizations or non-governmental organizations (NGOs).

In general, standards developed by retailers or groups of retailers primarily focus on quality and safety aspects, those developed by producers (harvest or aquaculture) concentrate on quality assurance, while those developed by NGOs are more directed at the environmental implications of fisheries and aquaculture. That is not to say that retailers, for example, are not interested in environmental issues. As discussed below, the fisheries procurement policies of most large retailers and processors now include a significant sustainability component, but in that case they are more likely to associate themselves with an existing ecolabel than to develop their own.³

2.4.2 Certification and compliance

Certification is the procedure by which a certification body or certifier gives written or equivalent assurance that a product, process or service conforms to certain standards. There are three main types of certification:

- *first-party certification*: by which a single company or stakeholder group develops its own standards, analyses its own performance, and reports on its compliance, which is therefore self-declared;
- *second-party certification*: where an industry or trade association or NGO develops standards. Compliance is verified through internal audit procedures or by engaging external certifiers to audit and report on compliance; and
- *third-party certification*: where an accredited external, independent, certification body, which is not involved in standards setting or has any other conflict of interest, analyses the performance of involved parties, and reports on compliance.

Private standards in fisheries and aquaculture are usually underpinned by certification schemes. Where standards are established by individual companies and based on their own product specifications, compliance is typically verified by internal audit procedures. However, where buyers require certification against a wider FSMS, third-party verification of compliance, by bodies independent of the standard setter and the organization to be audited, is the norm. This is also the case for the main ecolabelling schemes.

There have been attempts in various fora to define the determinants of a credible certification scheme. Some relate to certification schemes generally, for example: the International Social and Environmental Accreditation and Labelling (ISEAL) guidelines for certification programmes, and the Leuven Centre For Global Governance benchmark for assessing the credibility of certification initiatives (Marx, 2008). Others

³ Some corporations have been involved in partnerships to help fund the development of certification schemes (such as Unilever's involvement in setting up the Marine Stewardship Council [MSC]). Carrefour is one of the few retailers to have set up its own ecolabel: "Pêche responsable" for wild-capture fish.

are specific to fish and seafood. FAO has defined guidelines for the ecolabelling of fish and fishery products from marine and inland capture fisheries, and for aquaculture certification (discussed below).

In any case, the independence of certification is seen as a proxy for credibility – being audited by an independent body clearly offers a more credible judgment than a self-assessment: “For credence goods, one may rely on producer claims, but generally [there is] more trust in an independent third party to provide truthful information... In this case, either a third-party private certification may be used, or there may be government regulations requiring that certain product characteristics be revealed ... by means of government testing or inspections” (Roheim, 2003).

2.4.3 Business-to-business versus business-to-consumer models

Private standards related to food safety and quality, are typically business-to-business (B2B) arrangements, whereas those related to sustainability or environmental protection, or directed to other niche markets such as organics, typically follow a business-to-consumer (B2C) model. In the former case, certification is a tool for communicating assurance to buyers that the supplier is in compliance with the food safety and quality standard (although sometimes a quality mark is marketed directly to consumers). In the latter case, certification is marketed to consumers at point-of-sale, often through the medium of a label attached to the product. As discussed below, the B2B aspect of ecolabels and the certification process sitting behind them are becoming increasingly important.

3. The context: what is driving the development of private standards?

There is a variety of reasons for the proliferation of private standards. These are described in brief below.

3.1 PERCEIVED FAILURES IN PUBLIC GOVERNANCE

Private standards have been introduced in areas where there is a perception that public governance is falling short. This perception has been particularly prevalent in terms of the sustainability of natural resources and in terms of overall food safety, particularly on the occasion of food scares.

Food safety is traditionally the prerogative of government regulatory and inspection agencies. However, high-profile food scares in the last decade (Box 1), such as the bovine spongiform encephalopathy (BSE) case, and in relation to fish and seafood concerns related to various toxins and contaminants or the misuse of antibiotics in aquaculture, have lowered public confidence in the ability of government agencies to guarantee that the food consumers have access to is safe. This is particularly relevant to imported food, especially products originating in countries where local food safety assurance systems are perceived to be weak.

Food safety failures have considerable impact on retailers and brand owners.⁴ Product recalls and bad publicity are damaging to a firm's reputation, with subsequent negative implications for consumer confidence and future sales. To insure against food scares and to counter any perceived public institutional shortfalls (at home or abroad), firms are signing up to voluntary private standards or developing their own. Most of these are based on mandatory government requirements, but they tend to be prescriptive rather than outcome-based, and often include detailed requirements related to quality and traceability.

The protection of natural resources is also the prerogative of public authorities. However, there is a perception that governments are not doing enough to protect those natural resources, including the sustainability of the world's fisheries. While governments have the primary responsibility for fisheries sustainability, it is a responsibility that is increasingly seen as one that should be shared with other stakeholders in the supply chain. Support for private ecolabelling schemes is an indication that retailers and commercial brand owners are assuming some part of this responsibility (Box 2).

Non-governmental organizations concerned with the state of the world's fisheries have shifted their focus to increasingly target industry players. As well as trying to influence the purchasing decisions of consumers and lobbying governments to improve their performance, in the last decade they have developed private environmental standards or ecolabelling schemes to encourage fishers and fish farmers to adopt more responsible practices.

⁴ Food safety failures also affect firms not directly responsible for the failure. For example, a recent recall in the United States of one brand of peanut butter saw sales of peanut butter overall drop 25 percent: "Peanut butter recall hurts even safe brands", *International Herald Tribune*, 9 February 2009, p. 14.

BOX 1

Major food scares**Introduction**

Salmonella, *Listeria*, *E. coli*, mad cow disease, dioxin, foot and mouth disease, avian influenza, beef, fish, shrimp, peanut butter, tomato, spinach – every few months, there is a new food-borne threat to worry about, or a grocery favourite to avoid or being recalled from the supermarket shelves. In a world as technologically advanced and heavily regulated, food should not be so complicated. However, even as consumers have become better versed in home food safety techniques, globalization of food production, processing and supply have increased the risk of food-borne illnesses and the mass hysteria that follows their spread across borders and countries. Thus, a century after the idea of food poisoning first entered the public consciousness, some of the same mysterious food safety battles are still being fought. It is estimated that food safety problems in the United States alone account for about 76 million illnesses, 325 000 hospitalizations and 5 000 deaths annually.

The term food scare is generally associated with spiralling public anxiety over food safety incidents and escalating government and media attention that supplements such events. Food scares can be categorized into microbiological-, contaminant- or animal disease-related outbreaks. The following are examples of major food scares that have occurred in the last 30 years.

Microbiological-related scares

Many food-borne illnesses are caused by bacteria, such as *Salmonella*, *E. coli*, *Listeria*, *Campylobacter*, or viruses (e.g. hepatitis A virus) that enter the food supply. The infected people develop symptoms that vary in severity. Although rarely, some food-borne illnesses can be fatal.

Botulism is a very rare food-borne illness caused by the consumption of food (meat, fish, vegetables) containing the botulinum toxin. The toxin accumulates in food as a result of bacterial growth resulting from malpractices during handling, processing or distribution. The disease can vary from a mild illness to a serious disease, which may be fatal within 24 hours. In severe cases, patients develop neurological symptoms such as visual impairment (blurred or double vision), loss of normal mouth and throat function (difficulty in speaking and swallowing, dry mouth), lack of muscle coordination and respiratory impairment, which is usually the immediate cause of death.

In 1982, an outbreak of botulism caused the death of one person in Belgium, following the consumption of canned salmon that was traced back to a cannery in Alaska, United States. This led to the examination of the entire 1980 and 1981 production records of the Alaskan salmon canning industry and a series of recalls involving more than 50 million cans of salmon worldwide. An earlier outbreak of botulism caused the death of two women in Detroit, Michigan, United States, in 1963, following the consumption of canned tuna. Tuna sales fell 35 percent nationwide, forcing the industry to set up a tuna emergency committee and to launch a US\$10 million campaign to revive confidence in tuna products. Moreover, this case led the United States food control authorities and the canning industry to embrace the Code of Good Manufacturing Practices (GMP) and Hazard Analysis and Critical Control Point (HACCP) system as early as 1973.

Contamination-related scares

The last three decades have seen great concern worldwide over the presence in food of unacceptable levels of antibiotics (e.g. nitrofurans in shrimp), hormones (growth hormones in beef), pesticides (nitrofen in poultry and eggs) and other contaminants such as dioxins,

Major food scares (continued)

polychlorinated biphenyls (PCB) or polycyclic aromatic hydrocarbons in edible oils. The carcinogenicity of the chemical contaminants creates great anxiety, whereas the increasing resistance of many bacteria to most strains of antibiotics (which in turn are becoming less effective at treating human microbial infections) has raised concern over antibiotic residues.

Whereas the discovery of contaminants in food and drinks, such as the detection of carcinogenic benzene in Perrier bottled water in 1990 or poor-quality carbon dioxide in Coca-Cola in 1999, create major public outrage, media hype and impressive product recalls, the most spectacular scare remains the 1999 dioxin food scare when a PCB- and dioxin-contaminated batch of transformer oil entered the food chain via an animal feed mill in Belgium. This was then fed to broilers and subsequently recycled into pig feed, thus affecting poultry, eggs, pork and bacon products throughout Europe, with export of poultry and pork being halted from Belgium, France, Germany and the Netherlands. Netherlands and Belgian pigs and poultry farms were again placed under quarantine owing to another dioxin scare in January 2006, when restrictions were placed on a total of 582 farms. More recently (2008), high levels of melamine were found in infant formula, milk powder and pet foods in China, owing to its deliberate and illegal addition to increase the protein content of these products causing the death of many babies and children and 50 000 becoming ill. Given the importance of food exports from China, many other countries were seriously concerned and discovered alarming levels of melamine in various food products tested.

Animal disease-related scares

The main animal disease-related food scare worldwide remains bovine spongiform encephalopathy (BSE), or mad cow disease, which first appeared in the United Kingdom in 1986. Other epizootic-related incidents such as foot and mouth disease (FMD) or avian influenza have recently caused public concern and outrage worldwide.

It is known that BSE is a condition that causes nervous system degeneration in cows and can lead to Creutzfeldt-Jakob disease (CJD), a similar illness in humans. Since 1986, nearly 200 people have died from CJD around the world. More than 168 000 cases of BSE in cattle were confirmed between 1986 and 1996 in the United Kingdom alone, affecting more than 35 000 farms. Although the United States has seen no more than a handful of the bovine or human forms, even the remote possibility that the disease may have migrated into the food supply can cause severe panic. In April 2008, the United States Department of Agriculture asked for a recall of school lunchmeats in 26 states. No evidence of the contamination was found but the distributor Westland/Hallmark recalled 143 million pounds (about 65 million kg) of ground beef, making the incident the largest beef recall in United States history.

Certification to a private standard offers trust when there is a loss of faith in regulatory systems or the administration of those systems, either at home or in exporting countries. Moreover, private standards are considered to be more flexible and responsive to changing market conditions, whereas the public regulatory process is seen as less nimble.

3.2 CONSOLIDATION AND COALITIONS IN THE FOOD BUSINESS

The increasing consolidation and concentration of food firms, mainly in industrialized countries, has resulted in a market dominated by fewer but increasingly powerful global firms. In the last decade or so, retailers have gradually replaced manufacturing and processing firms as the dominant market players. In terms of fish and seafood

sales and marketing, while large brand owners remain important, supermarket chains increasingly dominate market terms and conditions. The food service industry is also important, especially in the United States.

BOX 2

Who is responsible for fisheries sustainability?

A global online survey of 25 420 consumers in 50 countries asked those consumers: “Who should assume responsibility for ensuring fish stocks are not overused?” In response:

- 67 percent of respondents said “governments”;
- 46 percent said the “fishing industry”;
- 28 percent said “fish manufacturers and processors”;
- 16 percent said “retailers of fish products”.¹

¹ Nielsen Global Online Survey, March 2009. Presentation by J. Banks, Nielsen, at OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, The Hague, April 2009.

To take advantage of the positive image of the health benefits of fish and to develop the concept of the “one-stop shop” (consumers being able to buy every food item under one roof), retailers are expanding the fish sections in their shops. They are also trying to offer a greater range of fish products, including pre-prepared, ready-to-serve meals. While there are differences between markets, in the countries that form the Organisation for Economic Co-operation and Development (OECD) the majority of fish is now sold in supermarkets (FAO, 2007a). In the United States, the food service sector is also important with an estimated two out of three fish meals eaten outside of the home.⁵ In Europe, large supermarket chains account for more than 80 percent of fish sales in some member countries (European Commission, 2008).

Consolidation has been particularly marked *within* the retail sector. The OECD estimated that in Europe the five largest retailers accounted for more than half of all sales (OECD, 2006). Large retailers have significant bargaining power in relation to other businesses in the supply chain. Private standards are a key mechanism for their translating requirements – both product and process specifications – to other parts of the supply chain. The OECD estimates that voluntary private standards cover about 70 percent of all retail trade (Fulponi, 2006). Highly specified standards reflect their need for large and stable supplies of products of consistent quality (in all of its dimensions).

In terms of food safety standards, there has also been an emergence of coalitions of food firms. In general, these coalitions continue to compete on issues of quality, price, level of service, and product range, but have agreed that food safety is a pro-competitive issue and, hence, should be dealt with in a collaborative rather than competitive way. There are clearly efficiencies in setting shared standards that can be benchmarked and mutually recognized as opposed to each firm “reinventing the wheel”. Moreover, serious food scares are likely to have a greater impact on those firms directly responsible. Indeed, they can taint a whole sector or even a country’s reputation. Hence, food firms see merit in ensuring that the whole food safety system functions well. Therefore, most standards set by coalitions of food firms are international in scope.

⁵ J. Connelly, National Fisheries Institute, Integrity in the seafood value chain. Presentation to the IAFI World Seafood Congress, Morocco, October 2009.

3.3 INCREASING VERTICAL INTEGRATION AND COMPLEXITY OF SUPPLY CHAINS

The increasing vertical integration in supply chains in most areas of the food industry is also stimulating the growth of private standards as B2B tools used in the context of procurement contracts and as a means to define relationships between retailers and suppliers. The level of integration of supply chains has implications for the application of safety and quality standards.

Fish and seafood supply chains have traditionally been less vertically integrated than supply chains operating in other food sectors, such as fruit and vegetables (OECD, 2006). While poorly documented, it appears that this situation is beginning to change as large retailers develop more direct links with producers, especially in aquaculture, and private contracts replace the traditional structure of the “importer–wholesaler–retailer pattern” (FAO, 2008).

More retailers are developing direct links with producers, as are other major seafood buyers such as those in the catering industry. For example, at an OECD/FAO workshop on globalization, the vice-president of a significant United States seafood buyer confirmed that its “strategic focus is to shorten supply chains by contracting directly with the producer” (Bing, 2007). As supply chains shorten, the onus is increasingly on producers to verify that their products meet certain standards. In the case of capture fisheries, this means verifying that the fish and seafood is from a well-managed fishery – certification to an ecolabelling scheme is a means of providing this verification. In the case of farmed fish, it means proving that products meet safety, quality, animal-health and social standards and do not have undue impacts on the environment. Certification to an aquaculture standard provides this burden of proof.

Value chains are also increasingly complex. Raw materials are sourced globally, while processing might be outsourced to a country that is neither the producer nor where the product will be eventually sold (such as China). This requires more sophisticated systems for ensuring traceability and guaranteeing that sanitary and hygiene standards are maintained at every stage of the value chain. These traceability systems (chain of custody) are built into the frameworks included in most private standards related to food safety and quality. Ecolabelling and certification schemes also include chain-of-custody requirements to ensure that fish from sustainable fisheries are not mixed with product from other non-certified sources. Where private standards schemes include a comprehensive assessment and/or audit model and effective chain of custody systems sitting behind them, they offer additional guarantees of traceability and good governance. Private standards are attractive to retailers and brand owners because they reduce the need for buyers to conduct their own expensive validation and/or audit processes of suppliers.

3.4 A SHIFT IN RESPONSIBILITIES FOR FOOD SAFETY FROM GOVERNMENT TO BUSINESS

Governments, particularly in OECD countries,⁶ are attempting to cut red tape and reduce compliance costs to business, including by replacing command-and-control-type regulation with more enabling or performance-based regulatory frameworks. Public authorities have been increasingly engaging industry in the implementation of good practices to ensure safety and quality, and requiring them to provide assurance (records) that they have done so. This has shifted more responsibility to business for developing food safety management systems, and reduced the reliance on government inspection services. While there is considerable variation between countries in this area,

⁶ Public management reforms driven by the activities of the World Bank and the International Monetary Fund have seen a similar dynamic in some developing countries.

the trend is towards risk-based safety and quality management and less end-product testing.

Under this scenario, fish producers, processors and distributors are responsible for implementing good practices, sanitary arrangements and HACCP plans (FAO, 2005). The HACCP system is recommended by Codex and required by many governments. As a systems-based approach, it requires processes to be monitored throughout the food chain, from production to distribution. However, the onus is on private sector firms to develop and implement internal food safety management strategies. In this context, private standards might be seen as a reflection of those firms assuming and extending this responsibility.

A relatively new development is that of governments using private market certification schemes to gain traction in their own policy frameworks. For example, the Government of the Netherlands is funding its fisheries to become certified to the ecolabelling scheme operated by the Marine Stewardship Council (MSC), to complement its regulatory activities aimed at encouraging more responsible fishing practices. The Food and Drug Administration (FDA) of the United States has a pilot scheme that might enable expedited entry of imported shrimp, based on its certification to a private certification scheme. These examples are described in later chapters. They are indications that the public/private interface is changing, and that private standards and certification schemes are an important part of that dynamic.

3.5 PRODUCT LIABILITY AND DUE DILIGENCE

Alongside the trend towards more performance-based regulation sit more stringent liability laws. These potentially encourage producers and retailers to develop private standards that are more prescriptive than government regulations. The United Kingdom's "due diligence clause" of the Food Safety Act, 1990, is perhaps the most direct example of this type of legislation. Liability laws mean that the "firm itself must now undertake the verification or present evidence that they undertook all possible steps to prevent the product from causing harm or contamination" (OECD, 2006). Studies in the United States and in the EU indicate that fish and fishery products are responsible for a significant proportion of food safety alerts (FAO, 2005). Due-diligence-type regulations are likely to affect fish processors and retailers, inducing them to take extra precautionary steps to ensure the safety of their products and to avoid potential litigation. This is particularly true in relation to brand and private label products,⁷ where the product is directly linked to the name of the firm (see Box 1).

3.6 PRIVATE LABELS – PROCESSED PRODUCTS

Private standards tend to apply less to fish sold on open commodity markets and more to processed and packaged products, especially those carrying a private label (retailer's own brand). Private labels are a growing feature of the food industry. It has been estimated that in European countries, including Germany, Switzerland and the United Kingdom, private-label brands account for more than 40 percent of all products sold.⁸ Private labels are in essence an attempt to build reputation by promoting products carrying the retailer's name. They also allow the retailer to compete with, and to reap the margins usually accruing to, commercial brand owners. While they were originally marketed to consumers as value-for-money items, retailers might now offer

⁷ For the purposes of this technical paper, a 'private label' product is a retailer's own brand product, or what is often described as a 'house brand' product (e.g. Tesco's Natures Choice brand). 'Brand products' are those manufactured by commercial brand companies (e.g. Birds Eye in the United Kingdom).

⁸ "Bad economy spurs higher private-label sales", 22 January 2009, available at www.intrafish.no.

private-label products of the same type but aimed at different consumers: from “basic” value-for-money products to “premium” items.⁹

In the case of private labels, retailers demand more control over the production process: in some cases, they even assume ownership of processing or manufacturing, although in the case of fish and seafood, rarely does ownership extend into primary production (OECD/FAO, 2007). Instead, private standards provide this control mechanism. Retailers themselves say that the growth in private labels is the main driver behind the development of private standards (CIES, 2007).

Product and process standards tend to be more prescriptive in relation to private labelled products as the potential damage to the firm’s reputation of any product failure is greater when the product is directly associated with the firm’s name. Since the early 1990s, the retail market has been conducive to the development of private labelled fish and seafood, typically in the form of processed or frozen products. This trend is likely to grow in response to consumer demand in developed countries for packaged, ready-to-eat or pre-prepared convenience foods. Moreover, as production involves more processing, often in countries that are not the producer or the end consumer, traceability, chain-of-custody, and robust quality and safety controls are crucial.

3.7 CONSUMER DEMAND AND CORPORATE SOCIAL RESPONSIBILITY POLICIES

Civil society and consumer advocacy groups have influenced the agendas of private companies, including in areas relevant to fish trade and marketing. Various NGOs have targeted retailers’ procurement policies through a variety of means, including media campaigns, organized boycotts or protests against certain retailers, or league tables announcing the most ethical supermarkets (such as Greenpeace’s rankings of the sustainability of supermarkets’ seafood supplies). Retailers are no longer just responding to this pressure. Indeed, it has been argued that on the basis of “enlightened self interest”¹⁰, retailers and brand owners are actually driving the demand for ethical products.

Competition in the food retail sector is shifting from a focus on price to competition based on quality (in all its aspects). In this context, retailers differentiate themselves on the basis of reputation or the overall quality image of their “brand”, including through their CSR policies. By adopting private standards and requiring their suppliers to be certified to a recognized international FSMS or ecolabel, retailers can protect and even enhance their reputation and, hence, the value of their overall business. Corporate social responsibility strategies related to fish products fall into two main areas: those relating to safety and quality (including organic, no pesticides or toxic residues and “fresh” or “natural” type claims); and those of a broader nature related to the impacts on the wider environment (e.g. small carbon footprint, sustainable fisheries), or to issues such as animal welfare or social responsibility.

From the perspective of the firm, attachment to an environmental standard provides some insurance against boycotts and bad press from environmental groups and in the media. It also helps them tap into and grow consumer demand for ethical products.

The power of retailers vis-à-vis consumers is further enhanced by the confusion inherent in the proliferation of ethical product differentiators (ecolabels, fair trade, buy local, organics, etc.). This proliferation complicates consumers’ decisions. It has been argued that, as a result, consumers are tending to put their faith in trusted retailers to sift the information for them: “the consumer increasingly wants the retailer to take the responsibility for their decisions ... He or she wants to know that if they shop at

⁹ For example, Tesco has a multitiered system for sales of smoked salmon, from a ‘value’ line to a ‘premium’ brand (Hajipieris, 2007).

¹⁰ Peter Hajipieris, at OECD/FAO Round Table on ecolabelling and certification in the fisheries sector, 22–23 April, 2009, The Hague.

X retailer they can do so with a clear conscience and without having to make further consideration as they shop” (Siggs, 2007). Retailers and brand owners filter the various ethical choices on offer and through “choice editing” decide which private standards to include in their procurement and marketing strategies. Corporate social responsibility policies, including private standards and requirements of suppliers, are an important mechanism for earning and maintaining customer loyalty.

4. Ecolabels and marine capture fisheries

4.1 INTERNATIONAL AND NATIONAL MEASURES FOR FISHERIES SUSTAINABILITY

As outlined in previous chapters, ecolabels are a growing feature of international fish trade and marketing. They have emerged in the context of growing concerns about the state of the world's fish stocks, increased demand for fish and seafood, and a perception that many governments are failing to manage the sustainability of marine resources adequately.

Mechanisms to ensure the sustainability of fish stocks have been introduced by governments at the national, regional and international levels. These include:

- the United Nations Convention on the Law of the Sea (UNCLOS) (1982);
- the FAO Code of Conduct for Responsible Fisheries (the Code) (1995);
- the United Nations Fish Stocks Agreement (1995); and
- various regional fisheries management organizations (RFMOs).

The RFMOs facilitate international cooperation at the regional level for the conservation and management of highly migratory and straddling fish stocks. At the national level, governments are attempting to embed the principles and goals of the Code – now in its second decade of implementation – into their national fisheries management policies (FAO, 2009a). However, they are having varying degrees of success. As outlined in Chapter 1, the state of the world's fisheries remains fragile.

Disappointment with the pace of regulatory measures to curb overfishing and to improve fisheries sustainability has led environmental groups to develop alternative market-based strategies for protecting marine life and promoting sustainability. These private market mechanisms are designed to influence the purchasing decisions of consumers and the procurement policies of retailers selling fish and seafood products, as well as to reward producers using responsible fishing practices. Ecolabels are one such market-based mechanism.

4.1.1 What are ecolabels?

To recap, ecolabelling is a market-based tool to promote the sustainable use of natural resources. Ecolabels are seals of approval given to products that are deemed to have fewer impacts on the environment than functionally or competitively similar products.¹¹ The ecolabel itself is a tag or label placed on a product that certifies that the product was produced in an environmentally friendly way. The label provides information at the point of sale that links the product to the state of the resource and/or its related management regime.

Sitting behind the label is a certification process. Organizations developing and managing an ecolabel set standards against which applicants wishing to use the label will be judged and, if found to be in compliance, eventually certified. The parent organization also markets the label to consumers to ensure recognition and demand for labelled products. The theory is that ecolabels provide consumers with sufficient information to enable them to recognize and choose environmentally friendly products.

¹¹ For a discussion of the theoretical foundations, institutional and legal aspects of ecolabelling, see Wessells *et al.* (2001).

A range of ecolabelling and certification schemes exists in the fisheries sector, with each scheme having its own criteria, assessment processes, levels of transparency and sponsors. What is covered by the schemes can vary considerably: bycatch issues, fishing methods and gear, sustainability of stocks, conservation of ecosystems, and even social and economic development. The sponsors or developers of standards and certification schemes for fisheries sustainability also vary: private companies, industry groups, NGOs, and even some combinations of stakeholders. A few governments have also developed national ecolabels.

4.1.2 Too many labels?

Many commentators have referred to the “proliferation” of ecolabels. Seafood buyers, retailers and large commercial brand owners in particular have expressed concerns about the range and diversity of ecolabels that, when coupled with the other private standards and certification schemes in fisheries and aquaculture (including the safety and/or quality schemes described in Chapter 5), complicate their fish and seafood procurement models. Market research suggests that consumers are also confused about the various messages and labels confronting them as they make choices about which fish and seafood to purchase. Fishers too have to decide which certification schemes have the most credence in the market and offer the most returns.

Despite the obvious proliferation of labels *per se*, participants at a recent OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector (OECD/FAO, 2009), concurred that in capture fisheries at least, there are not “too many ecolabels”. Indeed, in terms of private schemes that actually certify fisheries as sustainable, there are very few choices on offer. Two schemes – on the basis of the number of fisheries certified and the resulting volumes of certified fish and seafood products entering international markets – stand out as the most internationally significant. This chapter reviews the range of ecolabelling schemes in capture fisheries but uses these two main schemes most often as illustrative examples.

This chapter:

- briefly describes the history of ecolabels and the various types of certification schemes;
- analyses the market penetration of ecolabelled products and the determinants of a market conducive to sales of ecolabelled products;
- outlines the international responses to the ecolabels phenomenon including the FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries;
- discusses the opportunities and challenges presented by ecolabels and certification schemes for the various stakeholders in the fish and seafood supply chain (producers, processors, retailers and consumers);
- examines the specific challenges and opportunities for developing countries;
- briefly discusses the implications of ecolabels and certification for international trade (further discussion is included in Chapter 5); and
- presents some scenarios for the future and highlights areas requiring further attention.

4.1.3 A brief history of ecolabels

The first fisheries ecolabelling initiatives appeared in the early 1990s and were largely concerned with incidental catch, or bycatch, during fishing. For example, the “Dolphin Safe”¹² label was based on standards developed by the United States NGO Earth Island Institute and is focused on dolphin bycatch in the tuna industry (rather than the sustainability of tuna stocks). Other mechanisms used by NGOs include:

¹² See www.earthisland.org/dolphinSafeTuna for a description of how the label and standards function.

- publicity campaigns or organized boycotts of certain species deemed to be threatened such as the “Give Swordfish a Break” campaign in the United States in the late 1990s, or the “Take a pass on seabass” campaign;
- consumer guides to influence consumers purchasing decisions. The World Wide Fund for Nature (WWF) produces consumer guides on sustainable seafood for a range of countries. Other examples include the United Kingdom Marine Conservation Society’s Fishonline,¹³ “The Best Fish Guide” of the New Zealand Royal Forest and Bird Protection Society¹⁴, “Canada’s Seafood Guide” by SeaChoice,¹⁵ and “Seafood Lovers’ Guide”¹⁶ of Audubon or the Monterey Bay Aquarium’s “Seafood Watch”¹⁷ in the United States. Some of these guides take the form of tools that consumers can utilize at the point of purchase such as “wallet cards”, or are communicated via text messaging. They give information about which species to avoid (referring to “red lists”) and those that are deemed environmentally safe to purchase; and
- putting pressure on retailers to introduce sustainable procurement policies for fish and seafood. This is perhaps most developed in the United Kingdom, where Greenpeace initiated its league table, “Ranking of the sustainability of supermarkets’ seafood” (Greenpeace, 2006).¹⁸ That league table has since been replicated in other markets. Some NGOs also use “naming and shaming” strategies such as protests outside retail outlets deemed to be selling unsustainable products.

Strategies to steer consumers away from species deemed to be at risk are often a blunt instrument as they fail to distinguish between responsible and less responsible fishers targeting the same species or even working in the same fishery. For example, the “Take a pass on seabass” campaign to encourage consumers to avoid seabass from a particular country, based on concerns about IUU fishing and fishing methods, affected other fishers of the same species regardless of how responsible their practices were.¹⁹ Moreover, confusion arises when species are included in “red lists” but some fisheries of that species have been certified as sustainable by an ecolabelling scheme (such as New Zealand hoki, Chilean seabass and some tuna fisheries). An attempt to create a consensus seafood guide was made by the Sustainable Seafood Initiative of the University of Rhode Island (URI) (Armsby and Roheim, 2008), showing the similarities and differences between the different seafood guides. The criteria by which the guides are created differ, as do their recommendations. For example, Greenpeace sees deep-sea bottom trawling as the main threat to marine resources, while other groups focus on bycatch issues. By definition, seafood guides are simple; they are designed to be used by consumers when making purchasing decisions. They are not sophisticated enough for use by seafood buyers or other industry stakeholders.

Some NGO strategies can be seen in terms of a continuum from more reactive mechanisms that highlight and “shame” bad practice, to more proactive activities – encouraging consumers to purchase fish from sustainable stocks, and working with retailers to improve their procurement policies. The development of ecolabels and certification has gone one step further.

¹³ www.fishonline.org.

¹⁴ www.forestandbird.org.nz/what-we-do/publications/-best-fish-guide.

¹⁵ www.seachoice.org.

¹⁶ www.audubon.org/campaign/lo/seafood/.

¹⁷ www.montereybayaquarium.org/cr/seafoodwatch.aspx.

¹⁸ Greenpeace, “A recipe for Change”, October 2006, www.greenpeace.org.uk.

¹⁹ The campaign was related to Chilean seabass. Since then, the Patagonian toothfish (seabass) fishery off South Georgia has gained MSC certification as sustainable. See IntraFish, 21 September 2009.

Fisheries certification

The development of the MSC in 1997 went further upstream in the supply chain to target fisheries and fisheries management. It certifies an actual fishery as being both sustainable and sustainably managed. The MSC certification attempts to recognize producers using responsible fisheries practices. Its outreach work is designed to encourage retailers to procure those products and consumers to buy them. Initially developed by Unilever and the WWF, the MSC has operated independently of those two parents since 1999. The MSC is a key player in the ecolabel trend and has stimulated the development of other schemes. Other certification schemes have been operating for some time. They vary in terms of scope, sponsorship, assessment criteria and levels of transparency. The following section offers a typology of ecolabelling and certification schemes based on the nature of the organization behind the initiative.

4.1.4 Types of ecolabelling and certification schemes

4.1.4.1 Non-profit or non-governmental organizations

Non-governmental organizations have been the front-runners in developing ecolabelling schemes in the fisheries sector.

Dolphin Safe

As noted above, Dolphin Safe was developed by the NGO Earth Island Institute in 1990 and is concerned mainly with Dolphin bycatch. It maintains agreements with tuna companies worldwide, and monitors them to “ensure the tuna is caught by methods that do not harm dolphins and protect the marine ecosystem”.²⁰ It is unclear what proportion of global tuna sales the label accounts for, but it is likely to be significant given that, as the Earth Island Institute claims, the standards are “adhered to by more than 90 percent of the world’s tuna companies”. Dolphin Safe has been criticized by other NGOs (notably Greenpeace) for not taking account of other sustainability factors, such as the sustainability of tuna stocks or the other environmental impacts of tuna fishing.

Marine Stewardship Council

As noted above, the MSC was set up by the WWF and Unilever in 1997, but has been independent of them for more than ten years. The MSC is arguably the most comprehensive fisheries certification scheme in that it covers a range of species and deals with all aspects of the management of a fishery. The MSC has qualified for membership of the ISEAL as being consistent with its “Code of good practice for setting social and environmental standards”.

The MSC has two standards: on “sustainable fishing” and on “seafood traceability”. The MSC owns the standards against which independent third-party certifiers assess conformance. Its “Fisheries Assessment Methodology”, and “standardized assessment tree” focus on three pillars: independent scientific verification of the sustainability of the stock; the ecosystem impact of the fishery; and the effective management of the fishery. All three pillars are assessed on the basis of a range of indicators. Aspects related to the species, the fishing gear used, and the geographical area, are all included in the assessment. A study by Caswell and Anders (2009) concluded that it is the scheme most often referred to in the seafood industry media, and has variously been described as the “industry standard”. Another recent study (MRAG, 2009)²¹ revealed that a

²⁰ www.earthisland.org/dolphinSafeTuna/consumer/.

²¹ The MRAG study found that of the 25 supermarkets they studied, the MSC was “by far the most frequently referred to” (MRAG, 2009, p. 174).

significant number of retailers and brand owners refer to the MSC in their seafood sustainability procurement policies.

Some 150 fisheries around the world are engaged in some stage of the MSC assessment process (including pre-assessment) (MSC, 2009). Fifty-six fisheries have so far been certified.²² The MSC claims to cover “about 7 percent of the annual global wild harvest” of fish and seafood, accounting for 42 percent of the global wild salmon catch and 40 percent of the global white fish catch. However, not all fish from a certified fishery will end up with the MSC label attached. The actual volume of MSC-labelled product on the market as a proportion of overall traded fish products is likely to be considerably less significant in terms of global trade. While there are no robust statistics on the proportion of MSC-labelled products on the global market, FAO estimates suggest that the volume of MSC-labelled products on the market may only be statistically significant in the context of specific European markets. In a study carried out for FAO in 2007, Poseidon Ltd. estimated MSC products as then accounting for 0.3 percent of globally traded seafood by value.²³ Sales of MSC-labelled fish and seafood of an estimated US\$1.5 billion is minor when seen against a fisheries commodity market amounting to US\$101 billion in global export sales (FAO, 2010).

As of late 2009, more than 2 500 MSC-labelled products were available on the market (MSC, 2009); this is double the number (1 200) on sale at the beginning of 2008, and more than four times the number (600) available in early 2007,²⁴ showing just how dynamic the market for certified fish and seafood is. Today, MSC products are sold in 52 countries around the world.

*Friend of the Sea*²⁵

Friend of the Sea (FOS) has its origins in the Earth Island Institute. Set up in 2006, its founder is also the European Director of Dolphin Safe. It covers both wild and farmed fish and its criteria also include requirements related to carbon footprint and “social accountability”.

Certification is based on the sustainability of the stock, rather than whether the fishery is sustainably managed. Its certification methodology is based on existing official data in terms of stock assessment. Friend of the Sea says it will not certify stocks that are “overexploited” (based on FAO definitions of levels of exploitation), fisheries using methods that affect the seabed and those that generate more than 8 percent discards. Certification is undertaken by independent third-party certifiers.

Friend of the Sea claims to be “the main sustainable seafood certification scheme in the world” covering some 10 percent of the world’s wild capture fisheries.²⁶ It should be noted that 80 percent of the 10 million tonnes of landed FOS certified product from capture fisheries (8 million tonnes) comes from Peruvian anchovies.²⁷ Again, it is unclear what proportion of that product ends up as labelled products for retail sale.

There are about 600 FOS products (including fish oil and omega-3 supplements) sold in 26 countries²⁸ and covering 70 species both from wild capture and aquaculture.

²² www.msc.org, accessed 12 October 2009.

²³ See Poseidon, Certification and branding of fisheries products: options and decision-making in APFIC countries, Presentation to APFIC regional workshop on Certification Schemes for Capture Fisheries and Aquaculture, Ho Chi Minh City, Viet Nam, 18-20 September 2007.

²⁴ R. Howes, Chief Executive, MSC, personal communication, 2008.

²⁵ See www.friendofthesea.org.

²⁶ www.friendofthesea.org.

²⁷ Figures given by P. Bray, presentation to the OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, The Hague, April 2009.

²⁸ www.friendofthesea.org, accessed 9 October 2009.

Other NGO schemes

Other NGO-driven schemes include KRAV²⁹, a Swedish NGO that specializes in organic farming but which has recently developed a “standard for sustainable fishing” and Naturland³⁰ in Germany also with a background in certifying organic farmed seafood but now with a “Scheme for the Certification of Capture Fishery Project”, which includes social, economic and ecological sustainability criteria. To date, Naturland has only certified one fishery (Nile perch from Buboka in the United Republic of Tanzania).

4.1.4.2 Industry bodies

Certifying good fishing practices

National and regional industry bodies have also developed certification schemes. Many are not ecolabelling schemes in the strictest sense but rather provide certification of good fishing practices. For example, in 1998, the Canadian fishing industry launched a voluntary scheme covering all commercially harvested marine and freshwater species that certifies the good practices used on board fishing vessels. In 2006, in the United Kingdom, the Seafish Industry Authority launched a scheme covering all aspects of vessel operations, including environmental considerations and traceability. Developed in conjunction with the British Standards Institute, the specifications are audited by an accredited independent certification body, Moody Marine. Under the Responsible Fishing Scheme, certified vessels can be searched online.³¹

Fishing company in-house ecolabels

A few individual fishing companies have created their own ecolabels. For example, the Spanish group Pescanova, one of Europe’s largest fishing companies, which fishes globally and has interests in the processing sector, has created a logo that appears on a limited range of its packaged products. The logo states that the fish concerned has been caught in a way that “preserves the aquatic and marine ecosystem for maintaining the quality, diversity and availability of fish resources for today and future generations”. This in-house scheme claims to be based on the Code.

Fishing industry association ecolabelling schemes

The Japan Fisheries Association, an umbrella group for some 400 fishing companies, founded the Marine EcoLabel-Japan (MEL) in December 2007. The MEL operates as a non-profit part of that association. It could be seen as a response to a developing interest in ecolabelled fish and seafood in the Japanese market. Indeed the stated rationale behind the label was to “respond to the situation proactively and establish their own ecolabelling scheme, which is most suitable to the situation of the Japanese fisheries”.³² As of January 2010, only three fisheries have been certified to the fledgling label. It is likely to have significance only in the Japanese market.

In Iceland, Fiskifelag, an umbrella body for the Icelandic fishing industry developed a plan to promote and market the sustainability of Icelandic fisheries to international markets. This has since gained public sector support and has morphed into an Icelandic ecolabel or logo based on Iceland’s “Statement on Responsible Fisheries in Iceland”. The statement was signed by both industry and government representatives. The logo is in essence a label of origin but based on Iceland’s fisheries sustainability credentials. Certification will be conducted by independent accredited certifiers and will amount to third-party certification of Iceland’s fisheries management with conformance being judged against a standard or specification linked to the FAO Guidelines for the

²⁹ www.krav.se.

³⁰ www.naturland.de.

³¹ rfs.seafish.org.

³² www.suisankai.or.jp.

Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries. Assessments have been initiated in 2010.³³ The ecolabel, while the initiative of industry, could now best be described as a public–private partnership between industry and government.

International industry sector groups

The International Fishmeal and Fish Oil Organisation (IFFO),³⁴ an international non-profit organization representing fishmeal and fish-oil producers and related trades throughout the world, has recently (September 2009) launched a “Global Standard for Responsible Supply” along with a related third-party certification scheme and label “IFFO Assured” (which is likely to have a largely B2B value). The scheme has both a sustainability angle (“commitment to the responsible sourcing of raw materials” for fishmeal and fish oil) and a safety and quality angle (“the safe production of ingredients for aquaculture, agriculture and directly in the production of consumer products”). Applications for certification are currently being processed in Denmark, Peru and the United States. The IFFO expects that 15–20 fisheries could be certified within the next year.³⁵ The IFFO recognizes MSC certifications as compliant with its standard (and therefore recognizes equivalency).

4.1.4.3 Public ecolabelling schemes

Recently, some public authorities, most notably the Government of France and the EU, have set up their own ecolabels. They are described here in the interests of completeness.

France

The Government of France has chosen to create its own national ecolabel and related certification scheme. This decision was based on a feasibility study³⁶ undertaken in 2008 by the French authority, FranceAgriMer. As part of that process, it examined existing private ecolabels, including for consistency with the FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries. It concluded that, of the existing ecolabels, only the MSC was fully compliant with those guidelines. However, it also concluded that the MSC model would not fit all fisheries. It decided to adopt a public framework to meet the needs of its fishing industry as defined by the feasibility study; a scheme that was less costly than the MSC, easily recognized by consumers (along the lines of the French public quality label, Label Rouge), and one that was consistent with the FAO guidelines but went beyond them with the inclusion of social and economic criteria.

The public label does not preclude the certification of French fisheries to other private ecolabels. Indeed, certification to other labels will be encouraged; a number of French fisheries are currently in assessment with the MSC.³⁷ Forty-five French seafood processors have been awarded MSC-chain-of-custody certification. The MSC has recently set up an office in Paris to promote the label to the French market.³⁸

³³ K. Thorarinnsson, Federation of Icelandic Fishing Vehicle Owners, presentation to the OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, The Hague, April 2009.

³⁴ www.iffonet.net.

³⁵ P. Marshall, An overview of the IFFO Global Responsible Sourcing Standard, presentation to IAFI World Seafood Congress, Morocco, October 2009.

³⁶ The results of this feasibility study are available (in French) online at www.ofimer.fr/Pages/Ofimer/Publications.html.

³⁷ From the proceedings of the OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, The Hague, April 2009.

³⁸ msc.co.org, news release 14 October 2009.

European Union

The EU has a generic ecolabel (the “Flower” label) that is also applicable to fish and aquaculture. However, this does not preclude the adoption of other private voluntary ecolabelling schemes. In addition to its own label, the EU is also developing minimum criteria for voluntary ecolabelling schemes in fisheries (based on the FAO guidelines).³⁹

4.1.4.4 Retailers

A few retailers have developed their own sustainability labels. For example, in 2005, the large French retail chain Carrefour, the second largest retailer in the world, set up its own ecolabel, “Pêche responsable”. However, to date, only four species carry the label. Carrefour also stocks MSC-labelled products, both frozen products under its “Agir Eco Planete” label and fresh fish at its fish counters.

In a survey of retailers carried out for FAO⁴⁰, most retailers interviewed reported that they were generally averse to creating their own ecolabel, noting that it would not be cost-efficient given the existence of other accessible schemes, and that building an in-house ecolabel could be risky (if a scheme was discredited, it would be difficult to disassociate from it). In contrast, associating with a credible independent ecolabelling scheme offers benefits with marginal risks (described below).

As noted above, many of the world’s largest retailers have endorsed the MSC. In February 2006, Wal-Mart, the largest retailer in the world, set a goal to procure all its wild-caught seafood for North America from MSC-certified fisheries within three to five years.⁴¹ Asda (part of the Wal-Mart Group) in the United Kingdom has also pledged support to the MSC and has a target of buying wild-caught fish only from MSC certified sources by 2010. Many retailers in the United Kingdom have also associated themselves in some way with the MSC (Tesco, Sainsbury’s, Waitrose, and Marks and Spencer). Marks and Spencer has a target of 100 percent MSC-certified fish by 2012. Whole Foods Market, with 270 stores across the United States and in the United Kingdom, stocks MSC products and has a link to the MSC (as well as Ocean Trust) on its Web site.⁴² A consortium representing 99 percent of Netherlands retailers has a commitment to selling only fish certified by the MSC and GLOBALG.A.P (aquaculture) by 2011.⁴³ Germany’s largest supermarket chain, Edeka, has announced that it will source only from MSC-certified fisheries (and sustainable aquaculture sources) by 2011.⁴⁴ Manor Switzerland (which accounts for 10 percent of the Swiss seafood market) has a commitment to FOS.⁴⁵ As discussed below, some of these procurement targets have been downgraded in the light of shortfalls in supply of certified fish and seafood.

The remainder of this chapter refers most often to the MSC and FOS, as the two schemes that – on the basis of their international scope, the number of fisheries certified and the claimed volumes of certified fish and seafood products entering international markets – stand out as the most internationally significant private voluntary ecolabelling schemes.

³⁹ Presentation by R. Bates, Policy Officer, DG Maritime Affairs and Fisheries, European Commission, at the OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, The Hague, April 2009.

⁴⁰ Interviews conducted with retailers by M.C. Monfort, Seafood Marketing Consultant, between late 2006 and early 2007.

⁴¹ P. Redmond, Vice President, Wal-Mart Seafood and Deli, see www.walmartstores.com.

⁴² www.wholefoodsmarket.com.

⁴³ “Dutch retailer sector commits to MSC, GlobalGap seafood”, IntraFish, www.intrafish.com, 14 December 2007.

⁴⁴ “German supermarket giant, WWF launch green sourcing policy”, IntraFish, www.intrafish.com, 6 February, 2009.

⁴⁵ www.manor.ch/Fr/corporate/media.cfm?fuseaction=main&articleID=144&start=1.

4.2 MARKET PENETRATION OF ECOLABELLED PRODUCTS

Fish and seafood certified under ecolabelling schemes do not always end up as ecolabelled products on sale to the final consumer. Indeed, probably only a small percentage of certified raw material ends up as a labelled product. Many buyers procure certified fish but do not display it with the relevant ecolabel. In this case, an ecolabel, designed as a B2C tool (appearing on products for retail), has more of a B2B value. The certification process, including the inherent chain-of-custody and traceability guarantees, is the most important element.

Certification gives the processor or retailer assurance of the products' source and the production process, with potential returns to their reputation and brand, but is not promoted to the final consumer. Similarly, certification schemes managed by industry groups are typically B2B models aimed at commercial buyers rather than private consumers.

So, what is the real market presence of ecolabelled fish and seafood, and what are the determinants of a market conducive to sales of ecolabelled fish and seafood products?

4.2.1 Volumes

It is difficult to estimate the volume of ecolabelled certified products on the international market. The MSC and FOS claim 7 percent and 10 percent respectively of world's capture fisheries – when put together they account for less than one-fifth of wild capture product. It is certain that the real volume of traded ecolabelled products is significantly less than that. Indeed, of the MSC's 6 million tonnes of seafood landed from certified fisheries, only about 2.5 million tonnes ends up carrying the MSC label (MSC, 2009). A significant proportion of FOS-certified fish goes into products such as fishmeal and fish food that will not end up as labelled products on supermarket shelves (although the farmed fish they feed may do). Other schemes in existence currently cover fairly insignificant volumes of product.

Overall, the market presence of ecolabelled products is likely to be modest, and significantly lower than the publicity surrounding such products would suggest. For example, in 2006, the supermarket chain Sainsbury's accounted for 22.3 percent of the United Kingdom market share of fresh fish and ranked third in Greenpeace's league table of suppliers of sustainable fish (Greenpeace, 2006), yet ecolabelled products only made up about 1 percent of its sales (Porritt and Goodman).

Despite the claimed exponential growth in the number of MSC-labelled products on the market, the presence to date of MSC products is still concentrated in certain markets and limited to certain species. Products being the FOS label appear to be even more concentrated.

4.2.2 Concentrated markets

Products certified by FOS are highly concentrated in certain markets. A report prepared for the international Fish Sustainability Information Group (MRAG, 2009) found that the largest number of FOS consumer product lines on sale is in Italy, where FOS is based, followed by Switzerland and Spain.

An analysis of MSC-labelled products and where they are sold is also revealing. An analysis of the products on sale as of 30 September 2009⁴⁶ reveals that most are sold in a limited range of countries. Six markets (Germany, the Netherlands, United States, United Kingdom, Sweden and Switzerland) account for two-thirds (67 percent) of MSC products on sale. Germany alone accounts for one-fifth of MSC products on sale. However, this concentration is less pronounced than previously. In March 2007, five markets (Germany, Sweden, Switzerland, United Kingdom and the United States) accounted for almost three-quarters (72 percent) of MSC sales.

⁴⁶ Information provided by the MSC, 11 October 2009.

Some markets have seen dramatic change. In 2007, only six MSC products were on sale in the Netherlands. In 2009, the Netherlands had some 373 MSC-labelled products on sale, reflecting the commitment made by Netherlands retailers to source only MSC certified seafood by 2011. Similarly, in Japan of MSC-labelled products on sale went from 14 to 167, and in France the number rose from 13 to 146 products.

4.2.3 Consumer awareness and active civil society

Most of the markets in which ecolabelled certified products are sold have some features in common: a relatively affluent, eco-aware population; a strong civil society; and an active media. In theory, for an ecolabel to have any impact, consumers must recognize it and know what it stands for. While research suggests that individual ecolabels are not particularly well recognized by consumers,⁴⁷ environmental NGOs such as Greenpeace and the WWF are particularly strong in the markets where ecolabelled products have the greatest presence (e.g. Germany, United Kingdom, the Netherlands).

In southern Europe, notably in Spain and Portugal, the environmental movement is less evident. The Italian market similarly has a modest interest in sustainability; the presence of FOS products is likely to be a reflection of the fact that FOS is based in Italy and of the popularity of the types of product (canned tuna, sardines and anchovies) carrying the FOS label there. Consumer preference for fresh versus frozen fish plays also a role, as explained below.

The French market has traditionally been more concerned with quality and provenance than with environmental concerns, preferring French products and quality schemes (Siggs, 2007). The development of interest in sustainable seafood, and in MSC-labelled products in particular, has been attributed to (including in a report to the French Senate) the activities of Findus France.⁴⁸ Findus is part of the larger Foodvest group, described below, that has a significant attachment to the MSC born in the United Kingdom market. The development of a national French public ecolabel could be seen as an attempt to tap into a growing interest in ecolabels – the increasing presence of MSC products and an MSC office in Paris – and channel it towards the traditional preference for local products.

Asian markets remain fairly disinterested (Jacquet and Pauly, 2007), with the exception of Japan; Japan's MEL is perhaps an attempt to promote Japanese products in this context.

In any case, consumers' behaviour, however, does not always match their opinions (Box 3).

4.2.4 Consumption patterns

Consumption patterns show that populations in markets where there is less sensitivity to environmental concerns consume a wider range of fish and seafood products.

A Seafood Choices Alliance survey found that southern European countries have a greater variety of species on sale compared with northern European markets. In Germany, for example, in 2007 four species represented more than 60 percent of seafood sales (Seafood Choices Alliance, 2007, p. 6). In the United Kingdom, Sainsbury's claims to sell more MSC products "than any other United Kingdom retailer". However, 80 percent of the fish it sells is limited to five species: cod, haddock, tuna, salmon and prawns.⁴⁹

Whether or not this "substitutability" of seafood products has any bearing on the level of consumer concern about fish stocks and sustainability for the future cannot be verified, but it is perhaps a factor in the overall demand for ecolabelled products.

⁴⁷ The MSC has recognized this and is putting more effort into publicly promoting the label.

⁴⁸ "French ecolabel report endorses MSC", IntraFish, 22 December 2008.

⁴⁹ www.sainsburys.co.uk, accessed 16 October 2009.

Similar dynamics might occur in the Asian market, where there has been little reported evidence of consumers discriminating between products on environmental grounds.

Northern European consumers also tend to prefer frozen seafood while their southern counterparts prefer fresh fish. For example, less than 10 percent of the seafood market in Germany is fresh fish, while frozen seafood accounts for over 40 percent of the market (Seafood Choices Alliance, 2007, p. 6). Northern Europeans also purchase more processed and prepared products – Germany and the United Kingdom are the largest European markets for breaded and battered seafood products (Seafood Choices Alliance, 2007, p. 6). Products certified by FOS (anchovies, tuna, etc.) are similarly sold as canned or preserved products. These are all types of products that lend themselves to the attachment of a label at the point of sale. Hence, the consumption patterns in various markets – both in terms of types of seafood consumed and the level of value-addition – appear to be another factor in the concentration of ecolabelled products in certain markets.

BOX 3

Consumer demand – reliable?

Consumers' actions do not always match their stated intentions. They are generally more sensitive to factors that affect them directly, such as safety, quality and price. For example, data collected on consumer preferences in the United States indicated that “about 70 percent of respondents chose ecolabelled shrimp, salmon or cod over non-ecolabelled”. An econometric analysis to determine what factors influence the choice of ecolabelled fish concluded that choice is still affected most by price: “As the premium increases, the likelihood that the respondent would chose the ecolabelled product over the non-ecolabelled product declines.” (Wessells *et al.*, 2001). Similar results were observed for Norwegian consumers. Further research by Johnston and Roheim on consumers in the United States found that consumers were not willing to sacrifice their favourite (by taste) seafood species to purchase a less-favoured species with a “no overfishing” ecolabel”. A recent study published by the Organisation for Economic Co-operation and Development (Fliess *et al.*, 2007, p. 53) also concluded that: “Consumers are receptive to information about how internationally traded goods are produced, but they are unwilling to trade off price and quality for Corporate Social Responsibility [CSR] attributes of a product”. However, non-governmental organisations continue to claim that consumers are willing to pay a premium. For example, Greenpeace, in “A recipe for Change” noted that “Retail polls... revealed that... 86 percent of those surveyed would prefer to buy seafood reliably labelled as environmentally responsible and 40 percent would be willing to pay an extra 5-10 percent more for such products” (Greenpeace, 2006, p. 5). Market research suggests that, with the recent economic downturn, consumer behaviour is increasingly influenced by price (Banks, 2009).

4.2.5 Concentration of ecolabelled species

Sales of ecolabelled products similarly appear to be concentrated in certain species. Products certified by FOS are highly concentrated in one species – as noted above, Peruvian anchovies account for 80 percent of the volume of its certified landed product.

Products certified by the MSC are also fairly concentrated in certain species. In April 2009, the MSC claimed to cover 42 percent of the global wild salmon catch, 40 percent of the global “prime whitefish” catch (cod, pollock, hake, etc.) and 18 percent of the

global spiny lobster catch.⁵⁰ However, the salmon is all from the Alaskan salmon fishery, which accounts for almost one-third (31 percent) of all MSC products on sale. The Alaskan salmon and Pollock fisheries combined account for more than half (56 percent) of MSC products. The top six fisheries account for more than three-quarters (78 percent) of those products. In terms of species, these are salmon, hake type fish (Alaska pollock, New Zealand hoki and South African hake), or herring (Norwegian and North Sea). These species lend themselves to processing into products that can be packaged and, therefore, are conducive to carrying a label at the point of sale (e.g. in the form of processed fillets, ready-made meals).

4.2.6 Distribution issues

How fish products are distributed in markets also has an impact on the penetration of ecolabelled products.

4.2.6.1 Supermarkets

In Germany, the Netherlands and the United Kingdom, markets where there is the highest concentration of ecolabels, supermarkets play an increasingly significant role in the retail of fish and seafood products. Large supermarkets offer a conducive environment for the sale of ecolabelled products – they are more likely to sell packaged products that lend themselves to the attachment of a label. In the United Kingdom, the consistent frontrunner in Greenpeace's league table (ranking the sustainability credentials of supermarkets' seafood policies) is Marks and Spencer, which concentrates on processed and packaged seafood products. In addition, large supermarket chains are more likely to own private labels or "own brands" that would benefit from the addition of being certified as eco-friendly. Moreover, they have the economies of scale to promote "niche" products.

In contrast, southern European markets with more of a reliance on fresh fish markets (including wet fish counters in supermarkets), are less conducive to the sale of ecolabelled products. Ecolabelled products that have gained a foothold in those markets tend to be canned or preserved products such as tuna, sardines, mackerel and anchovies. The Asian market is also fairly traditional in terms of the distribution of fish and seafood, characterized by fresh fish sales rather than processed, packaged and frozen products.

Retailers play an important role in "educating" consumers. As noted above, while NGOs were the initial drivers of environmentally friendly purchasing, retailers have taken up the baton, and are now key players in pushing sustainability awareness. For retailers, the decision to stock and promote ecolabelled fish products is an insurance policy against negative publicity from NGOs (such as Greenpeace protests outside supermarkets in the United Kingdom). However, rather than simply responding to demand, retailers are now driving it by asserting sustainability values, often as part of their CSR policies. Sustainability is an increasingly important element in the seafood procurement policies of large supermarket chains. This is particularly the case in markets where there is intense competition between retailers.

In some markets, retailers compete to be the most eco-friendly firm. Greenpeace produces league tables of supermarkets and their seafood sustainability credentials in several markets – since conducting its original scorecard for the United Kingdom (see Table 3) in 2005 – including in the United States (Greenpeace USA, 2009), Canada (Greenpeace Canada, 2009), the Netherlands, Sweden and Norway, and Germany.

⁵⁰ R. Howes, Chief Executive MSC, presentation to OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, The Hague, 22–23 April, 2009.

TABLE 3
Ranking of the sustainability of supermarkets' seafood, United Kingdom

	Sustainability of wild-caught seafood	Sustainability of farmed seafood	General issues*	Rank and grade (2006)	Rank and grade (2005)
M&S	A	A	A	1	1
Witrose	A	A	A	2	2
J Sainsbury	B	B	A	3	3
Coop	C	B	C	4	4
Asda	C	D	B	5	9
Morrisson	C	D	B	5	8
Tesco	C	D	B	5	6
Somerfield	D	D	D	8	5
Iceland	E	E	E	9	7

* General issues: The brands and ranges of seafood covered by seafood procurement policies; transparency of policies and their implementation; and promotion of sustainable seafood.

Note: A=highest rating; E=lowest rating.

Source: Greenpeace.

4.2.6.2 Processors

Interest in sustainability has been growing in the processing sector. Often in response to demands from retailers (where their products will be sold)⁵¹ but also to tap into the sustainability market themselves, fish and seafood processors have developed specific procurement policies with a sustainability element. Where the processor manufactures strong commercial brand products, the attachment of an ecolabel can add value to the brand. There might also be an element of competition between private labels (or retailers' house brands) carrying an ecolabel and commercial brand products. Sustainability initiatives in the processing sector are stronger in countries where ecolabels are most embedded.

Foodvest Ltd. (see Box 4) provides an illustrative example of how some in this segment of the industry are responding to, and driving, an interest in sustainable fisheries and ecolabels. Foodvest is said to be the "world's Number one buyer of MSC-labelled products".⁵² Its Young's brand has brought a considerable presence of the MSC label to the United Kingdom market while its Findus brand has had a significant impact on the presence and interest in ecolabels, especially the MSC, in France.

As noted above, Dolphin Safe maintains agreements with tuna canning companies worldwide and claims that 90 percent of the world's tuna companies adhere to its standards. A number of European canneries use the FOS label on their packaging (Generale Conserve S.p.A. in Italy, Imperconser S.A. in Portugal, and Société Nouvelle Aveiro Maroc in Morocco).

4.2.6.3 The foodservice industry

The role of the foodservice industry in the distribution of seafood varies considerably by country. In the United States, this segment dominates with about two in every three seafood meals eaten outside the home. In Italy, Portugal and Spain, the catering industry's share of seafood sales peaks at about one-quarter. In these southern European countries, seafood is predominantly prepared and eaten at home.

The foodservice industry has been slow to embrace fish sustainability issues. In Europe, the industry in most markets is highly fragmented with a large number of

⁵¹ P. Hajipieris, Director of Sustainability and External Affairs, Birds Eye Iglo – UK and Europe, presentation to the OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, The Hague, 22–23 April, 2009.

⁵² "French ecolabel report endorses MSC, Findus", IntraFish, December 22, 2008.

small-sized independent establishments. A small number of restaurants, mainly in the United Kingdom and the Netherlands, have sought and achieved MSC chain-of-custody certification. Only recently has there been any connection between this industry and ecolabels.

A few large-scale restaurant chains, in the United States and in Europe, have announced new procurement policies that refer to ecolabels. Brakes, a leading supplier to caterers in the United Kingdom and France, promotes MSC products. In March 2003, Brakes and its specialty seafood supplier M&J Seafood became the first foodservice suppliers in the United Kingdom to carry an MSC product. It is also involved in the MSC “Fish & Kids” programme⁵³ (which is partly government funded) to put sustainable seafood on school menus.

In March 2006, Compass Group North America, the largest contract foodservice company in the United States, announced a shift in purchases away from threatened fish species towards sustainably sourced supplies.⁵⁴ By May 2009, it claimed that 70 percent of the seafood it sold was from sustainable sources.⁵⁵ Also in the United States, Darden Restaurants Inc. (the “largest casual dining restaurant company in the United States”, and operator of well-known restaurants such as the Red Lobster brand) also includes sustainability issues in its seafood procurement policies (Bing, 2007). McDonald’s has operated Sustainable Fisheries Guidelines since 2005 (Box 5), and says that in the past five years it has shifted more than 18 000 tonnes of fish away from unsustainable sources.⁵⁶ It refers to the MSC in its corporate responsibility policies.

BOX 4

Foodvest Ltd – responsible fish procurement

Foodvest Ltd. is one of Europe’s largest seafood processors. The group sells products under two very strong consumer brands: Young’s, the leading supplier of chilled and frozen seafood to the United Kingdom market; and Findus, the major brand for frozen seafood in France and the Nordic countries. The company sells products using some 60 species of fish, originating in 30 countries. The group’s procurement policy incorporates a set of ten major rules – “10 principles for responsible fish procurement” – including a commitment to carry out objective assessments of the environmental efficiency of all fish purchases. For every species and fishery, a full set of criteria are screened and the ecological and commercial risks assessed and ranked as low, average or high. Notably, all Marine Stewardship Council (MSC) fisheries are *per se* considered as low-risk supplies. Young’s supplies about 80 percent of the MSC products available in the United Kingdom market. It has been a strong supporter of the MSC since 1997 and M. Parker, its Deputy Chief Executive Officer, currently serves on the MSC Board of Trustees. During an industry presentation at the Groundfish Forum on October 2007, he explained that “Seafood sustainability is central to our business agenda”. Its French arm, Findus, has had a considerable influence in bringing ecolabels to the French market. In 2007, Findus launched some “sustainable lines” and claimed “a seven-fold increase in sales of such products in France”. At that time, according to its own figures, Findus manufactured 80 percent of the “sustainable seafood products” retailed in France (see “French industry alliance to lead sustainability drive”, IntraFish, 23 November 2007).

⁵³ www.fishandkids.org.

⁵⁴ “Chains join the quest for sustainable fish supplies: some operators struggle with mixed messages from environmental groups”, Nation’s Restaurant News, 27 November 2006.

⁵⁵ “Compass Group cuts 1.5 million pounds of unsustainable seafood”, IntraFish, 18 May 2009. Sustainability is determined by reference to the Monterey Bay Aquarium guidelines and in collaboration with the Environmental Defense Fund.

⁵⁶ www.mcdonalds.com/corp/values/purchasing/supply_initiative/sustainable_fisheries.html.

In general, however, despite some key players adopting procurement policies based on sustainable fish stocks, and publicity driven by celebrity chefs (as in the United Kingdom and France), this sector is less likely to attach itself directly to an ecolabel, and its influence overall in the international ecolabels debate has been relatively small.

4.2.7 Determinants of a market conducive to ecolabels

The above discussion suggests a range of factors that determine whether or not a market will be conducive to sales of ecolabelled fish and seafood products.

To recap, the market is likely to have:

- an environmentally aware population based on a strong civil society active in the environmental/sustainability area;
- retail of fish and seafood products dominated by supermarkets (typically large retailers in highly competitive market) rather than fresh fish markets;
- consumption patterns based on a traditionally limited range of fish and seafood species leading to lower substitutability of product; and
- strong tradition and presence of processed and/or packaged fish and seafood products that lend themselves to the attachment of a label.

The market penetration of ecolabelled products is currently fairly modest. The main demand for ecolabelled products appears to be in pockets of the European market. The market for them in the United States is developing steadily.

BOX 5

McDonald's Sustainable Fisheries Programme

McDonald's purchases 50 000 tonnes of fish annually. Its fisheries guidelines were developed in partnership with Conservation International and are implemented collaboratively with the Sustainable Fisheries Partnership. The guidelines outline "clear, measurable criteria that rate currently approved and potential future fisheries with the latest scientific information". The ratings address three criteria:

- fisheries management practices – (e.g. compliance and monitoring);
- fish stock status – (e.g. biomass levels); and
- marine environment and biodiversity conservation – (e.g. protecting vulnerable marine habitats).

This system "provides McDonald's with a sustainability snapshot for key source fisheries. If a fishery shows signs that something may be amiss, we first support improvements, but if those improvements are not made within agreed timeframes, we will cease sourcing from that fishery". For example, since 2007 McDonald's has progressively ceased to buy Russian Alaskan pollock, "because those fisheries did not address sustainability concerns".* McDonald's Global Fish Forum "reviews the ratings, shares updates on global sourcing, investigates alternatives for stressed species and develops recommendations for future species usage".

McDonald's argues that: "McDonald's standards are consistent with the Marine Stewardship Council's (MSC) Principles of environmentally responsible and sustainable fishing. The vast majority of McDonald's fish is already sourced from MSC certified fisheries. Working with the Sustainable Fisheries Partnership, McDonald's is supporting efforts of remaining supply fisheries to seek additional verification of their own sustainability through MSC or other credible, third-party certification programs".

* Russian pollock is apparently now in MSC pre-assessment.

Source: McDonald's corporate social responsibility – sustainable fisheries (www.crmcdonalds.com/publish/csr/home/report/sustainable_supply_chain/resource_conservation/sustainable_fisheries.html).

Overall, demand is growing rapidly. There is every indication that it will continue to increase as more retailers demand ecolabelled products, as those international supermarket chains expand further into markets in Asia and South America, and as middle-class populations in countries with a weak tradition of civic action related to environmental concerns start to emulate their counterparts elsewhere.

The ecolabels phenomenon has stimulated an ongoing debate in the international community. This is described below, followed by a discussion on the likely costs and benefits for the various stakeholders involved.

4.3 INTERNATIONAL RESPONSES TO THE ECOLABELLING PHENOMENON

When the MSC was first launched, the reactions of countries and industry groups were quite diverse. A report prepared in 1996 for the FAO Committee on Fisheries (COFI) showed a generally negative reaction on the part of many international industry groups (e.g. the International Coalition of Fisheries Associations, the Groundfish Forum).⁵⁷ Developing countries were particularly concerned that certification might create additional barriers to trade. The MSC initiative was criticized at the Ministerial Meeting of the Latin American Fisheries Development Organization in 1996. Countries with relatively effective fisheries management regimes appeared less perturbed by the move, perhaps seeing the potential benefits for their industry.

The mixed reaction to the MSC and fears of a proliferation of ecolabels led to calls for some international guidance in the area. The FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries (the Guidelines) was an attempt to respond to this demand. The Guidelines are described below.

4.3.1 FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries

The COFI first discussed the issue of ecolabels in 1996, when several countries expressed concerns about the transparency and potential impacts of the recently developed MSC scheme. However, at that point, there was no consensus that FAO should become substantively involved in the area.

In 1998, Norway, on behalf of the Nordic countries, submitted a proposal to the COFI Sub-Committee on Fish Trade, that FAO organize a Technical Consultation to investigate the potential to develop guidelines on the ecolabelling of fish. The ensuing Technical Consultation did not reach agreement on FAO's role in developing guidelines, except to concur that any future guidelines should be consistent with the Code, and that FAO should not be directly involved in the actual implementation of any ecolabelling scheme. It was not until the COFI session of 2003 that agreement was reached that FAO should develop guidelines on ecolabelling.

The FAO Guidelines were adopted in 2005 and contain three main sections:

- general principles and definitions;
- minimum substantive requirements and criteria; and
- procedural and institutional aspects.

These are briefly outlined below.

4.3.1.1 General principles and definitions

The Guidelines state that any ecolabelling scheme should be:

- consistent with relevant international law and agreements including: the 1982 United Nations Convention on the Law of the Sea (UNCLOS), the FAO Code of Conduct for Responsible Fisheries (the Code) and World Trade Organization (WTO) rules and mechanisms; and

⁵⁷ The Groundfish Forum is an annual meeting of "leading members of the global groundfish industry". In contrast to this earlier reticence towards ecolabels, it has since become engaged in the area; at its annual conference in October 2007, several presentations dealt with sustainability issues, including one by the Chief Executive of the MSC.

- voluntary, market-driven, transparent and non-discriminatory, including by recognizing the special conditions applying to developing countries.

4.3.1.2 *Minimum substantive requirements and criteria*

The minimum substantive requirements and criteria of any ecolabelling scheme should include the requirements that:

- The fishery is conducted under a management system that is based on good practice including the collection of adequate data on the current state and trends of the stocks and based on the best scientific evidence.
- The stock under consideration is not overfished.
- The adverse impacts of the fishery on the ecosystem are properly assessed and effectively addressed.

4.3.1.3 *Procedural and institutional aspects*

Any ecolabelling scheme should encompass:

- the setting of certification standards;
- the accreditation of independent certifying bodies; and
- the certification that a fishery and the product chain of custody are in conformity with the required standard and procedures.

4.3.1.4 *Ongoing debates*

Since the development of the Guidelines, FAO has been asked by its Member Countries, in the context of the COFI and the implementation of the Code, to help clarify some of the ongoing issues relating to private standards, such as ecolabels, as they apply to fish and seafood. Discussions have been held in the context of the COFI's Sub-Committee on Fish Trade.

4.3.1.5 *FAO Sub-Committee on Fish Trade*

Private standards and private certification have been on the agenda of the Sub-Committee on Fish Trade (the Sub-Committee) since 2006. In 2006, the Sub-Committee raised concerns about the increasing use of private standards and their impacts on international trade in fish and seafood products. In 2008, the Sub-Committee reiterated these concerns, noting a growing proliferation of private certification schemes, campaigns and ecolabels. The Sub-Committee was concerned that the many competing certifying claims could confuse consumers and thereby undermine public confidence in labels and standards generally. Some FAO Members were also concerned that monopolies could arise in certification, and that what were initially voluntary standards could become de facto mandatory standards with implications for international trade.

Under the auspices of the Sub-Committee, FAO initiated a process to review the Guidelines to further develop general criteria in relation to “stock under consideration” and any serious impacts of the fishery on the ecosystem (FAO, 2007b). An Expert Consultation was held in March 2008 to consider these matters. Its recommendations for amendments to the Guidelines were approved by the COFI in 2009. An Expert Consultation was held in May 2010 to develop guidelines for the ecolabelling of fish and fishery products from inland capture fisheries. The results of that consultation will be considered by the COFI in 2011.

The Sub-Committee and the COFI itself continue to monitor developments as ecolabels and other private standards influence international fish trade and market access opportunities. The Guidelines have become the international reference for ecolabelling certification schemes.

4.3.2 Opportunities and challenges for stakeholders

After more than a decade of experience with ecolabels, some assessments can be made about their impact in the fisheries sector. What is clear is that the global seafood industry is not a unified group. The costs and benefits of ecolabelling and certification accrue differently to different stakeholders. The following section attempts to describe the opportunities and challenges presented by ecolabelling schemes for the various stakeholders involved: fishers, importers and/or wholesalers, retailers and brand owners, and governments.

4.3.2.1 Fishers

There has been little in-depth analysis of the experiences of producers operating in fisheries that have gained certification to an ecolabel. As a result, there is a relative dearth of empirical evidence as to the actual costs and benefits. What follows is a list of the claimed costs and benefits of ecolabelling schemes from the perspective of producers. There is then a brief discussion of selected issues, based on some initial observations and experience to date.

The potential *benefits* articulated include:

- access to new markets;
- consolidation or expansion of market share in existing markets;
- greater credibility *vis-à-vis* retail buyers;
- potential for more value-added products, including through product differentiation (niche markets for environmentally friendly products);
- improved management of fisheries resources and resulting guarantees of future production potential; and
- increased earnings through an assumed price premium for ecolabelled fish and seafood.

In contrast, *costs* have been identified, including:

- the actual costs of certification, including experts' fees (outlined below);
- compliance costs related to adjustments in management practices, data collection and record-keeping, which is additional to existing government administrative requirements; and
- costs related to potential adjustments in fisheries management (for example, there might be a recommendation that catch limits are reduced to meet sustainability criteria).

Other *concerns* have been raised in relation to ecolabelling schemes, relating to:

- transparency and participation: standards are set by (foreign) “outsiders” and imposed on fishers;
- legitimacy: ecolabelling schemes are typically developed and controlled by private sector operators or NGOs, while some fishers would prefer to participate in a public scheme with some public accountability;
- applicability: concerns have been raised that current schemes do not lend themselves to multispecies or artisanal fisheries found in developing countries (the impacts on developing countries are discussed further below);
- impacts on trade: ecolabels might be used as a barrier to trade by importing countries and become “back door” protectionism;
- fears that schemes that are initially voluntary will eventually become mandatory; and
- governance: certification and labelling depends on the effective public management of marine resources. Poor institutional infrastructures pose a barrier to the certification of fisheries in those jurisdictions.

How much does certification really cost?

Producers lament the high costs of certification to an ecolabelling scheme. Recent research conducted by the URI's Sustainable Seafood Initiative (of MSC clients both certified and in assessment) confirmed that the fishing industry itself usually foots the bill for certification. Some 62 percent of successful certifications were funded by industry alone, 38 percent were paid for by some combination of industry, government or external grant, while just under 10 percent were paid for by government grants alone (Roheim and Seara, 2009). For example, the state government funded the certification of the Alaska salmon fishery (Roheim and Sutinen, 2006). Other public authorities – the Governments of the Netherlands and New Zealand and the EU – have funds available to help meet the costs of certification (described below).

The cost of certification can vary enormously depending on the scheme chosen, and even within the same scheme, on the size and complexity of the fishery. The cost for full assessment for certification to the MSC can range from about US\$10 000 for a simple small fishery to more than US\$250 000 for a large and more complex fishery.⁵⁸ The unit of certification can be an entire fishery or a component of a fishery. However, in the latter case, the entire fishery and its management is still assessed in order to determine the impact of that component on the overall fishery. The actual cost of MSC pre-assessment (which is confidential and gives an indication of the likelihood of certification being successful) can range from a few thousands United States dollars to a few tens of thousands of United States dollars. The certification of the Alaska pollock fishery (one of the largest fisheries in the world and, hence, an outlier) was reported to have cost US\$500 000 (Roheim and Sutinen, 2006, p. 220). During research for this technical paper, respondents invariably complained about the high cost of MSC certification. In contrast, FOS certification costs from about US\$2 000 as the assessment methodology involves less independent data analysis and is less time-consuming.

The overall cost of certification depends on the time involved in the certification process – the Alaska pollock fishery took four years to become fully certified. For MSC certification, timing varies according to the complexity of the fishery and the availability of sound and reliable scientific data. The more pre-existing data, the less costly the process, which means that certification is relatively cheaper for fisheries in countries where there is an effective fisheries management generally, and more costly for fisheries in data-deficient countries. For FOS certification, the process is less complex – involving no independent verification of data – and, hence, shorter. The certification process involves a preliminary assessment of the candidate by the FOS advisory board (usually taking one week). From there, an independent certification body evaluates existing official stock data (one day), following which a local on-site audit is conducted (2–10 days), and a traceability assessment carried out (one day).⁵⁹

The bulk of the certification costs relate to experts' fees (which accrue to certification companies not to the ecolabel standard owner). During interviews with stakeholders carried out for this technical paper, concerns were raised about the historically limited number of audit companies accredited to carry out an MSC certification, and the extent to which this was a factor in the "high" global cost of the assessment procedure. The MSC acknowledged that the small number of certifiers was problematic; over the past few years, the number of certifiers has increased considerably. The increased number of accredited certification bodies, depending on the level of competition this implies,

⁵⁸ R. Howes, Chief Executive, MSC, personal communication, 2008. The same costs were confirmed by Howes in April 2009 at the OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector. It should be noted that the costs of certification vary according to which company is carrying out the assessment. They are third-party assessments, hence fees are not determined by the MSC.

⁵⁹ P. Bray, Friend of the Sea, presentation to OECD/FAO Roundtable on Ecolabelling and Certification in the Fisheries Sector, The Hague, April 2009.

may have an impact on future fee structures. Moreover, the MSC has argued that costs should fall as a result of adjustments to its “standardized assessment tree” that leave less room for certifier interpretation. Certifiers present at the recent OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector agreed that, as they became more familiar with an assessment methodology, they become more efficient and were likely to be able to further contain costs.

Most of the fisheries certified by the MSC to date are large commercially significant fisheries, and tend to be based in countries with pre-existing, good fisheries management regimes and effective governance structures. For the bulk of these fisheries, the required management systems are already in place, while their commercial significance indicates an ability to pay.

Perceived high fees may or may not have deterred fisheries in developing countries from requesting certification. Very few certified fisheries are based in less developed countries. Any upgrading of systems or management required in countries with a poor public institutional infrastructure is likely to pose a barrier to certification. As Roheim and Sutinen (2006, p. 22) noted: “The major cost of certification remains... the cost of running a well-managed, sustainable fishery”.

Price premium – myth or reality?

There is only spotty evidence of price premiums accruing to certified fish and seafood. Research by the URI Sustainable Seafood Initiative (Asche, Insignares and Roheim, 2009) found price premiums at the retail level but acknowledged that this did not necessarily imply that any premium would accrue to fishers. At the 2009 OECD/FAO Round Table, some participants reported, if not price premiums, then less price volatility at the ex-vessel stage of the supply chain. Often, this was related to more direct supply relationships. The MSC’s recent publication, *Net Benefits* (MSC, 2009), which describes the experiences of the first 42 fisheries to be certified, concludes that the main beneficiaries of price premiums have been smaller-scale artisanal fisheries (all in developed countries) selling into niche markets. The price premiums described are all associated with more secure supply relationships, either with restaurants or, to a lesser extent, supermarkets.

In contrast, importers of Alaska pollock and Pacific salmon consulted for this research had not observed any change in price quotations from their certified suppliers based on certification. A supplier of Alaska pollock confirmed that there has been no price premium gained from certification and pointed to the fact that uncertified Russian pollock was fetching similar prices on the European market.⁶⁰ Netherlands fishers have expressed initial disappointment at the lack of any price premium for MSC certified North Sea herring.⁶¹ Similarly, the New Zealand Seafood Industry Council (SeaFIC) concluded that “It is difficult to identify any premium for hoki arising from certification”.⁶²

Price is a function of a multitude of factors, of which ecocertification is arguably not the most significant. Roheim argued in 2003 that certification could lead to some price stability for fishers as buyers had few substitutes and were therefore committed to purchasing from the limited number of certified fisheries. A South African industry source could not confirm a price premium but noted that his company was “able to stand firm on price knowing that a particular customer has specifically been needing MSC certified product that they have not been able to source elsewhere”.⁶³ Roheim also predicted in 2003 that any initial “reduction in price volatility will likely decrease”

⁶⁰ T. Halhjem, Trident Seafoods, and Vice-President of industry group, Genuine Alaska Pollock Producers (GAPP), personal communication, 2008.

⁶¹ “North Sea herring and the MSC: one year later”, www.intrafish.no, 3 December 2007.

⁶² A. Macfarlane, SeaFIC, personal communication, 2007.

⁶³ D. Handley, I&J, South Africa, personal communication, 2007.

as more fisheries become certified (Roheim, 2003). That is, with more competition between certified suppliers, there is likely to be less price stability. Any initial price premium or stability gained through certification is likely to level off as more certified producers enter the market. This may indeed be the case for larger fisheries in species where a significant proportion of world supply is similarly certified.

Market share: a case of diminishing returns?

Some respondents for this research noted returns from certification in terms of new business and/or consolidation of their market position. A South African industry source commented that: “There is no question that a large amount of new business has developed as a direct result of having MSC [certification]...Industry in South Africa have clearly seen higher demand for the product [certified hake] and regularly receive enquiries for certified product”.⁶⁴ In terms of certified Alaska pollock, an industry source noted: “the certification of the Alaska pollock fishery hasn’t attracted new customers as a result of the MSC ecolabel, but it has strengthened the company’s relationship with its existing customers.”⁶⁵

Will rewards in terms of market share also be a case of diminishing returns as more competitors become certified? In the white fish market, where MSC certified products are concentrated, certification is becoming more prevalent, although it is too early to tell whether it will become the new norm or “minimum standard” and what implications that would have for market access. There are some indications of peer pressure – that fisheries feel compelled to become certified when their competitors do.

Certification: choice or necessity?

A New Zealand industry source noted that “markets for hoki have become more concentrated towards the markets where ecolabelling has been promoted”.⁶⁶ There is an implication that certification is becoming a requirement for access to those markets. Indeed, South Africa’s application for certification of its hake fisheries followed that of New Zealand hoki, which was seen as a direct competitor. There were also concerns as to whether they could continue to supply to Unilever if they were not certified. The Namibian hake fishing industry agreed to support potential MSC certification⁶⁷ partly based on perceived competition with South African hake. An industry source there explained that they were responding to market pressure: “the industry agreed to take the process further because of market pressure. This pressure can be divided into two throngs: firstly, those that demand a certification because of their company philosophy (predominantly customers in Northern Europe) and secondly, those that compare the Namibians to the South African fishery and threaten to switch to supplies from that country because of their MSC certificate.”⁶⁸

The President of the Netherlands Pelagic-Trawlers Fishermen’s Association confirmed the extent to which some European fishers feel compelled to become MSC certified, noting that: “...price isn’t the reason to seek the MSC. In a few years’ time, you won’t be able to sell fish without it”.⁶⁹ This phenomenon was also noted by a South African industry source: “we have in the last 12–18 months had new product launches into Europe and the United States that have been on a ‘MSC or nothing’ basis”.⁷⁰ The Danish Fishermen’s Association recently announced plans to have all Danish fisheries

⁶⁴ D. Handley, I&J, South Africa, personal communication, 2007.

⁶⁵ R. Muir, Vice President of American Seafoods Group, personal communication.

⁶⁶ A. Macfarlane, SeaFIC, personal communication, 2007.

⁶⁷ The Namibian industry is awaiting government approval before going any further in the process towards certification.

⁶⁸ V. Kuntzsch, personal communication, 2007.

⁶⁹ “North Sea herring and the MSC: one year later”, www.intrafish.no, 3 December 2007.

⁷⁰ D. Handley, I&J, South Africa, personal communication, 13 December 2007.

certified to the MSC by the end of 2012.⁷¹ This “block” approach might help to contain costs as well as to promote the Danish industry overall as sustainable.

The decision to seek certification or not is based on a range of cost and benefit factors, including its affordability. A small group of fisheries in New Zealand recently became certified to FOS. The fisheries constitute the fleet operation of one company (Leigh Fisheries or “Lee Fish”) that was under pressure from a Swiss retailer to achieve third-party certification. The retailer concerned did not specify any preference for a particular scheme. According to a New Zealand industry source, the niche characteristics of the products from the fishing company – long-line caught, ultra-high-quality product sent chilled by air-freight to certain retailers in Germany and Switzerland – and the relatively small scale of the business “precluded the cost and comprehensive approach of the MSC”, so it “reached for the next most affordable certificate – Friend of the Sea.”⁷²

Consistency in certification

There have been concerns expressed about consistency in the certification process both within and between certification schemes. Anecdotal evidence suggests some “outliers” in terms of scoring fisheries, and that some applicants might have had an easier path to certification than others.

The certification and re-certification processes appear to be influenced by civil society. For example, the recertification of New Zealand hoki (October 2007) took longer than expected due in part to the level of objections to the certification, what the MSC acknowledged was a “very drawn-out objection process”.⁷³ Both WWF New Zealand and New Zealand’s Royal Forest and Bird Protection Society made formal objections to the hoki re-certification, claiming that the fishery was unsustainable despite significant cuts to catch limits imposed by the Government of New Zealand. Similar objections were raised by environmental groups during the Alaska pollock certification, and were said to have influenced the scoring process. More recently, NGOs raised objections regarding the MSC certification of the Fraser River Canadian sockeye salmon, citing concerns with the fisheries’ sustainability.

In response to these concerns, the MSC recognized that there were variations in scoring and initiated a “quality and consistency” project to ensure more consistency among certifiers, including by developing its aforementioned “standardized assessment tree”, and ensuring any re-assessment is judged against the same set of indicators. The project also reduced the number of indicators by which a fishery is assessed, and reviewed its objections process, with a view to making it more streamlined, cost-effective and quicker. The MSC argues that this will reduce the costly delays for fisheries seeking certification or recertification, and improve confidence in the credibility of those certifications.

The recent study commissioned by the Fish Sustainability Information Group (FSIG)⁷⁴ concluded that some FOS criteria lacked specific parameters to assess compliance, and that this may have resulted in those criteria being interpreted in different ways by different auditors (MRAG Ltd., 2009). Moreover, until recently, FOS only had a post-certification objections process. The United States Food Safety and Inspection Service study found that: “The value of this opportunity for stakeholder input is somewhat reduced... because very little information on the fisheries under

⁷¹ www.msc.org/newsroom/msc-news/archive-2009/denmark-goes-all-in-for-fisheries-ecolabel.

⁷² A. Macfarlane, NZ Seafood Industry Council, personal communication, 2009.

⁷³ R. Howes, presentation to Groundfish Forum, October 2007.

⁷⁴ Review of Sustainability information Schemes, Final report, Report prepared by MRAG for FSIG, January 2010.

audit is available on which stakeholders can base their comments” (MRAG, 2009, p. 34). However, during the period of the FSIG review, in mid-2009, FOS rectified this by introducing procedures for stakeholder input during the certification process.

FAO has not conducted any independent evaluation of the objections procedures of the schemes referred to. The FAO Guidelines call for stakeholder input into standards and a process for objections and complaints related to certification assessments. A fair and consistent certification process and balanced objections procedures are vital.

4.3.2.2 Importers and wholesalers

Importers of frozen MSC certified seafood interviewed for this research did not seem to have embraced the “raison d’être” of the process, with one respondent viewing it as “another fantasy of the supermarket chains”.⁷⁵ However, most saw the administrative costs (keeping records, completing specific documentation, and periodic audits) and the relatively small fee involved in the chain of custody certification (see Box 6)⁷⁶ as worthwhile in order to maintain relationships with clients requesting ecolabelled fisheries products.

One importer noted: “If our clients want it, we will get it for them”. Several importers interviewed said they became MSC certified in response to a direct request by a client. Overall, this sector appears to see MSC certification as a moderate additional constraint imposed by increasingly demanding clients. None of the importers reported having gained certification voluntarily to enlarge the range of products they would have on offer.

BOX 6

Chain-of-custody certification

The Marine Stewardship Council (MSC) has a specific traceability standard. The cost for certifying one level of chain of custody against this standard varies according to a risk assessment as to the likelihood of non-compliant products being mixed with labelled products. The number of sites managed by the operator is also relevant. The cost for certification will vary between markets, certification companies and the number of sites being audited. The cost for auditing one site typically includes one and a half days of audit, which could be invoiced at anywhere between US\$250 and US\$750 a day. If the company does not meet all the criteria, additional costs for upgrading procedures and/or premises may be involved. A typical Friend of the Sea (FOS) chain-of-custody audit takes half a day – similar certifier fees would apply.

4.3.2.3 Retailers, processors and brand owners

Retailers are clearly driving the ecolabelling phenomenon, seeing gains in terms of value-addition to their brand and reputation at relatively low or no cost. The higher competition between retailers, the more likely they are to strive for something that sets them apart. For example, in the United Kingdom, following effective pressure by Greenpeace, the five largest retailers (Tesco, Sainsbury’s, Asda, Safeway, and Marks and Spencer), which together account for more than 70 percent of total retail sales, have incorporated sustainability into their seafood procurement policies. In France, Auchan and Carrefour, direct competitors in selling through hypermarkets, have also marketed their sustainability credentials. The Food Marketing Institute (FMI) – which represents three-quarters of all grocery sales in the United States – has recently adopted a policy supporting sustainable seafood, encouraging its 26 000 members to “learn

⁷⁵ Anonymous, personal communication, 2007.

⁷⁶ A. Jackson, personal communication, 2008.

about the issues, consider sustainability in development of procurement policies and ‘explore’ seafood certification programmes”.⁷⁷ An article in the seafood media recently summed up this focus on sustainability saying: “every major seafood buyer in most every market is laser-focused on product that offers some guarantee of sustainability”.⁷⁸

Many retailers, wholesalers and buyers in the foodservice industries now have procurement strategies based on criteria related to sustainability. Some engage directly with relevant NGOs to develop those strategies, most refer to NGO seafood lists in order to avoid purchasing the most controversial species, and many also publicize a commitment to one or other ecolabel (see Box 7). For retailers, the costs of commitment to an ecolabel are relatively small, relating mainly to chain-of-custody certification and licensing fees where labels are used at point of sale and on private label (retailers’ private brand) products. The benefits can be significant.

BOX 7

Sainsbury’s sustainability strategy

Increasingly, retailers are embarking on a sustainability strategy. Some, like Sainsbury’s in the United Kingdom, use a traffic light sustainability rating system that was developed “by working closely with the Marine Conservation Society, suppliers, campaigners and industry experts”. It is attempting to convert its top five fish species (80 percent of its seafood sales) to “green” status on its traffic light scale by the end of 2010. Fish certified by the MSC is preferred. However, if MSC supplies are unavailable, then the sustainability rating system is applied.

Source: www.sainsbury's.co.uk, accessed 16 October 2009.

Adding value to private labels

As noted in Chapter 3, there is a strong link between the demands for certification and the increase in private label products. Private labels help build reputation by promoting products that carry the retailers name, and allow retailers opportunities to reap margins usually accruing to commercial brand owners. Private label items are a solid media for the retail chain identity and image. An ecolabel can add value to private label products and the overall brand. This does not mean that the actual ecolabel logo will always appear on seafood from MSC-certified fisheries. One retailer noted that they wanted to retain the “sustainability” value for their own brand saying: “We shall certainly buy MSC fish in the future but will not automatically promote the label.”⁷⁹ The sustainable character of the fish adds value to the retailer’s brand – the certification process and the guarantees it offers is often more important than the use of the ecolabel itself.

Similar returns related to value-addition also accrue to processors that link sustainability to their brands, including by attaching an ecolabel (such as those described above: Asdomar, Findus, Young’s, Birds Eye Iglo). Brand owners must respond to retailers’ requests for certified products (in order to achieve shelf space and position) but they also compete with retailers’ own private label products.

Risk management and ease of procurement

Ecolabelling schemes offer returns to retailers in terms of ease of procurement with guarantees, in particular related to traceability. The United Kingdom-based Seafood

⁷⁷ “Largest US retail trade group OKs sustainable seafood policy”, IntraFish, 23 January 2009.

⁷⁸ “To hell with ecolabels”, IntraFish, 13 February 2009.

⁷⁹ Personal communication with a fish purchase manager of a large retail chain (anonymous).

Choices Alliance quotes various retail industry sources and their views on ecolabels: “labels, schemes and certification provide the buyer with specific, guaranteed information about the product’s source and the way it was produced. The label makes purchasing “safer” for the corporate buyer, safeguarding brand and reputation”; and “the MSC gives us a license to trade with confidence and provides us full due diligence” (Siggs, 2007). For example, Sainsbury’s issued guidelines to their seafood buyers, with the first question being: “Is the product from an MSC-certified fishery? If yes, buy, subject to price and quality”.⁸⁰

Where retailers have confidence in the chain-of-custody audits carried out under an ecolabelling scheme, they can forgo their own audit of suppliers. Reliance on certification offers cost-efficiencies as well as providing another level of risk management by ensuring traceability from boat to point of sale. Robust traceability also helps to avoid the risk of inadvertently procuring illegally caught fish (Roheim and Sutinen, 2006). Moreover, it can shorten supply chains by enabling more direct relationships with suppliers.

Price premium

Most retailers are unwilling to divulge information about pricing. As noted above, research in the United Kingdom market by the URI Sustainable Seafood Initiative, using scanner data for frozen processed seafood products, found what the authors described as “the first robust indicator of retail price premiums” (Asche, Insignares and Roheim, 2009) for ecolabelled products (in this case MSC-certified pollock). Whether there is a consistent price premium attached to ecolabelled products at retail level remains to be seen. At the recent OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, representatives from the retail and commercial brand sectors warned that the industry could not rely on consumers being prepared to pay a price premium for ecolabelled products and that affordability was increasingly important in the current economic climate. Other industry sources concur with this. A seafood buyer from a major United Kingdom retailer confirmed: “I do not think there is a premium specifically charged for MSC certification either when buying the raw material or selling at retail level. For example, assuming quality and all other factors are equal, the price of Canadian salmon⁸¹ is similar to MSC certified Alaska stock and we do not add any cost at retail level. The over-riding factor that sets price is still quality, however this can coincide with MSC certification”.⁸²

Most returns to both retailers and processors appear to be more indirect and related to reputation and brand value.

Costs

For retailers, the actual cost of certification and for using an ecolabel is relatively small and, where the retailer has no private label products, might only equate to chain-of-custody certification. Other indirect costs would include any special marketing of those products. In this area, retailers would benefit from any marketing of the label by NGOs or the ecolabel standard owner itself, which in effect is “free publicity”.

The cost of the use of the logo or label on products from a certified fishery is borne by whoever applies the logo to the product – either the processor with brand products or retailers in the case of private label products, that is, whoever exposes the product to the end consumer. Licence fees vary by labels. For MSC-certified products, the annual

⁸⁰ R. Howes, presentation to Groundfish Forum, October 2007.

⁸¹ Following this assessment, wild salmon fisheries in British Columbia announced their intention to seek MSC certification in response to competition with certified Alaska salmon in the United Kingdom market. See “UK retail demand drives B.C. decision to seek MSC label for wild salmon”, *IntraFish*, 15 January 2008.

⁸² Marks and Spencer seafood buyer, personal communication, 2007.

fee for using the logo is based on the value of the product at the first point of sale after application of the logo.⁸³ A minimum royalty is payable annually by the licensee to Marine Stewardship Council International (the trading arm of the MSC), which licenses the use of the MSC logo. Organizations selling up to US\$200 000 of consumer-facing product would pay US\$250 plus 0.5 percent of sales, or a fee of US\$250 for non-consumer-facing product. Organizations selling more than US\$200 000 up to US\$500 000 would pay US\$1 000 and 0.5 percent of sales for consumer-facing product and US\$1 000 for non-consumer facing. In contrast, FOS-certified companies are authorized to use the logo based on a licensing agreement and pay a standard yearly fee of EUR3 000 (about US\$4 200) for each product (EUR5 000 [about US\$7 000] for the first year, which includes audit costs).⁸⁴

4.3.2.4 Consumers

Ecolabels can provide consumers with specific information on where products come from and whether their harvest is sustainable. By purchasing fish and seafood products certified to a respected ecolabelling scheme, consumers can reassure themselves that their consumption is not having an adverse effect on fish stocks or the marine environment. Moreover, assuming no or minimal price premiums, they can “do the right thing” at little or no additional cost.

Consumer awareness and the willingness to purchase ecolabelled products over similar alternatives depend on good information. As noted above, many NGOs in the fisheries area are attempting to provide information to consumers as close as possible to the point of purchase (e.g. wallet cards, seafood guides).

However, the proliferation of ecolabels and other ethical product differentiators complicates consumers’ purchasing decisions. Faced with information from various NGOs promoting different issues (fair trade, organics, etc.), consumers can face “ethics confusion”. As noted in Chapter 3, it has been argued that consumers increasingly put their faith in trusted retailers to sift the information for them. The inclusion of a commitment to certified products helps the retailer to communicate its CSR to consumers and, in turn, helps consumers reduce the complexity of their purchasing decisions. Retailers increasingly adopt a range of product differentiators depending on the commodity – fair trade coffee, ecolabelled fish, organic fruit and vegetables – in the quest for the “green dollar”. Consumers are increasingly likely to go to a trusted retailer as a one-stop-shop for the range of their “ethical” product purchases rather than to differentiate their shopping in search of products bearing specific certifications or labels.

4.3.2.5 Governments: responses and implications

Governments’ have the ultimate responsibility to ensure food security for current and future generations. The protection of the public goods of fish stocks and related ecosystems is an important part of that equation. At another level, governments have to ensure that the conditions are right for their fishing industries to compete in international markets, where ecolabels are increasingly a part of buyer specifications and a factor in market access.

Governments have taken quite diverse approaches to the ecolabelling question. A few have supported the development of a public ecolabel, some have made funds available to industry to offset the costs of certification, some have allocated resources to help improve the administrative or management conditions required for industry-funded certification to be successful, while others have taken a conscious hands-off approach. Some illustrative examples are described below.

⁸³ For further information and a schedule of fees, see: www.msc.org/get-certified/use-the-msc-ecolabel/copy_of_use-the-msc-label.

⁸⁴ www.friendofthesea.org, accessed 11 November 2009.

(a) Government approaches to ecolabels

National ecolabels

France

As noted above, the Government of France is creating its own national ecolabel and related certification scheme, based on a feasibility study and consultation with industry that highlighted support for a purpose-built, national French scheme. Certification will be conducted by an independent, internationally recognized and accredited certification body, which will in essence involve third-party certification of the government's performance in fisheries management. The certification body will assess fishery conformance to a specification based on the FAO Guidelines.

Iceland

The Government of Iceland supported its fishing industry⁸⁵ to develop an Icelandic "logo" based on a "Statement on Responsible Fisheries in Iceland". That statement was co-signed by government and the fishing industry. Both industry and government believed that Iceland's fisheries management was sound and that fisheries were being exploited responsibly. Yet both also realized that there was a need for some mechanism to offer "proof" or verification that this was the case. The Icelandic logo will be a label of origin but with reference to sustainability.

Public financial support for certification to a private ecolabel

The Netherlands

In the Netherlands, the Minister of Agriculture, Nature and Food Quality recently announced that a fund of EUR1 million (about US\$1.4 million) would be made available to the country's fishing industry to become MSC certified, saying: "...Dutch fisheries will in the future be assessed on the basis of the MSC Standard for Sustainable Well-Managed Fisheries".⁸⁶ A ministry representative explained further that, because government regulatory measures had not achieved the required results, they were opting to use a private sector mechanism to incentivize more sustainable fisheries practices. This is one of the most explicit examples of a government utilizing a private ecolabel to pursue its public policy goals.

New Zealand

New Zealand, which exports 90 percent of its seafood products, has created the "Environmental Certification Fund", which offers grants to fisheries to help pay for the costs of certification. Applicants can apply for a grant of up to 75 percent of the cost of certification. The objective is to "promote environmental certification and other independent sustainability assessments as a tool to:

- enable the New Zealand seafood industry to respond to growing pressure for environmental sustainability;
- promote and improve the management and environmental performance of New Zealand fishing and aquaculture, including impacts of fishing and aquaculture on the aquatic environment;

⁸⁵ www.fisheries.is.

⁸⁶ G. Verburg, Minister of Agriculture, Nature and Food Quality, the Netherlands. Opening address to the OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, The Hague, 22–23 April, 2009.

- build public confidence in the management of New Zealand fishing and aquaculture; and
- raise the profile of New Zealand’s seafood sector.”⁸⁷

The then Minister of Fisheries was quoted as saying: “New Zealand manages its fisheries carefully to ensure sustainability but we need to be able to prove that to our consumers... Independent ecocertification is the best way to do that and the New Zealand Government is supporting the New Zealand fishing industry to gain certification through management assistance and planning and through providing grants to help with the costs”.⁸⁸

The New Zealand fisheries that are currently MSC certified account for about one-third of New Zealand’s annual landed catch. As noted above, another small group of New Zealand fisheries are FOS certified.

European Union

The EU also has resources available for environmental projects, albeit not specific to fisheries; both France and the Netherlands apparently took advantage of these in defining their respective approaches to fisheries ecolabels.

(b) Hands-off approach to ecolabels

Other governments have taken a hands-off approach to ecolabels and certification.

United States

The approach of the United States has been to consider ecolabels and certification as private contracts, and hence it has chosen not to participate directly in the private sector certification of fisheries. The National Marine Fisheries Service (NMFS) clarified its role and responsibility on the matter (NMFS, 2005). The policy of the NMFS is to neither endorse nor participate directly or indirectly in the private sector certification of fisheries. However, with respect to private sector certification, the NMFS will provide information to both applicants and certification entities.

Canada

Canada sits somewhere between the hands-on approach of the former examples and the hands-off approach of the United States. Responding to its industry’s engagement with ecolabels, it has introduced management changes, such as redesigning data systems to fit the information demands of certification, and taking steps to reduce administration and transaction costs.⁸⁹

(c) Policy issues arising

How ecolabels and certification affect national fisheries policies and wider public policy frameworks has not been studied in great depth. While governments might balk at private outside interests evaluating the effectiveness of their fisheries management regime, they might also see the certification process as a support to their conservation policies by helping to incentivize industry to adopt more environmentally friendly fishing practices.

Whatever approach governments take towards ecolabelling and certification, they need to be aware of the implications of that decision. If they decide to endorse a particular private scheme that has current credence and acceptance in the market,

⁸⁷ www.fish.govt.nz/en-nz/Commercial/ECF.htm?WBCMODE=PresentationUnpublis.

⁸⁸ P. Heatley, then New Zealand Minister of Fisheries quoted in: “New Zealand dives deep into MSC”, IntraFish, 6 May 2009.

⁸⁹ Information derived from interventions by L. Ridgeway, Director General, International Policy and Integration, Fisheries and Oceans, Canada, at the OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, The Hague, April 2009.

it might imply a contingent liability if at some point in the future that scheme fails to deliver promised gains or ceases to exist. Does it transfer too much power to the private sector – with implications for policy sovereignty – especially if demands and requirements of those schemes increase over time? In contrast, developing a national ecolabel is expensive and may not be accepted by the market. Ultimately, it is large-scale buyers and their choice of which schemes they require their suppliers to be certified to that decide which ecolabels gain traction in the market. Governments need to consider how private market mechanisms fit into their overall governance framework for sustainable fisheries. In doing so, they can also help to ensure that any potentially benefits are realized, and any costs managed.

Some important policy dilemmas are starting to emerge.

(d) Resource allocation and policy frameworks

Government policies tend to have multiple goals. Fisheries policies might include considerations of food security, social equity, employment, and maximizing export earnings as well as sustainability and the efficient utilization of natural resources.

Fisheries seeking certification put pressure on governments to allocate resources to areas and/or activities that may not be entirely consistent with existing policy frameworks and trajectories. Governments have to decide if they should allocate resources accordingly, either financial or in administrative and policy “effort”; such as providing data, creating new data streams, conducting scientific research, and creating and implementing the “conditions” required for certification (which may include requirements to change policy, management settings and/or surveillance). For example:

- Companies involved in longline fishing of Alaska cod requested a federal government grant of US\$500 000 towards research on the impacts of lost longline gear, as recommended by the MSC certification process of that fishery.
- Tori lines (to deter birds that could end up as bycatch) are now mandatory on all trawling vessels in South Africa, apparently following on from a condition of the MSC certification of the South African hake fishery.
- A condition of MSC certification of United States North Pacific halibut was for the fisheries to pressure public agencies to improve on-board monitoring of bycatch, which has resulted in changes to the North Pacific Council’s observer programme.⁹⁰
- The recent MSC certification of the Japanese Tosakatsuo Skipjack Pole and Line Fishery includes the condition that Japan “promotes and supports management actions put forward to further improve and formalize the international and Japanese fisheries management framework”.⁹¹

Government responses to the demands of fisheries engaged in the certification process might affect the pace and timing of ongoing fisheries management reforms.

(e) Equity and fairness

Assuming economies of scale, it is currently relatively cheaper for a larger fishing firm or larger fishery to achieve certification. If that means that smaller firms competing in the same fishery, or fishers operating in smaller or data-poor fisheries, are excluded from lucrative international markets, governments might be called on to deal with resulting equity issues. Those operators might request assistance to allow them to compete. Governments might also be called on to assist fishing operators facing high-risk markets, or those markets where demands for certification are more prevalent. As discussed above, demands for certification are stronger in some markets and species

⁹⁰ These examples are drawn from case studies by the MSC of the first fisheries to be certified (see MSC, 2009). It is acknowledged that some of these changes might have occurred anyway.

⁹¹ Fishnewseu.com, 4 November 2009.

than in others. Impacts on trade and access to international markets will also influence governments' responses to ecolabels and certification. Less sustainable fisheries may be competing for scarce public resources against fisheries seeking certification or even recertification. The equation for determining where efforts should be focused is complex; for example, should the focus be on poor performers, on transitional fisheries, or on fisheries with the potential to bring in export earnings?

Governments have to determine a framework for the fair and effective allocation of public resources available for fisheries management. Resource allocation decisions are particularly complex when the demands are driven by a private market-based mechanism. Governments have to deal with these equity impacts, yet are not driving the changes that created them. Responses to ecolabelling and certification should ideally be consistent with overall management policy frameworks. Where a management framework is based on principles of cost-recovery, public authorities might decide to recover the costs of public responses to certification from those likely to benefit from the certification. On the other hand, if fisheries seeking certification fail because the assessment process reveals deficiencies in the overall public management of fisheries – a government responsibility – the pressure will fall on public authorities to foot the bill.

(f) Public investment in ecolabels

If governments decide to engage actively in the ecolabels phenomenon, other issues arise. Should resources be available to fisheries seeking certification to any and all ecolabels, or should governments play a role in deciding which are the more robust and credible labels? In order to decide whether or not to invest resources in certification and labelling of fisheries, governments might need to judge which labels are preferred by buyers and, therefore, affecting trade opportunities. A related question is: Will there be an ongoing market for certified products? Is the ecolabel and associated standard legitimate and stable? What levers, if any, do governments have to ensure ongoing good governance in a private scheme?

These questions highlight the value of some sort of benchmarking tool to assess the credibility of the various ecolabelling schemes on offer (discussed below).

In developing countries, concerns about the impacts of ecolabelling schemes have been more acute.

4.3.3 Ecolabels and developing countries: bonus or barrier?

Developing countries account for 50 percent of the world's traded fish and seafood by value, and 61 percent by volume (FAO, 2010). Some 50 percent by value of the fisheries exports from developing countries ends up in developed country markets (FAO, 2010). Given this dependency on developed country markets, how is the trend towards ecolabels affecting developing countries?

To date, fisheries in developing countries represent a small minority of certified fisheries. Most of those fisheries are large-scale, such as the South African hake fishery. Developing countries' underrepresentation is due to three main factors:

- The lack of an economic imperative for certification. Developing countries have a limited presence in the markets, species, types of products, and supply chains where pressure to be certified is greatest.
- Ecolabelling schemes do not translate well into the typical conditions of the fisheries environment in developing countries (insufficient fisheries management regimes, data deficiencies, small-scale multispecies fisheries).
- The high costs of certification are often prohibitive for small-scale or resource-poor operators.

On the other hand, developing countries might also be missing out on the potential opportunities certification has to offer, which might include more opportunities for value-added products, more direct and stable supply relationships and pressure for improved fisheries management.

4.3.3.1 *Lack of economic imperative*

Three factors suggest that, so far, developing countries have not been significantly affected by the trend towards sustainability certification and in ecolabelling schemes:

- The current small volumes of ecolabelled products on the market suggest only limited demand to date, although as noted above this demand is growing rapidly. So far, there has been no evidence to suggest that developing countries are seeing their markets drying up as a result of demands for certified ecolabelled products.
- The concentration of demand in certain markets: while there is significant demand in pockets of the European and the United States markets, in other key markets, such as Asia (including the important Chinese market), there is less eco-sensitivity.
- Ecolabelling is concentrated in species – temperate-water white fish (pollock, cod etc.) and salmon – that are not the main species traded by most developing countries, which export mainly tuna and shrimp. An FAO study of developing country products on sale (FAO, 2008) – albeit a limited survey of retail outlets in France and Italy – found that, overall, developing country products were concentrated in five species: tuna, anchovies, sardines, shrimp and crab. The overlap between developing country products and ecolabelled products, therefore, appears mainly in relation to tuna, and to a lesser extent shrimp (where there are very few capture fisheries certified and the pressure for certification has a greater impact in aquaculture). For developing countries, there might be some pressure for certification of tuna but more in relation to dolphin bycatch than sustainability of tuna stocks (Dolphin Safe). In general, therefore, if developing country competitors fishing in similar or substitutable species are not ecolabelled, then there is no immediate need for them to be.
- With some exceptions,⁹² developing country fishers (especially in environments characterized by small-scale fragmented operators) are less likely to be linked into direct supply relationships with large-scale buyers, where the pressure for certification is most intense.

A recent (albeit limited) survey conducted for FAO (FAO, 2009b) on small-scale developing country fisheries suggested that their exports were largely unaffected by sustainability requirements, with little or no sustainability information being requested by buyers, let alone any requests for certification. An earlier study of countries of the Association of Southeast Asian Nations (ASEAN) revealed that, in that region at least, countries did not feel any immediate pressure to engage in any ecolabelling scheme, concluding that: “several countries share the opinion that ecolabelling will be implemented only if it is required from importing countries (at the moment, it is not)” (Bjerner *et al.*, 2006, p. 6).⁹³

As demand for ecolabelled products grows and as fisheries in species relevant to developing country capture fishers (such as shrimp⁹⁴ and other tropical species) become certified, especially if they are competing in the same markets, developing country producers might feel more pressure to participate in ecolabelling schemes.

⁹² Some African fishers, for example in Senegal, sell to large processing companies that in turn have direct supply relationships with buyers mainly in Southern Europe.

⁹³ Countries consulted included Brunei Darussalam, Cambodia, Indonesia, Lao People’s Democratic Republic, Myanmar, Malaysia, the Philippines, Thailand and Viet Nam.

⁹⁴ So far only two shrimp fisheries are MSC certified; both are in North America. Pressure for certification of shrimp is greater for aquaculture.

Under pressure from the fishing and canning industry, Morocco has committed to an MSC pre-assessment of two sardine stocks and an octopus fishery. The Moroccan industry claims to lose competitive advantage to countries such as Portugal, which has engaged in MSC certification.

However, several commentators have raised serious concerns about the ability of most developing countries to obtain certification, pointing to the “fit” between certification methodologies and developing country fisheries, and the ability of those countries to assume the costs of certification.

4.3.3.2 Mismatch between ecolabelling schemes and developing country fisheries

Current ecolabelling schemes are problematic in many developing country environments. To take MSC certification as an example, on all three fronts of the MSC’s assessment criteria – quality of information on fish stocks, information on environmental impacts, and quality of management systems – developing countries often fall short. Specific difficulties are outlined below.

Insufficient overall fisheries management regime

Many developing countries lack an effective fisheries management regime, which in practice is a prerequisite for certification. Some operate under open-access arrangements, with poor governance, including weak official controls over catch limits if and when they exist.

Data deficiencies

Many developing countries lack information on existing stocks. Certification requires science-based stock assessments for which there is often poor infrastructure (systems and human resources). There are also inadequate data on catches. Small-scale fishers land catch at a multitude of sites for which records are not always kept. Ecolabelling schemes such as the MSC are generally data-intensive; in developing countries, there is often a lack of know-how and a weak tradition of record-keeping. This makes any chain-of-custody certification problematic. In some cases, literacy is also an issue.

Unit of certification

Certification is often based on a single species fishery, characteristic of developed countries. Developing country fisheries tend to be multispecies, with commercial and artisanal fishers competing for the same stocks. Some commentators have argued that where “the unit of certification is a fishery in its entirety, there is no scope to reward the responsible fishing methods of the artisanal, and to reprimand the destructive fishing activity of the large-scale” (Macfadyen, 2004, p. 11).

Under an MSC assessment, there is the potential to certify a component of a fishery.⁹⁵ However, the evaluation remains dependent on the continued sustainability of the entire fishery, much of which is outside of the direct control of those fishers.⁹⁶ Certification of a component of a fishery, however well managed, is problematic in environments where overall management is weak.

Fragmented, small-scale fisheries

Developing country fisheries tend to be fragmented and characterized by a large number of small-scale operators, with weak or non-existent producer organizations. Under these arrangements, the costs of certification can be prohibitive, it is difficult to establish an appropriate body to act as a “client” for certification, and any management

⁹⁵ For example, the southwest Cornwall (United Kingdom) mackerel handline fishers were duly certified even though they target a small component of a larger fish stock that is exploited by a number of other fishing methods under different jurisdictions.

⁹⁶ See “Unit of certification”, www.msc.org.

changes required for certification would be difficult to implement and monitor. Small-scale fishers account for a small fraction of ecolabel certifications to date – less than 1 percent (MRAG Ltd., 2009) of both MSC and FOS certifications – and most are in developed countries.

High costs of certification

Even fisheries in developed countries complain about the high costs of certification. For developing countries, the costs are often prohibitive, including the up-front direct costs of the initial assessment process with reliance on outside experts, as well as any subsequent costs relating to upgrading of gear, facilities, methods or management systems. Where there are multiple stakeholders, deciding who pays, and how much, is also problematic. As discussed above, there is no guarantee of a price premium to offset these costs. Where there are catch limits imposed, reductions in income and some unemployment might be other indirect costs of certification.

Barriers to trade?

Where certification in an ecolabelling scheme becomes a requirement of entry into a market, and if developing countries are unable to meet those certification requirements, then they could be perceived as a barrier to trade. Some developing countries already have concerns about ecolabels on these grounds. A study of ASEAN countries to test their reactions to ecolabelling revealed that: “ecolabelling is seen as a regulation imposed by importing countries to discriminate ASEAN products” (Bjerner *et al.*, 2006).

Whether ecolabels act as a barrier to trade for developing countries depends on the level of demand for those products in developed country markets. Given the current small volumes of ecolabelled products on the market and their concentration in certain species, this is currently not a critical issue. Moreover, the limited degree of substitution for capture fishery exports from developing countries – especially shrimp and tuna – means that competition from certified fisheries is likely to be minimal. As noted above, however, if a critical mass of fisheries in relevant species became certified, this dynamic could change.

The impacts of ecolabelling on trade and the WTO regulatory framework are discussed below.

Potential benefits for developing countries

While many developing countries have focused on the barriers to certification, some have also seen the ecolabelling debate in more positive terms. The aforementioned study of ASEAN countries showed that some countries saw ecolabelling as a means to improve fisheries management. Some saw synergies with existing mechanisms, such as national codes of conduct and best management practices policies, and envisaged the institutions responsible for monitoring and certifying in those areas (including those set up for organic aquaculture) as also being well placed to manage the ecolabelling process. In short, they saw that the existing infrastructure could be slightly modified to incorporate the requirements of an ecolabelling scheme. This was also the case for East African countries, with plans to incorporate ecolabelling into the systems developed to manage the Nile perch fishery.

Some of the East African Community countries (Kenya, Uganda and the United Republic of Tanzania) have initiated work on the ecolabelling of Nile perch (Box 8). Nile perch, as a white groundfish, competes in the European market with fish from certified fisheries. Moreover, certification can be seen as part of a strategy to attach positive values to Nile perch, whose reputation was dented by EU bans in the late 1990s and early 2000s and the negative publicity associated with the film “Darwin’s Nightmare”.

BOX 8

The case of Nile perch

Three countries (Kenya, Uganda and the United Republic of Tanzania) are involved in the Lake Victoria Nile perch fishery. Nile perch is an introduced species in an inland fishery. However, the fishing communities around the lake depend on its continued sustainability, and ecolabelling has been seen as one strategy towards ensuring good management of the resource, which includes cooperation among the three countries involved in the fishery.

The Lake Victoria Fisheries Organization sponsored a Marine Stewardship Council (MSC) pre-assessment (conducted by third-party audit in 2007/08), which was used as a basis for the initial assessment of the fishery and the development of a roadmap for management improvement. The results contributed substantively to the development of the Lake Victoria Fisheries Management Plan (2009–2014). The pre-assessment indicated a lack of readiness for a full MSC assessment, but more importantly it highlighted gaps and shortfalls in existing management strategies, for example, the need for a specific management and stock recovery plan. That information was used to put pressure on the relevant public authorities to respond to shortfalls highlighted in the pre-assessment and resulted in the development of an overall management plan.

A specific project was carried out by Naturland on one component of the fishery. The project, “Ecolabelling of Nile Perch from Bukoba” in the United Republic of Tanzania, was not just an assessment of a fishery for certification purposes but a hands-on development project, carried out in partnership with the German Agency for Technical Cooperation (GTZ), a Netherlands importer, a Tanzanian processor/exporter and more than 350 local fishers. A holistic approach was taken to improving the sustainability of this particular segment of the Lake Victoria fishery; the project included aspects such as the introduction of a mobile health service for fishers and their families and options for diversifying employment opportunities.

Sources: Joint Workshop on the Feasibility of Ecolabelling for Lake Victoria Fisheries, 4–6 October 2006, Kenyan School of Monetary Studies, Lake Victoria Organization (LVFO), GTZ, and OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, presentations by Naturland and Executive Secretary of the LVFO, April 2009.

Fishing industry representatives can potentially use the certification process to underscore to government the importance of effective resource management, including scientific assessment of stocks, data collection and improved enforcement of compliance. The certification process might provide an opportunity for dialogue between government and industry as to what is required for ensuring the long-term sustainability of marine resources. For example, in Mexico, the MSC certification of the Baja California spiny lobster was said to have helped justify requests to the Government of Mexico for infrastructure assistance. It has been estimated that since certification more than US\$20 million has been received by related communities for electricity and other infrastructure.⁹⁷

Capturing overseas expertise and assistance

For less developed countries with poor infrastructure, the above synergies are unlikely to exist. However, development assistance being bought in under the auspices of ecolabelling schemes might have some downstream positive impacts on fisheries management generally, including in assessing the state of fisheries stocks and providing a roadmap on what needs to change in order for the fishery to be sustainable. The Nile perch example is a case in point.

⁹⁷ www.panda.org/about_wwf/what_we_do/marine/news/on_the_ground/index.cfm?uNewsID=63401.

It will be important to ensure that donor assistance has positive impacts on fisheries management generally in developing countries and is not limited to fisheries that are potential candidates for ecolabelling. In this sense, the involvement of national and local authorities as well as the wider fishing communities in the process is needed.

For many developing countries, the pre-conditions for certification will take some time to develop, so it is an opportune time to enter the debate, as indeed several countries and regions have done. Outside assistance, as well as local public support, should be directed towards helping to develop effective fisheries management generally, which is beneficial in its own right as well as a step towards creating the conditions for future certification, if and when market conditions require it.

Opportunities for value-addition and more direct supply relationships

The FAO study of developing country imports into the French and Italian markets concluded that “developing countries have yet to exploit the benefits from value addition gains associated with product certification” (FAO, 2008). This refers to the range of certifications, and arguably more in the area of safety and/or quality, which would enable more processing in developing countries rather than exporting relatively unprocessed products to be sold under auction in developed country markets. However, certification, including ecolabelling, could enable more direct and stable supply relationships with developed country buyers. By offering a “calling card” with credence in those markets, certification can lead to improved access to the growing market for sustainable products (providing suppliers have the expertise to manage contracts and provide the volumes and stable quality required by buyers).

Some commentators who were initially negative about ecolabelling have since seen the potential benefits, providing there is adequate assistance for developing country fisheries to participate. The former Director of Fisheries in Kenya noted: “though I and other fisheries managers in developing countries have been concerned about the ability of small-scale fisheries in developing countries to participate, I am also aware of its significant contribution to sustainable fisheries [including through its ability to] ascertain sustainable utilization of the marine fishery resources”.⁹⁸ She calls for assistance for developing countries to participate and has been involved in developing ecolabelling guidelines for small-scale fisheries, including as a member of the MSC’s Developing World Fisheries Programme.

New certification methodologies for developing countries

In recognition of difficulties for developing countries, the MSC created a Developing World Fisheries Programme. As an attempt to make certification more accessible to small-scale and data-deficient fisheries, the programme includes the development of assessment guidelines that include the use of traditional ecological knowledge and traditional management systems, and a risk assessment component where fisheries lack full and complete scientific data (Box 9).

Friend of the Sea argues that its certification is already accessible to developing country fisheries as its methodology is simpler and cheaper. However, its reliance on official data is likely to make certification of data-deficient fisheries problematic.

Some organizations offer funds, loans or support to developing countries to help offset the costs of certification – these include WWF’s Community Fisheries Grants, and the Sustainable Fisheries Fund.⁹⁹ The Lake Victoria Fisheries Organization took advantage of development resources available from Germany in its attempts to improve the sustainability of the Nile perch fishery.

⁹⁸ N. Gitonga, fisheries consultant and former Director of Fisheries in Kenya, personal communication, 2008.

⁹⁹ See “Protecting fisheries, improving livelihoods, MSC Developing World Fisheries Programme” at www.msc.org.

BOX 9

The MSC's Risk-Based Framework (RBF)

The Marine Stewardship Council (MSC) began work to develop a suitable methodology to assess data-limited fisheries in 2005. A series of expert workshops and consultations were undertaken. These led to the development of a set of risk-based tools referred to at the time as the Guidance for the Assessment of Data-Deficient and Small-Scale Fisheries. In early 2008, a pilot project commenced to test these tools using seven pilot fisheries from around the globe, resulting in the Risk-Based Framework (RBF).

In February 2009, Version One of the RBF was released for public consultation and provisional use by certifiers. Following this consultation and a subsequent final revision, the RBF was integrated into the MSC Fisheries Assessment Methodology (FAM), Version Two, and approved by the MSC Technical Advisory Board and MSC Board of Trustees for official use as of 31 July 2009.

The RBF can now be used in any fishery assessment that uses the default assessment tree in the FAM as its basis.

Source: www.msc.org, accessed 4 December 2009.

There is currently a dearth of information on the experiences of developing country fisheries with certification and ecolabelling. The MSC has conducted case studies on certified fisheries in its stable; a few other studies have provided some insights. It will be important to monitor the impacts on developing countries fisheries and their market access as and when they become certified. Robust and independent analysis is required to enable developing countries to learn from the experiences of their counterparts. The relative scale of the fishery, the level of integration of supply chains, and the relative development of public fisheries management frameworks are all factors affecting the potential for certification and market access, and they need to be included in any analysis.

4.4 ECOLABELS AND TRADE

The FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries state that voluntary standards, including environmental standards, should not distort global markets and should not create unnecessary obstacles to international trade. Under the general principles and definitions, they state that any ecolabelling scheme should be consistent with *inter alia* the World Trade Organization (WTO) rules and mechanisms. What does the WTO have to say about ecolabels?

4.4.1 The WTO's position on ecolabels

The WTO's Web site describes its current position: "Labelling environmentally-friendly products is an important environmental policy instrument. For the WTO, the key point is that labelling requirements and practices should not discriminate — either between trading partners (most-favoured nation treatment should apply), or between domestically-produced goods or services and imports (national treatment)."¹⁰⁰

The WTO agreement of most relevance to ecolabelling is the TBT Agreement. The TBT Agreement makes a distinction between "technical regulations", which are mandatory, and "standards", which are voluntary requirements. In its Code of Good Practice for the Preparation, Adoption and Application of Standards, the TBT Agreement prohibits both technical regulations and standards from discriminating between domestic and foreign products that are alike (the national treatment principle)

¹⁰⁰ www.wto.org/english/thewto_e/whatis_e/tif_e/bey2_e.htm.

and between “like products” from different WTO members (the most favoured nation principle). Yet the preamble to the TBT Agreement also allows for countries to take measures necessary to ensure “the protection of human, animal or plant life or health [and] of the environment”. Where a technical regulation is applied in accordance with a relevant international standard, then it is presumed not to create an unnecessary obstacle to trade.¹⁰¹ There is no such interpretation in relation to voluntary standards. The 2001 Doha Declaration instructed the WTO Committee on Trade and Environment to examine the effects of environmental measures on market access and to examine labelling requirements for environmental purposes. To date, there has been no resolution on ecolabels in that committee or in the TBT Agreement.

4.4.2 Points of contention

Several contentious issues have arisen related to the interpretation of ecolabels and the TBT Agreement. The main one relates to the distinction between product and non-product related process and production methods. The question is how the TBT Agreement should relate to the non-product related process and production methods. This refers to situations where a product label includes information that allows consumers to discriminate on the basis of production methods unrelated to the product itself and invisible to the consumer, such as environmental impacts of production (as is the case with ecolabels). Some countries opposed a resolution on this front. Some developing countries feared the inclusion of non-product-related production and processing methods (PPMs) could open the door to developed countries imposing their domestic policy frameworks either related to fishing methods and/or the inclusion of labour standards and other conditions (such as human rights), thereby giving further grounds for discrimination against developing country products. Other countries supported the inclusion of non-product-related PPMs in TBT Agreement coverage, emphasizing their importance for global environmental objectives.

4.4.3 Relevant disputes panel judgments

There have been very few WTO judgments relevant to ecolabelling or mechanisms to protect marine resource. The judgments in the cases against the United States and its refusal to import tuna caught using purse seines lead to a mention of the Dolphin Safe label (Box 10).

Environmental issues are entering the international debate in terms of market access and barriers to trade. How this will affect ecolabelling schemes is unclear, especially as to date they have been driven by private sector or non-governmental interests.

4.4.4 Jurisdiction over private sector actors

While governments have the right to challenge the actions of other governments at the WTO, the grounds for challenging non-governmental actors are less clear. A note by the WTO Secretariat discusses governments’ responsibilities *vis-à-vis* non-governmental bodies in relation to private standards. The note explains that: “were a particular private standard to fall within the definition of a standard under the TBT Agreement, then Article 4 would apply. This Article requires Members to take reasonable measures to ensure that non-governmental bodies accept and comply with Annex 3 to the TBT Agreement (the Code of Good Practice for the Preparation, Adoption and Application of Standards)” (WTO, 2007, para. 20).

Voluntary standards have been discussed in relation to the SPS and TBT Agreements, mainly in the context of consumer protection and international trade and the status of the Codex Alimentarius Commission standards. This discussion is described in Chapter 5.

¹⁰¹ For a discussion of these issues, see: Ponte, 2006, and Gardiner and Kuperan Viswanathan, 2004.

BOX 10

No to regulating non-product PPMs, voluntary labels OK

When the United States regulated to prohibit the importation of tuna from countries using purse seines, a fishing method that results in the bycatch of dolphins, two challenges were launched against it: one in 1991 by Mexico, and one in 1994 by the Netherlands and the European Union. In both cases, the disputes panels found against the United States, on the basis that it was regulating a non-product-related production and processing method (PPM) and could not prohibit tuna based on the characteristics of how it was caught. However, the 1991 panel accepted the use of the voluntary “Dolphin Safe” ecolabelling scheme on tuna products, on the grounds that it did not restrict the sale of non-labelled products and that it was up to consumers to choose labelled products over non-labelled.

4.4.5 A barrier to trade?

There is no consensus view as to whether ecolabels constitute a barrier to trade.

The most comprehensive international guidance on ecolabels remains the FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries. However, these are voluntary guidelines and, as noted above, on the issue of barriers to trade, the document defers to the WTO.

While the volumes of ecolabelled products remain low, even in markets where there is greatest presence, labelling schemes are unlikely to pose a significant barrier to trade. However, as demand grows, the impacts on trade and market access will need to be monitored.

Whether public sector financial support for ecolabelling certification could be considered a “subsidy” and/or notifiable in the context of WTO mechanisms has also been raised, including at the recent OECD/FAO Round Table on ecolabelling. If governments pay outright for certification, is that a subsidy to their industry? If it leads to a trade advantage or improved market access, then should it be notifiable? As noted above, several governments have “subsidized” the certification of their fisheries. Similar issues have been raised in the WTO related to mechanisms for dealing with climate change.¹⁰²

There is a need for further discussion on these issues, in particular to determine whether ecolabelling schemes as they currently operate discriminate against developing countries. Standards, whether public or private, must be inclusive.

4.5 FUTURE SCENARIOS AND ISSUES FOR ATTENTION**4.5.1 Looming gap between demand and supply?**

The procurement policies of large international food firms with their commitments to purchasing fish from sustainable sources, including from certified fisheries, are likely to drive demand and spread it to new markets. When this occurs, more fisheries will need to be certified to meet that demand. Certification of fisheries supplying internationally significant volumes such as Alaska pollock and salmon did indeed help to create a critical mass of supply in certain species, and other fisheries in similar species followed suit. However, can supply really keep up with growing demand?

Despite exponential growth in requests for and actual certifications, some retailers have already had to downgrade their procurement targets due to the lack of supply. For example, the United Kingdom retailer Sainsbury’s had to drop its goal of selling only MSC fish by 2010 “because it realized that not enough fisheries would carry the

¹⁰² www.wto.org/english/res_e/booksp_e/trade_climate_change_e.pdf.

requisite certification in time”.¹⁰³ As noted above, while there are significant volumes of supply in species like pollock, salmon and hake, very few tropical species are represented among the ranks of certified fisheries.

Industry sources consulted for this research expressed concerns about the extent to which the supply of MSC-certified fish, for example, would be able to meet the targets currently being set by buyers: “There have been many organizations/manufacturers/retailers/wholesalers/distributors who have made statements of ‘100 percent sustainable products by 2010–2011–2012 etc. However, if one lists all of these and then adds up their total buying needs for fish and seafood, and then draws up a list of likely certified fisheries and their yields by 2010–2011–2012 etc. and adds up their total output potential one likely finds a severe supply deficit [of MSC-certified product]”.¹⁰⁴

Another source described the potential supply gap as a “critical situation”,¹⁰⁵ also referring to reductions in supplies from some existing MSC-certified fisheries owing to quota cuts, such as the 30 percent cut to the Alaska pollock quotas in 2007. Other supply issues can also intervene. The debate over the re-certification of Alaska salmon (Box 11) could have meant a significant drop in certified salmon supplies. Birds Eye Iglo did not include the MSC label on its new range of Alaska salmon products for the United Kingdom market owing to uncertainty about the re-certification of the fishery.¹⁰⁶

How the market responds to these supply and demand issues needs to be monitored. In the face of supply gaps, will buyers stop selling fish and seafood (unlikely), shift to farmed fish (not practical for all species), revise their MSC procurement targets in line with the realities of supply, or develop alternative procurement policies linked to a different or less rigorous certification scheme or some other mechanisms for guaranteeing sustainability?

Buyers have indeed developed their own sustainability policies with alternative mechanisms for determining the sustainability of supply where certified sources are not available. As noted above, retailers such as Sainsbury’s operate a traffic-light sourcing system for sustainability, as does McDonald’s in the foodservice sector, although clearly third-party certification is the preferred and most efficient option for them both. A few large-scale buyers have strategies to encourage and support fisheries to become certified, in order to secure supplies and maintain their sustainability procurement commitments. For example, Birds Eye Iglo has been instrumental in encouraging Russian pollock fisheries to seek MSC certification.¹⁰⁷

4.5.2 A further proliferation of labels and certification schemes? Where is it heading?

Will new ecolabelling and certification schemes enter the market? In 2007, a report in the seafood industry media expressed concerns about a potential proliferation of schemes: “the recent emergence of low-cost eco-certifiers has led to concerns among some in the seafood industry the appearance of too many ecolabels will ... lead to a race to the bottom in terms of standards, as fisheries and processors sign up to the cheapest, most affordable alternative – to the detriment of the environment”.¹⁰⁸ As noted above, there are currently very few internationally significant third-party ecolabelling certification schemes in capture fisheries. The MSC and FOS are currently the most significant in terms of volume. It would be difficult (although not impossible)

¹⁰³ See “Supermarket chain to launch fish traffic light scheme”, Fishupdate.com, 26 September 2006.

¹⁰⁴ D. Handley, I&J, South Africa, personal communication, 2007.

¹⁰⁵ T. Halhjem, Trident Seafoods, and Vice-President of industry group, Genuine Alaska Pollock Producers (GAPP), www.gapp.us, personal communication, 2008.

¹⁰⁶ “Salmon limbo keeps MSC logo off Birds Eye line”, IntraFish, 12 March 2009.

¹⁰⁷ Communicated by P. Hajjipieris, Director of Sustainability and External Affairs, Birds Eye Iglo, during the OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, The Hague, April 2009.

¹⁰⁸ “Aussie calls for single global seafood standards”, IntraFish, 24 April 2007, www.intrafish.no.

for any new label to gain traction in the market unless targeting a specific niche, such as the IFFO concentrating on fishmeal. There are currently no indications that any new international schemes are imminent.

BOX 11

Alaska salmon re-certification

The struggle to find a new “client” for the Alaska salmon certification in the light of the withdrawal of Alaska’s Department of Fish and Game from the role (unusual in any case as a government fisheries management body) called into question the continued certification of the Alaska salmon fisheries.

The Marine Stewardship Council (MSC) delayed the re-certification process in order for a new client to come forward. The volumes of Alaska salmon mean that it is critical to the MSC – the largest number of MSC-labelled products on the market (987) come from Alaska salmon – and to the retailers with commitments to supplying only MSC-certified product.

It first appeared likely that the Alaska Seafood Marketing Institute (ASMI) would become the new client, albeit reluctantly, given its preference for promoting its own quality label and its view that the Alaskan fisheries already have a reputation for good management and hence do not need third-party certification of that. Moreover, the ASMI promotes a range of Alaskan seafood, some of which is not certified. Another sticking point was how it would fund the estimated annual US\$250 000 in administration costs, especially given its desire for its role as client to be cost-neutral. The ASMI board voted in early December 2009 to delay its decision until March 2010. The MSC certification holds until late 2012, but products would not be able to use the label after 2010 unless a new client was in place. In February 2010, the Alaska Fisheries Development Foundation (AFDF), which also manages the MSC certification of the Alaska Pacific cod fishery, stepped forward and agreed to become the new client for Alaska salmon. It will be developing a similar cost-sharing mechanism for the salmon industry as it operates for fishing operators involved in the MSC-certified cod fishery.

The crisis raised fears among buyers of a significant gap in supply of certified salmon. It also highlighted ongoing debates about the necessity for private certification of fisheries considered sustainable and well managed by those involved in the fishery, and in particular how the costs of certification are distributed.

Where there is development in the ecolabels market is in the emergence of national schemes, as outlined above. This, alongside regional and local quality marks based on sustainability claims, is also causing some concern and might add some further complexity. As one commentator noted: “one of the most damaging outcomes of the ecolabel boom is the creation of regional sustainability marks for domestic production, which undermine the whole premise”.¹⁰⁹ The underlying rationale for any label or claim based on provenance is to promote the quality of those products over similar products from other geographical areas, a different motive from trying to improve the sustainability of the world’s fisheries. On the other hand, industry representatives from some areas (including some where fisheries are already certified) are starting to question the value of certification to an independent scheme. They argue that their reputations for good fisheries management are well established and that there should be another way to “prove” good management without resorting to costly certification to a private scheme.

¹⁰⁹ E. Roderick in “Too many ecolabels”, IntraFish, 2 November 2009.

There is no formula to determine the optimal number of ecolabels. Too many labels are confusing to buyers and consumers alike. Too few labels might lead to a monopoly situation that could see industry vulnerable to changing criteria or a ratcheting up of requirements over time. What is important is the relative quality of the schemes – are they credible, transparent, robust and consistent with the FAO Guidelines?

4.5.3 Evaluating the relative quality of ecolabelling schemes

Many ecolabelling schemes, including most of those described above, claim to be in accordance with the FAO Guidelines. Both the MSC and FOS claim to be fully consistent with the FAO Guidelines: “The MSC program is fully consistent with this [FAO] internationally-agreed set of principles for a credible fishery certification and ecolabelling scheme... We achieved full consistency with these guidelines in September 2006.” [MSC Web site, 4 November 2009]; and “Friend of the Sea Criteria are the only ones in the market which follow the FAO – Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries. In particular, Friend of the Sea Criteria fulfill also Art. 30 of the Guidelines, in that it allows certification only of products from fisheries targeting stocks which are NOT OVEREXPLOITED.” [FOS Web site, 4 November 2009].

The various ecolabelling schemes vary considerably as do their assessment methodologies. They are assessing different things. As such, it is difficult to compare one with the other. Friend of the Sea concentrates on the sustainability of the stocks themselves, and whether the product comes from a sustainable stock. In contrast, the MSC concentrates on whether the product comes from a fishery that is both sustainable and sustainably managed. The former approach offers a pass or fail result while the latter can be used, according to participants at the OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, in capacity building and in designing improvements in transitional fisheries. Other schemes, such as KRAV and Naturland offer opportunities to use a certification process in the context of a social and economic development exercise.

It is generally agreed that the FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries provide acceptable minimum criteria for ecolabelling schemes, against which ecolabelling schemes could be evaluated. Some evaluations have already been undertaken.

Attempts to benchmark against FAO Guidelines

As noted above, FranceAgriMer, the French authority, conducted an evaluation of existing ecolabelling schemes as part of its process to determine whether or not to develop its own public ecolabel. Similarly, on the initiative of the United Kingdom Seafish Authority, the FSIG – an international consortium of national organizations concerned with seafood trade – commissioned a project to study and evaluate various ecolabelling schemes (as well as other organizations providing fish and seafood sustainability information, including seafood purchasing guides) against the FAO Guidelines (MRAG Ltd., 2009).

The results of these benchmarking exercises are useful but they only provide a snapshot in time. Some of the schemes under consideration in the FSIG study made adjustments in the light of challenges and questions raised in the assessment. As the schemes adjust their methodologies or practices, the results of any benchmarking analysis lose their currency. Moreover, an individual benchmarking exercise necessarily reflects the interests of the commissioning organization.

Need for an agreed benchmarking methodology

There is clearly a need for an agreed methodology to evaluate the relative quality of any certification scheme. While the FAO Guidelines provide minimum criteria for benchmarking schemes, there is currently no agreed methodological framework for assessment or for benchmarking them. A methodology for testing the relative merits of the various schemes would be useful for the range of stakeholders: for governments making investment decisions, for retailers and brand owners as a basis for choosing suppliers, and for the fisheries industry seeking both a tool for management improvement and the scheme most likely to offer market returns. An agreed evaluation tool would help industry examine the effectiveness of any certification scheme before signing up to it, including by checking that it is fully consistent with the FAO Guidelines. In this case, the onus would be on stakeholders themselves to evaluate any scheme using the agreed evaluation tool.

There have been calls for FAO to evaluate and benchmark ecolabelling schemes. The legal implications of carrying out such an exercise and its consistency with FAO's mandate need to be determined. Different approaches to the benchmarking question were discussed at the FAO Sub-Committee on Fish Trade in April 2010. The Sub-Committee agreed on the development of an evaluation methodology – which could be used by any stakeholder. This is now being developed.

4.5.4 Potential mutual recognition or equivalence between ecolabelling schemes

Some stakeholders¹¹⁰ have called for a specific benchmarking exercise to establish equivalence between ecolabelling schemes, referring to the work of the Global Food Safety Initiative (GFSI).¹¹¹ The GFSI has benchmarked the key international FSMSs to facilitate mutual recognition among them (see Chapter 5). In that case, having a standard and certification scheme benchmarked against the GFSI implies mutual recognition or equivalence with other benchmarked schemes. Retailers who are members of the GFSI have pledged to recognize and accept any benchmarked food safety certification scheme. In theory, any ecolabelling scheme that is fully compliant with the FAO Guidelines could be considered equivalent. Indeed, this is one of the principles included in the Guidelines.¹¹²

However, in relation to ecolabels, there is as yet no obvious “home” to manage such a benchmarking exercise. The GFSI is managed for and by global retailers as an attempt to reduce overall supply chain costs in the food safety area, which is considered a pre-competitive issue. To date, there is no such dynamic in the sustainability area where retailers and brand owners typically compete in terms of their sustainability credentials.

Ecolabelling schemes themselves have shown that they are unlikely or not yet ready to recognize one another as equivalent.¹¹³ While existing ecolabelling schemes are apparently open to being evaluated as to their compliance with the FAO Guidelines, they have warned that they are not equivalent. For example, the four schemes attending the OECD/FAO Round Table – the MSC, FOS, Naturland and KRAV – argued that they were not doing the same thing and that it would be dangerous to see them as interchangeable.

¹¹⁰ This was discussed at the OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, The Hague, April 2009.

¹¹¹ www.ciesnet.com.

¹¹² The FAO Guidelines state that any scheme should “be considered equivalent if consistent with these guidelines”.

¹¹³ The IFFO recognizes the MSC as equivalent, but as a “niche” player, there is less direct competition between them.

4.5.5 Recognition of good management without certification to a private scheme

As noted above, some industry stakeholders are questioning the value of certification to an independent scheme, arguing that their reputations for good fisheries management – either national or regional – are well established and that there should be another way to “prove” it without resorting to costly certification to a private ecolabelling scheme. The Icelandic ecolabel was built on this premise. The controversy over finding a client to manage the MSC re-certification of Alaska salmon and the promotion of its quality seal are other indicators.

In a similar vein, a presentation by an Australian industry representative at a recent seafood congress projected a vision that in 2015 private ecolabels would only be used in sectors where there was “a clear market/price advantage” and in countries “that do not have FAO Code [of Conduct for Responsible Fisheries] compliant schemes”.¹¹⁴ Under this scenario, fish and seafood from countries with recognized good fisheries management would be considered sustainable. Only fisheries in jurisdictions where management was not up to standard would need to revert to certification to a private ecolabelling schemes to prove their sustainability.

There appears to be pressure developing for alternative mechanisms – other than private certification and labelling – to verify good fisheries management: “There needs to be recognition of responsible practices whether or not products participate in a particular ecolabels scheme; responsible products cannot be impaired from market access”.¹¹⁵

Evidence is starting to emerge about the impacts of ecolabels on fisheries management and sustainability. At the same time, there appears to be a growing sense of the limits of private certification. Are ecolabels making a difference? How do they interface with public mechanisms for sustainable fisheries management?

4.5.6 Are ecolabels helping to improve management and overall sustainability?

After more than a decade of experience, it can be argued that there is some evidence of improvements resulting from certification, either directly or indirectly.

Ecolabelling and certification do appear to result in peer pressure for competitors to also seek certification. Examples were documented above. Other positive environmental impacts, such as significant reductions in bycatch and fewer impacts on ecosystems, have also been noted. For example, the MSC certification of the South African hake trawl fishery was said to have resulted in practices that reduced bird-kill from an estimated 18 000 to about 200 birds per year (MSC, 2009). Management adjustments, such as improved surveillance of bycatch and changes in data management, have also been documented in some certified fisheries.

Certification methodologies are also being used as self-assessment tools for fisheries, as a means to define gaps in performance and to set a roadmap for improvement, whether or not those operating in that fishery actually go on to seek formal certification. This suggests that certification methodologies can be used as a tool to help improve management in fisheries that for various reasons would be unlikely candidates for actual certification.

However, in terms of overall fisheries management and stock status, it is difficult to document improvements as a result of certification. Most of the fisheries certified to date were arguably already well managed prior to certification. They became certified

¹¹⁴ T. Loveday, Managing Director, Seafood Services Australia, presentation to IAFI World Seafood Congress, Morocco, October 2009.

¹¹⁵ R. Rice, Technical Program Director, Alaska Seafood Marketing Institute, “IAFI – future”.

to verify or prove the point. As more fisheries currently undergoing pre-assessment make adjustments to gain certification, more evidence in this area might come to light.

Overall environmental impacts depend on a critical mass of sustainably managed fisheries. Any significant impact on fish stocks will require improvements in fisheries hitherto not well managed and an extension of pressure for improvements into species (shrimp, tuna, cephalopods) and jurisdictions where the pressure to improve management and overall fisheries sustainability has yet to gain a foothold. If practices from certified fisheries spill over into other fisheries – such as strategies to reduce bycatch, improved traceability mechanisms, and reductions in IUU fishing – further improvements in fisheries management and sustainability could be realized.

Ecolabels are not a panacea. They were set up in response to perceptions that governments were not doing enough to ensure the sustainability of the world's marine resources. As a market-based mechanism, they are designed to incentivize good management with potential market rewards. As such, they can complement public measures for responsible and sustainable fisheries management. The limits of ecolabelling and certification might indeed highlight the current gaps in those public measures and the overall governance for fisheries sustainability.

As one observer has recently pointed out: “Certification and ecolabelling, properly applied, can be positive tools for promoting conservation and sustainable use of living marine resources. It must be kept in mind however, that ecolabelling is a marketing tool. The important task is Effective Fisheries Management (EFM)....Certification and ecolabelling cannot substitute for EFM”.¹¹⁶

4.5.7 A governance framework for fisheries sustainability – closing the gaps

Gaps in the overall governance framework for fisheries sustainability are starting to be identified. Countries have obligations in international law (UNCLOS), and internationally agreed guidelines to help implement those obligations (the Code), but there are no internationally agreed sustainability standards, or standards for fisheries management. The dearth of scientifically based standards for stock management and agreed definitions of sustainability make global governance of fisheries sustainability problematic.

Therefore, there are no criteria, beyond those contained in the Code, against which governments can judge their own performance in fisheries management. Moreover, there are no agreed criteria against which they can be judged by any third party.

Private certification schemes fill a gap in terms of assessing individual fisheries. The relative effectiveness of the management framework that the fishery operates within is part of that equation.

Several participants at the OECD/FAO Round Table argued that governments, not NGOs, should be taking the lead in this area of assessing overall fisheries management performance. Efforts to develop standards for fisheries – defining the essential elements of an effective fisheries management regime – and a related assessment model, based on the Code, would be best placed in an intergovernmental organization where the process would be transparent, participatory and the outcomes subject to international agreement. The debate over how to define “sustainability” – there are multiple definitions and methodologies – and any related sustainability standard in fisheries also needs further discussion and mutual agreement. There was a suggestion that FAO would be the appropriate forum for further work in this area, having both the relevant expertise and legitimacy.

¹¹⁶ K. Thorarinnsson, Vice Chair, Fisheries Association of Iceland, presentation at IAFI World Seafood Congress, Morocco, 2009.

Governments need to determine, both individually and collectively, what the essential components of an overall governance framework for sustainable fisheries are and how private market mechanisms fit into that framework. Some governments – such as the Netherlands authorities – appear to see ecolabelling and certification as a mechanism for gaining traction in their own policy objectives. Others – such as the French authorities – have co-opted the mechanism but under public management and ownership. Still others – such as New Zealand – seem to be more focused on the marketing aspects of ecolabels. The challenge is to determine how a market-based mechanism can complement public measures for responsible and sustainable fisheries management. As was concluded at the recent OECD/FAO Round Table: “ecolabels provide a nexus between marketing and management and are an increasingly important part of the fisheries sustainability equation” (OECD/FAO, 2009, p. 29). However, with or without the existence of voluntary certification schemes, governments must continue to actively embed the Code into their national management strategies.

4.5.8 Issues for attention

There remains a relative dearth of empirical evidence on the impacts of ecolabels and certification. Further research is required, in particular to monitor:

- Changes in demand and supply for ecocertified fish and seafood. If supply from existing, large, certified fisheries cannot meet growing demand, supply will have to come from smaller fisheries, or developing country fisheries or species hitherto not certified, where certification has to date been problematic. Competition from eco-certified aquaculture sources is another important part of the supply equation.¹¹⁷
- Distribution of the costs and benefits of ecolabelling and certification. To date it appears that producers meet the main costs of ecolabelling and certification but that retailers appear to reap many of the rewards. Further inquiry into the costs and benefits of ecolabelling as they accrue to the various stakeholders and how they could be more equitably distributed would be useful.
- The opportunities for developing countries to benefit from the certification trend. This includes further support to improve their fisheries management generally and as a precondition for future certification applications if and when market conditions require it. Some independent in-depth case studies of developing countries’ experiences with the certification process would be especially useful.
- The impacts of ecolabels and certification on international trade. Further clarity on WTO rules as they apply to private mechanisms driven by private or third sector actors is needed.
- Mechanisms for evaluating certification schemes and ecolabels, to ensure that they are transparent and consistent with the Guidelines, are needed. These should explore the potential for mutual recognition between schemes (including their public counterparts).
- The impacts of ecolabels on fisheries management and governance, at the level of individual fisheries, at the national level and at the international level need to be monitored. Enquiry is needed to ascertain whether certification schemes are really incentivizing good management practices, and with what impacts on the sustainability of fish stocks. How ecolabels interface with, and can complement, public mechanisms for achieving responsible fisheries management and sustainability needs to be investigated.

¹¹⁷ For a discussion of developments in eco-certification in aquaculture see: www.panda.org/about_wwf/what_we_do/marine/index.cfm?uNewsID=119260.

5. Private standards and certification for food safety and quality in fisheries and aquaculture

5.1 PUBLIC FRAMEWORKS FOR FOOD SAFETY AND QUALITY

In 2006, some 194 countries around the world reported exports of fish and fishery products. Increasing amounts of fish and seafood are now caught in one part of the world, transported to another for processing and finally consumed in yet another country. Food safety systems that function across national borders are therefore vital. A range of national and international regulatory frameworks has been developed accordingly.

The international regulatory framework for fish safety and quality takes its origin in two WTO agreements: the SPS Agreement, and the TBT Agreement.

The SPS Agreement confirms the right of WTO member countries to apply measures necessary to protect human, animal and plant life and health. This right was included in the original 1947 General Agreement on Tariffs and Trade as a general exclusion from the provisions of the agreement provided that “such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade”. However, despite this general condition for the application of national measures to protect human, animal and plant life and health, these measures became, whether by accident or design, effective trade barriers.

The SPS Agreement was introduced to ensure that measures established by governments to protect human, animal and plant life and health in the agriculture sector, including fisheries, are consistent with obligations prohibiting arbitrary or unjustifiable discrimination on trade between countries where the same conditions prevail and are not disguised restrictions on international trade. To promote harmonization of sanitary measures, WTO members are encouraged to base their national measures on international standards, guidelines and other recommendations adopted respectively by the Codex Alimentarius Commission (CAC) for food safety (Box 12), the sanitary measures of the World Organisation for Animal Health (OIE) for animal health or the phytosanitary measures of the International Plant Protection Convention (IPPC) for plant protection. This does not prevent a member country from adopting stricter measures if there is a scientific justification for doing so, or if the level of protection recommended by the CAC or the OIE is inconsistent with the level of protection generally applied and deemed appropriate by the country concerned.

The TBT Agreement is a revision of the agreement of the same name first developed under the Tokyo Round of negotiations (1973–79). The objective of the TBT Agreement is to prevent the use of national or regional technical regulations and standards as unjustified technical barriers to trade (TBTs). The TBT Agreement covers standards relating to all types of products including industrial products and quality requirements for foods (except requirements related to sanitary and phytosanitary [SPS] measures). It includes numerous measures designed to protect consumers from deception and economic fraud.

The TBT Agreement basically provides that all technical regulations and standards must have a legitimate purpose and that the impact or cost of implementing the standard

BOX 12

The Codex Alimentarius

The Codex Alimentarius (Food Code in Latin) is the joint FAO/WHO Food Standards Programme. It was created in 1962 for the purpose of developing food standards to protect the health of consumers, providing assurance of fair practices in food trade and for coordinating the international work on food standards.

The Codex Alimentarius Commission (CAC) is an intergovernmental body with a membership of 165 member governments. In addition, observers from international scientific organizations, food industry, food trade and consumer associations may attend sessions of the CAC and of its subsidiary bodies. An executive committee, six regional coordinating committees and a secretariat based in Rome assist the CAC in administering its work programme.

The work of the Codex Alimentarius is divided between two basic types of committees:

- nine general subject matter(s) committees that deal respectively with general principles, food hygiene, veterinary drugs, pesticides, food additives, labelling, methods of analysis, nutrition, import/export inspection and certification systems;
- twelve commodity committees that deal respectively with a specific type of food class or group, such as dairy and dairy products, fats and oils, or fish and fish products.

The work of the Codex committees on food hygiene, fish and fishery products, veterinary drugs, methods of analysis and import/export inspection and certification systems are of paramount interest to the safety and quality of internationally traded fish and fishery products.

In the environment of the Uruguay Round agreements, the work of the CAC has taken on unprecedented importance with respect to consumer protection and international food trade. The specific Codex food safety provisions, which are recognized by the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), include the maximum residue limits for pesticides and veterinary drugs, the maximum level of use of food additives, the maximum levels of contaminants, and food hygiene requirements of Codex standards.

In the specific area of food hygiene, the CAC has revised its main document on food hygiene to incorporate risk assessment principles and to include specific references to the Hazard Analysis and Critical Control Point (HACCP) system.

Since its foundation, the CAC has adopted (as of 2006):

- 186 food standards and 46 commodity-related texts;
- 9 texts of food labelling, 5 on food hygiene, 15 on sampling and analysis, 8 on inspection and certification procedures, 3 on risk assessment, 7 on food additives and 6 on animal food production;
- 2 930 maximum limits (MLs) for pesticide residues, covering 218 pesticides;
- 12 provisions for contaminants in foods (MLs, detection and prevention);
- 1 112 provisions for food additives, covering 292 food additives; and
- 441 maximum residue limits (MRLs) covering 49 veterinary drugs.

The following Codex standards, guidelines and codes are relevant to fisheries and aquaculture:

- the Code of Practice for Food Hygiene;
- 14 standards for fish and fishery products (Volume 9A);
- the Code of Practice for Fish and Fishery Products;
- several risk assessments (Vibriosis in seafood, biotoxins, antimicrobial resistance);
- several principles and guidelines for food import and export inspection and certification;
- MRLs for veterinary drugs;
- MRLs for contaminants; and
- work in progress (EC viruses, risk/benefits of methylmercury or active chlorine, antimicrobial resistance).

must be proportional to the purpose of the standard. It also states that if there are two or more ways of achieving the same objective, the least trade-restrictive alternative should be followed. The TBT Agreement also places emphasis on international standards; WTO members are obliged to use international standards or parts of them except where the international standard would be ineffective or inappropriate in the national situation.

Both the SPS and TBT Agreements call on WTO member countries to:

- adopt international standards of the CAC, the OIE and the IPPC and participate in their elaboration;
- promote international harmonization and equivalency agreements;
- facilitate the provision of technical assistance, especially to developing countries, either bilaterally or through the appropriate international organizations; and
- take into consideration the needs of developing countries, especially the least-developed countries, when preparing and implementing SPS measures, technical regulations, standards or conformity assessment procedures.

This international regulatory framework has been adopted at the national or regional level by major fish producing, exporting or importing countries. This has become necessary amid increased globalization of fish trade, which has highlighted the risk of cross-border transmission of hazardous agents. Likewise, the rapid development of aquaculture has been accompanied by the emergence of food safety concerns, in particular regarding residues of veterinary drugs. The food and feed scares of recent decades (see Box 1) have exacerbated the concerns. International organizations such as FAO, the World Health Organization (WHO) and the OIE have responded by promoting the adoption of a “farm or sea to table” strategy applicable throughout the entire supply chain. This strategy, which addresses production, process and product control (Box 13), must be scientifically based, adaptive and responsive to changes in the food production chain. It should be articulated around the use of risk analysis to develop food safety and animal health objectives and standards and the HACCP-based preventive systems to manage food safety hazards.

The implementation of the food chain approach requires an enabling policy and a regulatory environment at the national and international levels with clearly defined regulations and standards, establishment of appropriate food control systems and programmes at the national and local levels, and provision of appropriate training and capacity building. Development and implementation of good aquaculture practices (GAPs), good hygienic practices (GHPs) and HACCP are required along the food chain. Government institutions are responsible for developing an enabling policy and a regulatory environment, organizing the control services, training personnel, upgrading the control facilities and laboratories, and developing national surveillance programmes for relevant hazards. The industry is responsible for adopting good practices and for training personnel to implement GAPs, GHPs and HACCP.

The ISO on food safety certification and accreditation is another international organization of relevance.

Despite these international frameworks and attempts to harmonize requirements and conformity assessment procedures, fish exporters still face safety and quality control regimes that vary from one jurisdiction to the next. Even within the EU, where the goal is to harmonize food safety regulations, differences in national regulations still exist for several issues. The United States has its own particular requirements, as do other key import markets such as Japan and the EU (FAO, 2005). This multitude of approaches imposes significant compliance costs¹¹⁸ on exporters, particularly those in

¹¹⁸ Costs also include detentions and rejections of products deemed not to be in compliance with importing countries' requirements.

developing countries where there is limited capacity to develop comprehensive safety and control infrastructures, let alone several different systems to meet diverse import market requirements.

BOX 13

Product versus process control

For many years, food quality and safety experts have known that sampling and testing finished products for conformity present many shortfalls, not the least giving a sensation of “being in control” and creating a strong but false sense of security.

This can be easily demonstrated theoretically as follows. The probability of accepting a lot of seafood products (a shipment of shrimp cartons for example) depends on the percentage of defective units (cartons) in the lot, on the number of samples drawn (n) and the maximum allowable number of defective samples (c). Assuming a lot with 1 percent defective units, a sampling plan with $c = 5$ (5 randomly drawn cartons) and $n = 0$ (none of the drawn samples is defective), the probability of accepting the lot is $P = C50 (0.99)^5 (0.01)^0 = (0.99)^5 = 0.951$ or slightly above 95 percent.

The accompanying table was constructed using the same method of calculation for different combinations of percent defective, n and c . It shows clearly that testing of foods offers very little protection even when large numbers of samples are drawn. For example, with 1 percent defective units in a lot, drawing 60 samples, which is usually not feasible on a lot-by-lot basis in routine food inspection (and not economical at all for destructive sampling), yields a probability of acceptance equal to 54.7 percent. In other words, assuming 100 such lots of a prepacked fish product containing 10 000 units each, thus 100 defective units in each lot, even with a sampling plan of $n = 60$ and $c = 0$, more than 54 lots will be accepted (pass food sampling and control) because no defective units will be found in their samples of 60 each. To decrease the probability of acceptance, more than 3 000 or 5 000 units would need to be sampled and tested in order to detect a 1 percent defect rate with 95 percent or 99 percent probability (to accept the lot with 5 percent or 1 percent probability).

Effect of lot quality (percent defective in a lot) on the probability of acceptance (percent) for different sampling plans

% defective units in lot	Probability of acceptance (%) given sampling plans with a total of “n” samples and allowance of “c” defective samples			
	n=1, c=0	n=5, c=0	n=10, c=0	n=60, c=0
1	99.0	95.1	90.4	54.7
2	98.0	90.4	81.7	30.0
5	95.0	77.4	59.9	4.6
10	90.0	59.1	34.9	0.18
20	80.0	32.8	10.7	0.00015

Consequently, even the most elaborate sampling and testing plans of end product, although unrealistic and uneconomical for routine testing, cannot guarantee safety of the product. There is no way to avoid some degree of risk and error in each acceptance and each rejection of lots unless the entire lot is tested, in which case no edible food will be left for sale.

Furthermore, where the distribution of contaminants in units is heterogeneous, as is the case in the fish industry, as compared with the soft-drinks or dairy industry, the probability of detection is even much lower. That is why scientists, industry and regulators have been promoting for many decades approaches such as HACCP, which prevents the hazard from entering the supply chain at the source or reduces its likelihood to acceptable levels, reflecting proper application of codes of practice, control and corrective measures.

5.2 THE EMERGENCE OF PRIVATE STANDARDS FOR FOOD SAFETY AND QUALITY

Further complicating the variety of public sector food safety regulations is the multitude of standards applied by the private sector. These relate to a range of objectives, including food safety and quality but also to animal health, environmental protection and even social development, and are often linked to private firms' CSR strategies.

As noted in Chapter 1, a range of factors has fuelled the trend towards private safety and quality standards. Food safety scares have weakened public confidence in governments' abilities to guarantee food safety, especially the safety of imported food. Government policies related to product liability and due diligence as well as the shift towards more performance-based regulatory frameworks put the onus on private sector firms to assume responsibility for food safety management. Large food firms, especially retailers, have increasing bargaining power *vis-à-vis* other businesses in the supply chain, and are requiring suppliers to be certified to private FSMSs.

Private standards provide buyers with some insurance against food scares and a due diligence defence. Third-party certification offers buyers direct access to written audit reports and/or their results. In contrast, certification by competent authorities (government inspection agencies) and their compliance-conformity evaluations are targeted at providing assurance to other public control authorities, not individual private sector buyers. Publicly available results might only be presented in the aggregate to give assurance that the overall system is functioning well.

The increasing vertical integration and complexity of supply chains in fish and seafood also stimulate the growth of private standards, as B2B tools used in the context of direct procurement contracts, which are starting to replace the traditional structure of "importer–wholesaler–retailer". Complex value chains – where raw materials are potentially sourced globally, processed in a second country and retailed in yet another – require sophisticated systems for ensuring traceability and guaranteeing that sanitary and hygiene standards are maintained at every stage of the value chain – from farm or boat to fork. These traceability and chain of custody systems are built into the frameworks included in most private standards schemes.

Private safety and quality standards related to fish and seafood apply to both wild capture and farmed fish post-harvest. A number of private standards schemes specific to aquaculture have also emerged in the past decade that cover the entire supply chain. Most aquaculture certification schemes include multiple standards criteria (safety, quality, animal health, environment, social) and are used to market farmed fish as a safe, sustainable and environmentally sound alternative to fish and seafood from dwindling marine capture stocks. As noted above, aquaculture now accounts for almost half (47 percent) of fish for food supply. Private standards are a mechanism for responding to concerns about aquaculture by offering guarantees related to quality, safety, environmental impacts, traceability, and transparency of production processes.

5.3 TYPES OF PRIVATE SAFETY AND QUALITY STANDARDS IN FISHERIES AND AQUACULTURE

There are many different private safety and quality standards applying to fisheries and aquaculture, including: private in-house standards (producers or processors manuals of standard operating procedures [SOPs]), buyer guidelines, collective private quality standards (codes of conduct or codes of practice) developed by local, regional or national producer/industry groups; NGO-driven schemes; and national and international FSMSs.

The following sections give an overview of the various types of standards, including illustrative examples. They are organized as follows:

- private in-house standards (guidelines) of large retail firms;
- collective private standards (codes of conduct) developed by local, regional or national producer/industry groups;
- NGO-driven schemes (mainly related to aquaculture); and
- national and international FSMSs.

5.4 PRIVATE IN-HOUSE BUYER GUIDELINES OF LARGE RETAIL FIRMS

Setting product and process specifications, and requiring suppliers to meet those specifications, is not a new phenomenon. Most large retailers, as well as large processors and catering firms, have developed their own detailed product and process specifications. Most take mandatory national (or EU in the case of European retailers) food safety regulations as a baseline and then build on other specifications in line with their in-house SOPs. These additional requirements are typically related to quality rather than food safety. Industry sources suggest that they are less likely to include more stringent safety-related criteria than required by national regulations, such as “use by” dates or more stringent requirements in terms of acceptable levels of pathogens (e.g. *Salmonella*) or contaminants (such as heavy metals). However, they usually include stringent SOPs or requirements for certification to an FSMS, which include detailed traceability and audit requirements and documentation.

Retailer product specifications are usually treated as confidential as they are considered commercially sensitive in what is a highly competitive market (World Bank, 2005a). However, the package of specifications is likely to include detailed:

- product specifications: organoleptic and/or sensory and/or taste, metrological (size, block, dimension, etc.), chemical and physical, bacteriological;
- packing and packaging, labelling requirements;
- delivery conditions (where, when, how much); and
- demands for information about the supplier company’s safety and sanitary management capacities: SOPs, safety and quality management process (including details on product controls), traceability and recall procedures.

These specifications are typically communicated to the next level down in the supply chain – to processors, brokers or importers, which subsequently translate those specifications to their suppliers.

The practice of buyers inspecting suppliers’ facilities, and auditing their food safety management systems, has occurred for decades in relation to processed (frozen, canned) fish products. Some retailers are now buying direct from aquaculture producers and, therefore, communicating specifications directly to them. Many have their own audit and inspection requirements. For example, Carrefour, the world’s second largest retailer, buys shrimp directly from farmers in Thailand, which involves sending their own inspectors to verify that products and farming practices meet their own standards.¹¹⁹ In the United States, Whole Foods Market¹²⁰ has developed its own standards for a range of farmed fish and seafood. The standards require that all documentation, records, farms, and processing plants be subject to annual inspection (both announced and unannounced spot inspections) by independent third-party auditors, selected by Whole Foods Market. Suppliers are required to meet the costs of those third-party audits.

However, most large retailers, commercial brand owners and foodservice industry firms prefer to align themselves to (and require suppliers to be certified to) private

¹¹⁹ V. Sowanapreecha, quoted in “Carrefour leading trend to buy shrimp direct from farmers”, IntraFish, 7 October 2008.

¹²⁰ www.wholefoodsmarket.com/products/aquaculture.php, accessed 30 November 2009.

standards schemes developed by other bodies, rather than to develop their own certification and verification schemes. Therefore, in addition to their firm-specific product and process specifications, firms might also require their suppliers to be certified to:

- For processed fish and seafood: a national or international FSMS, such as the British Retail Consortium (BRC), International Food Standard (IFS), Safe Quality Food (SQF) (all described below). For example, most large-scale British retailers require BRC certification as a standard requirement for doing business.¹²¹
- For aquaculture: to one or other of the schemes that merge quality and safety with environmental protection, animal health and even social development. For example, Wal-Mart has pledged to buy only farm-raised shrimp from sources certified by the Aquaculture Certification Council (ACC) (described below).¹²² Darden Restaurants, the largest casual dining restaurant company in the United States, also requires all its suppliers of aquacultured shrimp to be certified by the ACC.
- For wild capture fish and seafood: to an ecolabelling scheme (as described in Chapter 4).

Requiring suppliers to conform to the firm's own quality and safety standards and/or requiring certification to an FSMS offers assurances of quality, safety and traceability; in short, an insurance policy to protect the value of the firm and its brand.

Adherence to these and a range of other private standards (related to environmental protection, animal health and social development) usually forms part of firms' "corporate social responsibility" (CSR) strategies, which are marketed both to other businesses as well as to consumers, to enhance the firm's overall reputation.

Safety and quality requirements are supported by multilayered audit and inspection requirements. Independent private certification schemes are attractive to large-scale buyers – requiring third-party certification is cost effective as it can reduce the need for companies to carry out their own inspection and audit of suppliers.

However, large retailers and food firms may not be equally demanding of all their suppliers or product lines. The pressure on suppliers to conform to stringent private standards depends on the market and the type of product in question. For example, requirements are more stringent for private label and high-risk processed fish and seafood products than for basic commodity fish and seafood. This is discussed further below.

5.5 COLLECTIVE PRIVATE STANDARDS DEVELOPED BY REGIONAL OR NATIONAL PRODUCERS ORGANIZATIONS

Discussions about private standards usually centre on standards imposed by retailers or other food firms on suppliers further down the supply chain. However, some producers or groups of producers have also developed standards and/or schemes as self-imposed specifications or codes of conduct. These are typically B2B communication tools to reassure buyers of the safety and quality of products and production processes, and are often linked to the origins of the products, which are marketed as an indicator of superior quality.

In the past 15 years, seafood producers have also developed brands promoting safety and quality linked to the geographical origins of the product. The motivation is to:

- Establish quality criteria and good practices and diffuse them throughout the local industry (standards creation and implementation).

¹²¹ P. Hajipeiris, Director of Sustainability and International Relations, Birds Eye Iglo, personal communication, 2009.

¹²² P. Redmond, Vice-President, Wal-Mart, United States, in OECD/FAO, 2007.

- Promote those good practices as indicators of quality to buyers. Quality assurance is verified through inspection and certification.

Wild-seafood quality schemes have emerged usually at the local or regional level. They operate as B2B tools aimed at reassuring buyers of the quality of products. A few illustrative examples are given below.

5.5.1 Alaska Quality Seafood

Alaska Quality Seafood (AQS),¹²³ is a private, non-profit organization, based in Anchorage, Alaska, in the United States, focused on providing value-adding services to the Alaska seafood industry. It:

- provides specialized services certifying that best management practices (BMPs) are applied throughout the production chain, from fishers to processing plants, to ensure repeatable quality results for all grades of seafood. A final inspection covering 30 criteria is conducted or audited by third-party inspectors to ensure compliance before a quality seal (label) – “Certified Alaska Quality Seafood” – is attached to final products; and
- works with a certification body to deliver MSC ecolabel certification and auditing services to the Alaska-based industry.

Since 2000, the AQS’s affiliate base has included 10 seafood plants, 20 receiving stations and more than 200 fishers. Its voluntary board of directors includes expertise in quality food processing and handling standards, ISO 9000¹²⁴ management systems, economic development, seafood marketing, fisheries management, seafood harvesting, production and international food markets.

5.5.2 Integrated Management System (SIGES) – Salmon Chile

The SIGES standard was developed for the Chilean salmon producers association, Salmon Chile.¹²⁵ It is managed by the institute for salmon technology in Chile (INTESAL), and functions as a certifiable integrated management system, dealing with:

- food safety and quality management;
- environmental issues;
- fish health; and
- occupational safety.

It incorporates all relevant legislation, plus technical standards, and is based on international norms and standards including ISO 9001 and ISO 14001.¹²⁶ As of August 2008, 31 companies were participating in the SIGES, which accounts for 90 percent of the companies associated with Salmon Chile.¹²⁷ Wal-Mart requires that all its Chilean suppliers have SIGES certification.¹²⁸

5.5.3 The Scottish Salmon Producers’ Organisation (SSPO)

The SSPO¹²⁹ is the trade association for the Scottish salmon farming industry, whose membership accounts for 95 percent of the tonnage of Scottish salmon production. It has developed a Code of Good Practice for Scottish Finfish Aquaculture that includes more than 300 main compliance points covering: consumer assurance issues (traceability), animal health, environmental issues, and feed requirements (including the sustainability of sources of fish used as fish feed). The organization also offers

¹²³ www.alaskaqualityseafood.com, accessed 1 December 2009.

¹²⁴ ISO 9000 deals with quality management systems. See: www.iso.org.

¹²⁵ www.salmonchile.cl.

¹²⁶ ISO 14001 deals with environmental management systems. See: www.iso.org.

¹²⁷ FIS.com, accessed 26 January 2009.

¹²⁸ Food and Beverage online, www.21food.com, accessed 26 January 2009.

¹²⁹ www.scottishsalmon.co.uk.

access to certification schemes including Label Rouge (Scottish salmon was the first non-French product to gain the French public quality mark).

5.6 PUBLIC CERTIFICATION SCHEMES

The focus of this chapter is on private standards for safety and quality. However, it should be noted that a number of public certification schemes have also been developed. Label Rouge is a well-established French quality label (albeit not exclusively related to fish and seafood). Other examples – such as Thai Quality Shrimp – are described below in relation to governments' responses to demands for certified fish and seafood. Most relate to aquaculture.

5.7 NGO-DRIVEN STANDARDS AND CERTIFICATION – AQUACULTURE

Some NGOs have also been active in developing private standards and related certification schemes, specifically for farmed fish and seafood. These schemes have been borne out of a desire to improve the image of farmed fish and seafood as a safe and sustainable alternative to wild capture fish, and are aimed at improving practices generally throughout the industry, including reducing the negative environmental impacts. Most of the work to improve management practices has been carried out on salmon and shrimp, mainly owing to their high commodity value and importance as the most traded fish and seafood products (Box 14).

5.7.1 Aquaculture Certification Council (ACC)

The certification scheme developed by the Global Aquaculture Alliance (GAA) is one of the most significant aquaculture schemes in terms of volumes and global coverage. The GAA first developed a voluntary best practice programme for aquaculture producers. The Responsible Aquaculture Program included various guiding principles, codes of practice and best practice standards. Responding to industry calls for more formal recognition of these practices, it aligned with the Aquaculture Certification Council (ACC),¹³⁰ a non-governmental body based in the United States, to develop a certification of aquaculture production processes. The Global Aquaculture Alliance's Best Aquaculture Practices (BAPs) Standards are applied in a certification system that combines site inspections and effluent sampling with sanitary controls and traceability. Certified producers are entitled to use the "BAP certification mark"; a label attached to products from certified fish farms. Standards cover a range of considerations including: food safety, traceability, animal welfare, community and social welfare, and environmental sustainability. Both farms and processing facilities can be certified.

The ACC has accredited 113 independent inspectors and auditors from 30 countries. As of December 2009, the ACC had inspected more than 50 farms, certifying 38, and conducted seminars for various governmental and non-governmental organizations, as well as industry groups in 12 countries. It has also audited 88 aquaculture processing facilities, and certified 54 of them.

The ACC professes to work at arm's length from the GAA to maintain the "objectivity and credibility" of the certification process. It has also sought input from NGOs and other stakeholders to ensure its auditing and inspection requirements are "objective and transparent".

The importance of the ACC scheme was enhanced by Wal-Mart's announcement that it would only buy farm-raised shrimp from ACC-certified sources. Darden Restaurants also require its suppliers of aquacultured shrimp to be ACC certified.¹³¹ The seafood industry media recently commented that ACC "has had great momentum

¹³⁰ www.aquaculturecertification.org, accessed 1 December 2009.

¹³¹ R. Bing, Vice-President, Protein Procurements, Darden Restaurants, United States, in OECD/FAO, 2007.

in the farmed shrimp sector, with major buyers, growers and processors coming out in strong support of the standard”.¹³²

BOX 14

Aquaculture production and trade

In the last three decades, aquaculture has been the fastest-growing animal production system worldwide. The average yearly growth in volume in the aquaculture sector has been estimated at 8.5 percent in the period 1990–2005. Currently, aquaculture provides about 47 percent of fish for human consumption. This percentage is expected to reach 60 percent by 2020.

The accompanying table lists the 15 major aquaculture producing countries and the 15 most important aquaculture species traded internationally.

Aquaculture – main producers and main species traded internationally

Country/territory	Main producers (2008)		Main species traded internationally (2008)	
	Production (1 000 tonnes)	Species	Production (1 000 tonnes)	
China	32 736	Shrimp	3 450	
India	3 479	Tilapia	2 500	
Viet Nam	2 462	Salmon	1 540	
Indonesia	1 690	Pangasius	1 375	
Thailand	1 374	Channel catfish	350	
Bangladesh	1 006	Trout	320	
Norway	844	Seabream	160	
Chile	843	Seabass	150	
Philippines	741	Other flatfish	125	
Japan	732	Barramundi	45	
Egypt	694	Cobia	40	
Myanmar	675	Atlantic cod	23	
United States	500	Oysters	4 320	
Republic of Korea	474	Clams, cockles, arkshells	162	
Taiwan Province of China	324	Mussels	1 620	

This table shows clearly the importance of China and Southeast Asia, where more than 80 percent of aquaculture production takes place. The majority of the 15 major aquaculture producers are developing countries. While a major share of the production from these developing countries is exported mainly to Europe, the United States and Japan, a large proportion of the export comes from small-scale producers. For example, 55 percent of shrimp from India comes from small-scale farms. This percentage is 70–75 percent for shrimp and catfish from Thailand and Viet Nam, respectively.

In addition to aquaculture species such as shrimp and salmon that have been traditionally traded on the international markets, other species such as tilapia and Pangasius catfish have gained significant acceptance in international market. Likewise, the increasing demand for marine species such as seabass, seabream, Atlantic cod and shellfish is being increasingly met by aquaculture. As advances in aquaculture technology enable more domestication of marine species, the limiting factor remains the availability and sustainability of wild fish stocks for the production of fishmeal and especially fish oils.

¹³² “Who will win the certification showdown?”, www.intrafish.no, 30 January 2009.

The ACC has also expanded into finfish, with recent standards developed for tilapia and channel catfish. It claims certified volumes of product amounting to:¹³³

- shrimp – 139 000 tonnes (farm), 416 000 tonnes (plant);
- tilapia – 22 000 tonnes (farm), 100 000 tonnes (plant); and
- channel catfish – 16 000 tonnes (farm), 8 000 tonnes (plant).

The ACC announced an agreement to cooperate with GLOBALG.A.P (a certification scheme with strong support in Europe, discussed below) to develop and harmonize certification systems for the aquaculture sector worldwide. A “joint checklist approach” to farm audit would be designed to facilitate efficiencies at the farm audit level, and it is expected to benefit producers exporting to both the United States and Europe and related seafood buyers.¹³⁴

5.7.2 WWF “Aquaculture Dialogues” and the Aquaculture Stewardship Council

Following on from its involvement in the certification of sustainable forestry (Forestry Stewardship Council) and wild-capture fisheries (Marine Stewardship Council), the WWF has developed standards for aquaculture certification, with an emphasis on eliminating the negative environmental and social impacts of aquaculture. It has organized a range of round tables involving aquaculture producers, buyers, NGOs and other stakeholders in an attempt to develop standards for aquaculture certification. The goal of the Aquaculture Dialogues is to create standards for 12 aquaculture species by the end of 2010. As with the MSC, the standards will be handed over to an arms’-length, independent standards-holding entity.¹³⁵ The WWF recently announced the formation of the Aquaculture Stewardship Council, which will be responsible for hiring independent third-party auditors to certify the compliance of aquaculture farms with the Aquaculture Sub-committee (ASC) standards. Those standards will be finalized for 11 species (salmon, shrimp, pangasius, tilapia, abalone, clams, trout, oysters, scallops, mussels, *Seriola* and cobia) that the WWF says “have the greatest impact on the environment, highest market value and or the heaviest trading in the global market”.¹³⁶ As with the MSC, the ASC will also be aimed at consumers, giving them “assurance that their food purchases are good for the environment”, whereas its competitors in the aquaculture area are largely B2B schemes. The ASC is expected to be operational within the next two years.

5.7.3 Friend of the Sea¹³⁷

Friend of the Sea (FOS) was set up in 2006 and has origins in the Earth Island Institute. It covers both wild capture and farmed fish and seafood with an environmental focus. Its “criteria for sustainable aquaculture” require, *inter alia*, that:

- an environmental impact assessment or equivalent be run before the development of a farm;
- the farm is not impacting critical habitats, such as mangroves, wetlands, etc;
- procedures are in place to limit escapes of fish to a negligible level;
- there is no use of genetically modified organisms and growth hormones;
- there is no use of antifouling paints;
- waste, water, feed and energy management are in place; and
- only FOS certified feed is used (where available).¹³⁸

¹³³ D. Lee, GAA, presentation to IAFI World Seafood Congress, Morocco, October 2009.

¹³⁴ “GAA, GlobalGap join forces on aquaculture certification”, www.intrafish.no, 1 February 2009.

¹³⁵ www.worldwildlife.org/what/globalmarkets/aquaculture/whatwearedoing.html.

¹³⁶ “WWF unveils Aquaculture Stewardship Council”, www.intrafish.no, 27 January 2009.

¹³⁷ www.friendofthesea.org, accessed 1 December 2009.

¹³⁸ Certified FOS feed ranges for seabream, seabass and trout became available in late 2009.

The FOS criteria for sustainable fisheries and aquaculture also include recommendations on carbon footprint reduction and offset (20 percent per year) and “social accountability”. However, they do not include criteria for food safety and quality. Friend of the Sea has certified about 30 aquaculture facilities. It claims to have certified 500 000 tonnes of farmed products.

5.7.4 Organic aquaculture

Other niche markets, such as organic aquaculture, are also being developed. Sometimes, certification for fish and seafood products are linked to existing certification schemes for agricultural products. For example, the United Kingdom Soil Association and the New Zealand organics certifier BioGro have added aquaculture to their schemes. There are about 20–25 certifying bodies for organic aquaculture products. For example, Naturland,¹³⁹ based in Germany but operating internationally, certifies organic farmed seafood. It is said to be widely accepted in both the United States and in Europe, although some European buyers also insist on certification by local organic organizations (such as Bio Suisse in Switzerland and the Soil Association in the United Kingdom).¹⁴⁰ However, organic aquaculture accounts for very small volumes of production – only about 1 percent of overall aquaculture production.

5.7.5 Food safety management schemes (FSMSs)

Until the mid- to late 1990s, retailers typically had their own product and process specifications as well as associated verification criteria or audit schemes. As a result, a supplier often had to pass several different audits, one for each of its customers. Collaborative certification schemes, often designed for coalitions of retailers, were created to reduce the cost for certification and improve efficiency throughout the food chain. Most were designed for food generally but are now increasingly applied to fish and seafood products. These are arguably the most important schemes in terms of the impacts of private standards on the food industry generally – they represent comprehensive food safety management systems and are internationally significant.

5.7.6 Operationalizing HACCP

In terms of food safety, most FSMSs have at their core a requirement for HACCP. The HACCP system is an internationally recognized system for risk analysis in the handling of foods (see Box 15), and is widely used by the seafood industry worldwide. It has become a mandatory requirement for exporting to the major markets in developed countries. However, HACCP is a method and the quality of its implementation varies significantly. Several FSMSs have been developed specifically to operationalize and verify the implementation of HACCP.

5.7.7 The Netherlands HACCP, or CCvD HACCP

In 1996, a group of certification bodies in the Netherlands developed a standard for food safety management, “The Requirements for an HACCP based Food Safety System”. The first version of this standard was published on 15 May 1996 by the National Board of Experts HACCP, a group of experts on food safety representing all parties in the Netherlands food chain. Commonly called the Netherlands HACCP, or CCvD-HACCP, it is based on the Codex Alimentarius. The latest version contains all the relevant elements of ISO 22000 (described below), and is accompanied by an HACCP certification programme, which is well recognized in the seafood industry.

¹³⁹ www.naturland.de.

¹⁴⁰ “Taking the organic route”, Seafood International, October 2008, p. 48.

BOX 15

The HACCP system

The Hazard Analysis and Critical Control Point (HACCP) system is a science-based preventive system for food safety and quality assurance. The HACCP system consists of seven principles:

- identification of all potential hazards and their control measures (CMs);
- determination of critical control points (CCPs) where the identified CMs should be applied to prevent the identified hazards;
- establishment of the critical limits for each CM at each CCP;
- establishment of a monitoring system to ensure proper implementation of the CM at each CCP;
- establishment of the corrective actions to undertake when monitoring reveals that a particular CCP is not under control;
- establishment of verification procedures to confirm that the HACCP system is working effectively; and
- establishment of documentation concerning all procedures and records appropriate to these principles and to their application.

Credit for the development of the HACCP system is traditionally given to the 1971 United States Food Protection Conference, with the first industry application by the Pillsbury Company in the 1960s for astronaut feeding during the inception of the National Aeronautics Space Association (NASA) manned space programme. The basic concepts of the HACCP system are however found in the hazard opportunity studies (HAZOPs), which have been used by the chemical and engineering industries for hazard controls since the mid-1930s.

Following introduction of the HACCP system, the food canning industry and the United States Food and Drug Administration quickly adopted the preventive controls and the documentation aspects of the HACCP system. Other segments of the food industry voluntarily and gradually introduced the HACCP system, or elements of it, into their food safety and quality assurance programmes. However, it was not until the mid-1980s that the HACCP system became a major focus of regulatory agencies and industry, mainly in the United States, but also in Europe, Canada, New Zealand and Australia. It was clearly established that the HACCP system had to be an industry-driven programme, with regulatory and control agencies being in charge of certifying the food facilities and conducting on-site verification of proper HACCP implementation.

Since then, the HACCP system has been in a constant state of evolution. Implementation by the food industry has been slow and at times painful – it is a process that is still in progress. Application guidelines, prerequisite programmes, decision trees and training programmes have been developed and implemented. Coalitions of industries, such as the United States Seafood HACCP Alliance, have been formed to train and certify HACCP trainers, develop hazard analysis and generic HACCP plans. At the international level, the Codex Alimentarius Commission has adopted guidelines for the application of the HACCP system in food production and processing. Based on this, the Codex Committee on Fish and Fishery Products has developed a specific code of practice on how to adapt HACCP principles in fisheries and aquaculture.

Currently, most national food safety regulatory agencies and international institutions have adopted regulations, guidelines and procedures for the development and implementation of HACCP plans by industry. However, now that the HACCP system has become the food safety regulatory system of choice, policy issues rather than science are likely to shape its evolution in the future.

5.7.8 Danish HACCP

The Danish Standards Association, Denmark's national standardization body, has also developed a certification model – the DS 3027 HACCP certification (called the Danish HACCP) – to enable food producers to verify their effective implementation of the HACCP method.

5.7.9 British Retail Consortium Global Standards

In 1996, United Kingdom retailers realized that on the issue of food safety, there were many advantages to sharing experience and developing robust systems together. The development of the BRC Global Standards¹⁴¹ was initially driven by the need to meet legislative requirements of the EU General Product Safety Directive and the United Kingdom Food Safety Act, that is, for retailers and brand owners to use in their “due diligence” defence should they be involved in a safety failure. It was soon seen as having significant benefits to the suppliers of product to the United Kingdom retailers and, subsequently, European and global retailers.

The first issue of the BRC Global Standard – Food was published in 1998. It is regarded as a benchmark for best practice in the food industry. It is a food safety and quality management protocol including:

- implementation of an HACCP system;
- a quality management system;
- factory environmental standards;
- product control;
- process controls; and
- personnel requirements.

It has evolved into a global standard (called the Global Standard for Food Safety – Issue 5)¹⁴² and is used not just to assess retailers' suppliers, but as a framework upon which many companies have based their supplier assessment programmes and the manufacture of some branded products.

Suppliers to firms under the BRC umbrella must undergo an evaluation by a BRC-certified auditor. As overseas suppliers see the benefits of accreditation to the BRC, the number of licensed certification bodies has grown. There is currently a network of more than 80 accredited and BRC-recognized certification bodies around the world. The BRC is developing a database that will allow retailers to check the accreditation of any of the more than 13 000 suppliers in 90 countries certified to the BRC Global Standards. The BRC's claim that “the majority of United Kingdom, and many European and Global retailers, and brand owners will only consider business with suppliers who have gained certification to the appropriate BRC Global Standard”¹⁴³ was confirmed by industry sources consulted for this technical paper, especially in relation to the United Kingdom. In the United Kingdom, BRC members (including Tesco, Marks and Spencer, and Sainsbury's) account for about 90 percent of retail trade.

5.7.10 International Food Standard

In 2002, German food retailers from the Hauptverband des Deutschen Einzelhandels developed a common audit standard on food safety called the International Food Standard (IFS).¹⁴⁴ It was designed *inter alia* to bring transparency to the supply chain. In 2003, French food retailers and wholesalers from the Fédération des entreprises du Commerce et de la Distribution joined the IFS Working Group. The IFS operates as a uniform tool to ensure food safety and to monitor the quality level of producers of

¹⁴¹ See www.brc.co.uk.

¹⁴² Issue 5 has some 326 clauses, expanded from 270 in Issue 4, including those related to increased clarity and guidance to auditors assessing food safety plans.

¹⁴³ www.brc.org.uk/standards, accessed 22 January 2009.

¹⁴⁴ www.ifs-online.eu.

retailer-branded food products. The standard can apply for all steps of the processing of foods following primary production. The standard includes:

- HACCP;
- management systems (quality, responsibilities, resources);
- traceability; and
- corrective action plans.

The IFS reports association with a range of retailers and wholesalers, mainly in Europe, including: Metro Group, Edeka, Rewe Group, Aldi, Lidl, Auchan, Carrefour Group, EMC – Groupe Casino, Leclerc, Monoprix, Picard Surgelés, Provera (Cora and Supermarchés Match), Wal-Mart, Système U, COOP, CONAD and Unes. Its Web site notes that “Nine of the ten biggest European food retailers use the IFS as their food safety standard.”¹⁴⁵ Registered retailers, certification bodies and certified suppliers have access to a database of IFS audit reports and certification information.

5.7.11 Safe Quality Food

In 1995, the Western Australia Department of Agriculture developed The Safe Quality Food (SQF) Programme for the purpose of verifying the safety of food exported to other countries, particularly to the United States. The programme was modelled after ISO 9000 standards. In 2003, the FMI, based in Washington DC, purchased the SQF programme. The FMI is a non-profit association conducting programmes in research, education, food safety, industry relations and public affairs. It has some 2 300 members, including food retailers and wholesalers, covering about three-quarters of retail sales in the United States. International membership includes companies from 50 countries.

Currently, there are two SQF codes: SQF 1000 for farmers and producers; and SQF 2000 for food manufacturers and distributors. The two codes are based on HACCP principles, Codex, ISO and quality management systems.

Safe Quality Food provides “independent certification that a supplier’s food safety and quality management system complies with international and domestic food safety regulations. This enables suppliers to assure their customers that food has been produced, processed, prepared and handled according to the highest possible standards, at all levels of the supply chain”.

The SQF programme has been implemented by more than 5 000 companies operating in Asia-Pacific, Europe, the Near East, South America and the United States.¹⁴⁶

5.7.12 GLOBALG.A.P.¹⁴⁷

EurepGap was developed in 1997 by the Euro-Retailer Produce Working Group (Eurep), a private sector body driven by a group of British and European retailers. In late 2007, it changed its name to GLOBALG.A.P to reflect its more international focus. EurepGap was initially designed as a standard for good agricultural practices. Its food safety criteria are based on the HACCP system.

Originally applying to fruits and vegetables, EurepGap was later extended, including to fish farming practices. It was the first to develop an Integrated Aquaculture Assurance Standard (in late 2004). In addition to the general code of practice, specific criteria have also been developed for salmonids, tropical shrimp, pangasius and tilapia. Its Integrated Farm Assurance Standard includes an overall base of requirements for all farms and a specific rubric of standards for crops, livestock and aquaculture.

GLOBALG.A.P has 100 independent and accredited certification bodies in more than 80 countries. Notably, it also allows other schemes to be benchmarked against it. Moreover, in June 2009, it announced a “voluntary add-on module to its existing food

¹⁴⁵ www.food-care.info, 22 January 2009.

¹⁴⁶ www.sqfi.com, accessed 2 December 2009.

¹⁴⁷ See www.globalgap.org, accessed 2 December 2009.

safety, environmental and social requirements with the metrics-based environmental and social standards”¹⁴⁸ under development by the WWF Aquaculture Dialogues (described above). It is of particular interest in developing countries because it allows certification at the level of the cooperative (rather than a separate certification for each operator). GLOBALG.A.P has strong support in the retail sector in Europe¹⁴⁹ and elsewhere, including the Netherlands giant Royal Ahold, Carrefour, Tesco, Wegmans (United States), Aldi (Germany) and Asda (United Kingdom arm of Wal-Mart). GLOBALG.A.P-certified products are automatically given the “green light” on the United Kingdom retailer Sainsbury’s “traffic light” procurement decision tree¹⁵⁰ (which includes safety and sustainability criteria).

5.8 THE NEED FOR HARMONIZATION

As noted above, GLOBALG.A.P and the ACC have reached agreement to cooperate through a “joint checklist approach”, which according to GLOBALG.A.P “is a way to harmonize existing standards, create robust and accredited programs, and avoid costly and confusing duplication of efforts for producers”.¹⁵¹ Indeed, industry sources suggest that rivalry between schemes – particularly related to aquaculture – has created confusion in the market, with producers not sure as to which scheme, if any, to sign up to: “There is a disturbing level of over criticism by rival standards setting bodies of each others’ efforts – WWF has been particularly outspoken”.¹⁵²

GLOBALG.A.P’s add-on module based on WWF Aquaculture Dialogues might help to encourage further cooperation rather than competition.

In terms of food safety generally (not exclusive to, but including fish and seafood products), other attempts at reducing the confusion around the proliferation of private standards and to seek some harmonization or international norms have occurred – the first driven by an international coalition of retailers, the other in the context of the ISO.

5.8.1 Global Food Safety Initiative

In April 2000, chief executive officers (CEOs) from a range of international retail firms identified the need to enhance global food safety, including by setting requirements for food safety schemes. They were concerned that retailers were having to deal with a multitude of certificates issued against various standards in order to assess whether the suppliers of their private label products and fresh products had carried out production in a safe manner. They noted that their suppliers were being audited many times a year, at significant cost and with what they perceived to be little added benefit. The Global Food Safety Initiative (GFSI)¹⁵³ was developed as an attempt to improve cost-efficiency throughout the food supply chain.

The GFSI’s main objective is to implement and maintain a scheme to recognize food safety management standards worldwide, including by:

- facilitating mutual recognition between standard owners; and
- working towards worldwide integrity and quality in the certification of standards and the accreditation of certifying bodies.

The GFSI does not undertake any certification or accreditation activities. Instead, it encourages the use of third-party audits against benchmarked standards. The overall vision is to achieve a simple set of rules for standards, harmony between countries, and cost-efficiency for suppliers by reducing the number of required audits.

¹⁴⁸ www.globalgap.org/cms/front_content.php?idart=883.

¹⁴⁹ “Who will win the certification showdown?”, www.intrafish.no, 30 January 2009.

¹⁵⁰ “Firm Commitment”, Seafood International, September 2008, p. 14.

¹⁵¹ GLOBALG.A.P Secretary K. Moeller, quoted in “GAA, GlobalGap join forces on aquaculture certification”, www.intrafish.no, 1 February 2009.

¹⁵² A. MacFarlane, NZ Seafood Industry Council, personal communication, 2009.

¹⁵³ www.ciesnet.com.

A guidance document lists key requirements against which food safety management standards can be benchmarked. Those requirements include three key elements:

- food safety management systems;
- good practices for agriculture, manufacturing or distribution; and
- the HACCP system.

Notably, the application of the benchmarked standards to particular products is at the discretion of retailers and suppliers. This process will vary in different parts of the world, depending on:

- company policies;
- general regulatory requirements; and
- product liability and due diligence regulations.

A number of relevant standards have been benchmarked as compliant with the GFSI, including:¹⁵⁴

- BRC Technical Standard (Version 5);
- IFS (Version 5);
- The Netherlands HACCP;
- SQF 2000 Code level two (manufacturing), SQF 1000 level two (primary production);
- GAA BAP (GAA seafood processing standard); and
- GLOBALG.A.P IFA Scheme Version 3 (Aquaculture Version 1.02–March 2010).

The board of the GFSI is its main governing body. It is responsible for policy-making and overall decisions. The board is made up of representatives from the largest retail and wholesale food companies in the world, namely: Royal Ahold, Carrefour, Delhaize, Metro, Migros, Tesco and Wal-Mart. The board is supported by a task force, which acts as a consultation body. Overall, the coalition accounts for more than 70 percent of food retail sales worldwide.

The GFSI is an important development in that it is an attempt to reduce the transaction costs associated with retailers and their suppliers having to apply a multitude of different standards. Suppliers to European retailers report needing BRC certification for the United Kingdom market and IFS certification for the French and German markets. In theory, having a standard benchmarked against the GFSI should mean that there is some form of mutual recognition or equivalence.

All the schemes benchmarked to the GFSI require traceability systems and monitoring as well as auditing in line with Codex and the HACCP system. In practice, differences remain in terms of the specific requirements of schemes and their related certification and audit processes. Indeed, in a survey conducted by the OECD (OECD, 2006), retailers that were members of the GFSI reported that they not only used GFSI benchmarked standards, but often a combination of them. Moreover, they also often add on firm-specific standards. This is especially the case with owners of private label and brand name products. Many retailers remain members of several schemes. Carrefour, for example, is a member of the GFSI, the IFS, and it is also a member of the FMI, which owns SQF. The United Kingdom's Tesco is a member of SQF, the BRC and the GFSI. Work has also been undertaken by the GFSI on differences and similarities with ISO 22000 (described below).

¹⁵⁴ www.mygfsi.com/about-gfsi/gfsi-recognized-schemes.html.

BOX 16

ISO Technical Committee ISO/TC 234, Fisheries and Aquaculture

In 2007, the International Organization for Standardization (ISO) established Technical Committee ISO/TC 234, Fisheries and Aquaculture. The work the ISO/TC 234 focuses on areas where:

- performance can be assessed against specified benchmarks (e.g. under global sustainability market certification regimes);
- actors in the sector can learn from one another's experience, develop best practice, efficiently exchange knowledge and utilize international expertise in the field;
- food business operators can reduce workloads by avoiding conflicting documentation requirements and re-using data;
- electronic data interchange and automatic translation of product and process parameters can be enabled;
- there are global markets for equipment and technology, and sufficient similarity in operating conditions to warrant establishing minimum design, testing or performance standards;
- there is a desire for international transparency in import requirements used by various countries, in order to support fair trade; and
- comparability of data can be promoted.

The ISO/TC 234's activities in fisheries and aquaculture include the creation of:

- Working groups:
 - traceability of fish products,
 - environmental monitoring of seabed impacts from marine finfish farms,
 - aquaculture technology,
 - food safety for aquaculture farms,
 - methodology for sea lice counts, and
 - calculation of "fish-in, fish-out" (FIFO) and feed conversion ratios (FCRs)
- Advisory group:
 - Aquaculture advisory group.

The GFSI has announced that its "vision of 'once certified, accepted everywhere' has become a reality".¹⁵⁵ Carrefour, Tesco, Metro, Migros, Ahold, Wal-Mart and Delhaize have all agreed to reduce duplication in supply chains through the common acceptance of any of the GFSI-benchmarked schemes. Impacts on suppliers will need to be monitored. While experts have yet to reach on a consensus on whether the GFSI has reduced the proliferation of private standards, it has clearly increased awareness of global food safety issues and facilitated cooperation between international retailers.

5.8.2 International Standards Organization – ISO 22000 (ISO, 2005)

In addition to the adoption of private standards, many food companies and retailers have also adopted international voluntary standards developed in the context of the ISO. The ISO (Box 16) is a network of national standards bodies, based in Geneva, Switzerland. It is an NGO that is the product of collaboration between public and private sector bodies. Its members include national standardization bodies as well as industry associations. Despite this public/private mix, the WTO recognizes the ISO as providing internationally recognized standards. As international standards, these allow some assurance of safety and quality across national borders. In late 1980s, the ISO developed the ISO 9000 series for quality management in all sectors. Although

¹⁵⁵ www.ciesnet.com/2-wwedo/2.2-programmes/2.2.foodsafety.gfsi.asp. Accessed 2 December 2009.

ISO 9000 helped food companies to improve the organizational and operational aspects of quality management, it lacked food safety specifics, especially reference to HACCP requirements. Subsequently, ISO 22000 was developed in 2005, building on previous food-safety-related standards, as an attempt to establish one internationally recognized standard for food safety management systems. To date, however, it sits alongside the range of other private and public schemes.

There has been some collaboration between the ISO and the GFSI. For example, the ISO participates in the GFSI Technical Committee. A comparison conducted by the GFSI of the GFSI Guidance Document and ISO 22000¹⁵⁶ showed strong similarities. However, different approaches to accreditation and differences in ownership – retailer-driven GFSI versus the diverse public/private ISO 22000 membership – were cited as the stumbling blocks to formal recognition by the GFSI of ISO 22000. It was thought that retailer-driven GFSI-benchmarked schemes had a “specific reactivity” and could implement changes agreed in the GFSI, whereas the decision-making structures of the ISO were thought to be less conducive to “timely and efficient” adjustments in the light of changes in market conditions and demand.

5.9 CALLS FOR INTERNATIONAL GUIDANCE

The preceding descriptions attest to the multitude of different food safety management systems and related private standards that have emerged over the past decade and a half, and which are increasingly being applied to fish and seafood either at the post-harvest level (food safety schemes) or throughout the supply chain (aquaculture-specific standards). Despite attempts at harmonization, there is little evidence to date to suggest that retailers are prepared to give up their own mix of specifications and requirements for certification. Instead, it appears that global schemes sit over national collaborative schemes, which individual retailers sign up to and then add on their own individual product and process specifications (related to safety and quality as well as other aspects of their CSR policies). This is perhaps the clearest evidence that private standards are not only designed to provide guarantees against food safety failures, they are also tools for differentiating retailers and their products.

The work of the GFSI and the development of ISO 22000, and the specific cooperation between GLOBALG.A.P and the ACC in aquaculture, are indicators of the need for some harmonization of private standards. International organizations have been asked to play a role in this context. Discussions on private standards generally have been held in the context of the WTO. These are described below in a discussion of the impacts of private standards on international trade. The OECD has carried out a number of studies on private standards, albeit concentrating on agricultural products and excluding fish and seafood (OECD, 2006). FAO has been asked by its Member Countries, in the context of the COFI, to help clarify and resolve some of the challenges related to private standards as they apply to fish and seafood. Discussions have been had in the context of two COFI sub-committees – on aquaculture, and on fish trade (described in Chapter 4 in relation to ecolabels).

5.9.1 FAO Sub-Committee on Aquaculture

While recognizing the value of better management practices (BMP) and of certification for consumer confidence in the safety of aquaculture practices and products, the Sub-Committee on Aquaculture became aware of the disquiet associated with private certification schemes. The Sub-Committee noted that the emergence of a wide range of standards, certification schemes and accreditation bodies was causing some confusion among the various actors in the supply chain, but particularly among producers. The potential increased costs to producers wanting to participate in those schemes,

¹⁵⁶ “What is ISO 22000?”, www.ciesnet.com.

in particular small-scale producers, was an additional concern. The Sub-Committee subsequently requested that FAO play a lead role in the development of national and regional aquaculture standards. It highlighted a need for more globally accepted norms for aquaculture production, which would serve as a basis for improved harmonization, or mutual recognition, of the various certification schemes.

Since 2006, FAO has organized six consultative workshops in Asia, Europe, North America and South America to develop draft guidelines for aquaculture certification. A precedent had been set in the development of guidelines on ecolabelling – the 2005 FAO Guidelines for the Ecolabelling of Fish and Fisheries Products from Marine Capture Fisheries (described in Chapter 4) – which were similarly aimed at mitigating the confusion around the potential proliferation of private standards and certification by setting out: general principles and definitions, minimum substantive requirement and criteria, and the procedural and institutional aspects any certification scheme should include.

Draft guidelines on aquaculture certification were submitted to the FAO Sub-Committee on Aquaculture in October 2008. The Sub-Committee called for a further process of consultation. Sticking points included the lack of agreement over, *inter alia*, the inclusion of criteria such as economic and social development in definitions of “sustainability”, for which there was no consensus.

Subsequently, a Technical Consultation was held in February 2010 in Rome, Italy, to advance consensus significantly on the guidelines for certification in aquaculture. Consensus was reached on most provisions, except for two sticking points, which were discussed further at the fifth session of the FAO Sub-Committee on Aquaculture in September 2010 in Thailand, where the guidelines were finally approved by consensus.

5.10 MARKET IMPORTANCE OF PRIVATE STANDARDS

There is little empirical evidence of the market significance of fish and seafood certified to private safety and/or quality standards or to a specific aquaculture certification scheme. However, it appears that the pressure on producers (fish farmers) and processors (of both wild capture and farmed fish) to comply with private standards depends on the market, how that market is structured, and on the type of product being sold.

To take the European market as an example, all seafood entering the EU must comply with mandatory EU food safety and quality regulations. However, within that market, there are regional differences that have implications for the pressure to comply also with private standards. The pressure is more intense in northern Europe, and especially in the United Kingdom and Germany where a higher proportion of fish and seafood is sold in supermarkets, and where there is a greater predominance of processed and value-added products, as well as more private label products. These characteristics seem to drive the pressure for suppliers to comply with and be certified to an FSMS. There is less evidence on other markets, but in the case of private standards (for safety and quality as well as ecolabels), it could be argued that the European market, and in particular the United Kingdom, often acts as a harbinger for other markets. In terms of requirements for certified aquaculture, the United States market is also important.

5.10.1 Large retailers – stringent demands

Large supermarket chains are the most demanding in terms of private standards. In an increasingly competitive market, large food companies search for ways to distinguish their products, brands or firm from competitors. As the link between the rest of the supply chain and consumers, they are under pressure to respond to consumer expectations for safe, quality food, to show due diligence in terms of food safety assurance, and increasingly to present their CSR credentials. Private standards play an

important role in all of these aspects and subsequently provide opportunities to both protect (risk management) and enhance reputation.

While there were traditionally fewer retailer guidelines for fish than for fresh fruit and vegetables, this is changing as supermarkets attempt to increase their fish sales potential. To take advantage of the positive image of the health benefits of fish and to develop the concept of the “one-stop shop”, retailers are expanding the fish sections in their shops. They are also trying to offer a greater range of fish products, including pre-prepared, ready-to-serve meals. Moreover, as noted above, fish products are increasingly being sold under retailers own-brand or private labels. The larger the chain, the more economically attractive it is to invest in private label products (FAO, 2008). Suppliers are required to provide levels of information and compliance – from basic information to detailed questionnaires to certification to an FSMS – depending on the product and the form in which it will be sold.

5.10.2 Private labels

Supermarket chains impose relatively stricter standards on their private label products, whether they are fresh, frozen or canned. Private labels operate as a market differentiator helping to build up a retailer’s reputation *vis-à-vis* other retailers, as well as allowing retailers to compete with large commercial “brands”. This trend towards private labels is likely to continue. Research by AC Nielsen suggests that: “Private label products, especially in refrigerated foods continue to steadily increase their share of the global marketplace, eating into processors’ brands”.¹⁵⁷ Interviews conducted for this technical paper indicated that safety and quality requirements were significantly more stringent for private label or house brand fish and seafood products:

- “The fact that the product is safe to eat and correctly labeled may be good enough for ‘commodity’ product, but branded consumer producers are generally more concerned with identifying indicators that enable them to control consistency of product and maintain consumer experience. So they need to specify attributes in buying specifications.”¹⁵⁸
- “We supply private label and non private label seafood from Thailand, Viet Nam and China to our customers. IFS certification is highly recommended (not strictly required) by our French customers for their private label line; they are far less demanding for the other segments.”¹⁵⁹

It should be noted, however, that while steadily increasing, the proportion of fish and seafood sold under private labels is still fairly limited in terms of volume.

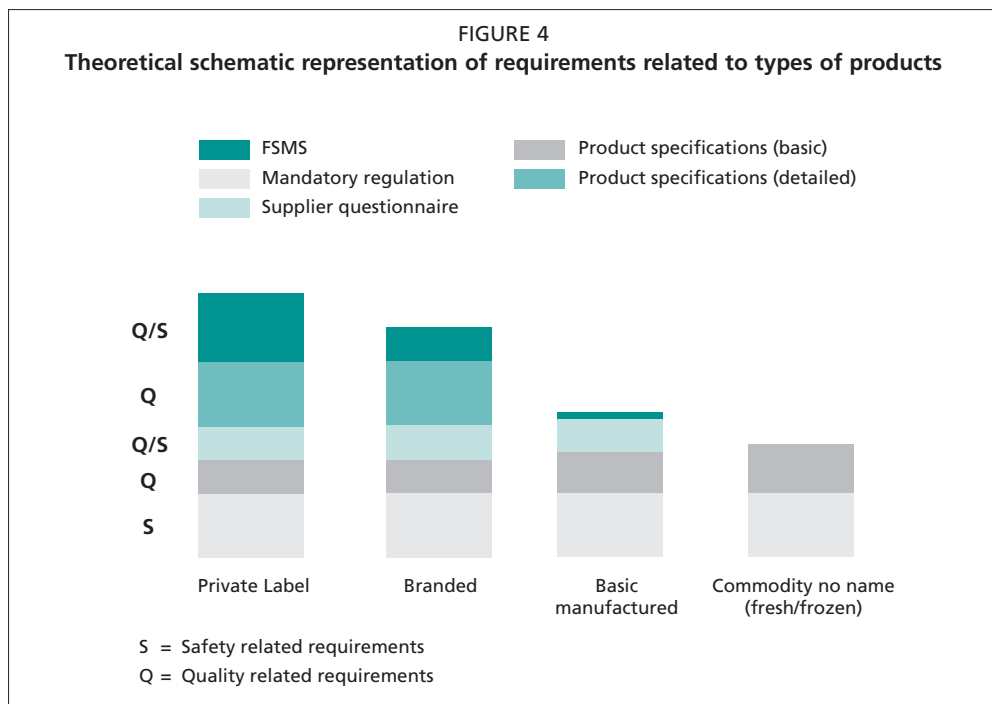
5.10.3 Product type – processed products

Branded products in supermarkets, including house brands, are more likely to be found in the freezer case rather than as chilled products (OECD/FAO, 2007, p. 21). Again, proportions vary between markets, appearing higher in northern Europe and lower in southern Europe, differences that seem linked to the type of products preferred by consumers in those markets. For example, whole fish remains standard fare for people in southern Europe (overall the largest European seafood consumers) while people in northern Europe prefer frozen and breaded fillets and portion-sized items. Less than 10 percent of the seafood market in Germany is fresh fish, while 40 percent is frozen. Germany and the United Kingdom are the largest markets for breaded and battered seafood products (Seafood Choices Alliance, April 2007).

¹⁵⁷ Foodnavigator-usa.com, 28 September 2005.

¹⁵⁸ A. MacFarlane, NZ Seafood Industry Council, personal communication, October 2008.

¹⁵⁹ French seafood importer, personal communication, 2007.



Source: FAO (2009b).

The intensity of the pressure to meet above-the-legal-requirements, including by certification to an FSMS, varies greatly by market, by market segment (product type), and according to the importance of the segment for seafood items that carry a “name” linking products directly to a brand owner or supermarket chain.

Figure 4 shows the relative levels of compliance required depending on the type of product and level of processing.

5.10.4 Procurement strategies and supply chains

In terms of procurement, food retailers’ buying strategies also differ around the world. “In Europe supermarkets are increasingly contracting directly with processors for supply and may also secure wet fish from wholesale markets. In the United States supermarkets use the services of brokers. In Asia and Australia there is a mix of buying from auction and contracting for supplies” (OECD/FAO, 2007, p. 21). Recently, supply relationships have tended towards more direct contracts. The more direct the supply relationship and the more integrated the supply chain, the more private standards are likely to enter the equation. Where retailers contract directly with producers or processors, they are able to impose more controls, including product and process standards.

The characteristics of supply chains also seem to have an impact on the relative importance of private standards. A World Bank study found that differences in the organizational structures of supply chains result in differences in the implementation of food safety and quality control systems (World Bank, 2005a). In general, there is a lack of vertical integration in fish supply chains compared with other sectors of the global food industry. While there might be integration from the retail sector into the processing sector, this rarely extends into the catch sector. There is relatively more integration in aquaculture, where there is scope to produce to specification. Three separate supply chains for fish and seafood products have been identified: (i) vertically integrated supply chains; (ii) collaborative supply chains; and (iii) fragmented supply chains. These are discussed further below in relation to the interface between developing

country producers and processors and private standards. However, the scant evidence that exists suggests that private standards are more significant in vertically integrated supply chains.

5.10.5 Conclusions

The pressure to comply with private food safety and quality standards therefore depends on the market (related to the regional differences described above), on the procurement strategy (direct contracts) and the type of product the fish or seafood is destined to become (highly processed, private label, brand), and it therefore affects:

- Products for sale in supermarkets that have built up a strong brand policy, and whose products, whether they are private labelled or not, carry the image of the retail shop; this is the case for retail chains such as Waitrose, Marks and Spencer, and Tesco in the United Kingdom, Carrefour in France and other European markets, Wal-Mart in the United States and elsewhere. Consequently, these chains have set up very tight quality policies and engage in direct supply relationships.
- Products supplied to the segment of the processing industry selling branded products e.g. companies such as Food Vest (Young's and Findus brands) and Bird's Eye Iglo (the number one frozen food company in Europe).

In terms of pressure to comply with private quality and/or safety standards, processors can be affected whether they are dealing with wild capture or farmed fish and seafood. In contrast, producers are affected relative to the sector, with fish farmers being under potential pressure to comply with an FSMS or specific aquaculture certification scheme, and wild capture fishers largely unaffected.

5.11 PRESSURE ON DEVELOPING COUNTRIES TO MEET PRIVATE STANDARDS

As noted in earlier chapters, developing countries represent about half of world exports of fish and fishery products by value and about 60 percent in terms of quantity (FAO, 2009a). Developing countries have expressed concerns, for example in the context of the WTO, that private standards could pose a barrier to their access to lucrative developed country markets.

Research on the implications of private standards and retailer procurement strategies on developing country producers and processors is fairly limited. However, it appears that, with the exception of aquacultured shrimp, developing countries have so far had relatively little exposure to the pressure to comply with private standards. This is due to three key factors:

- They supply proportionately smaller volumes into markets where private standards are most prevalent.
- They supply non-processed, or minimally processed, fish and seafood, while private standards apply mainly to processed value-added products for brands or private labels.
- They tend to operate in supply chains with low levels of integration and, therefore, a limited direct interface with retailers and private standards schemes.

5.11.1 Export markets for developing country fish and seafood

The markets that are most demanding in terms of private standards are the markets where imports from developing countries are lowest. For example, the percentage of European imports from developing countries that end up in Germany and the United Kingdom, where private labels and private standards are more dominant, is relatively low. These markets tend to prefer North Atlantic and North Pacific species to tropical species from developing countries (again, with the notable exception of shrimp, catfish and species typically sold as canned products – tuna, sardines etc.).

5.11.2 Relative absence of value-added products

An FAO study of developing country products on sale in supermarkets in France and Italy found that: “One of the striking features is the absence of prepared seafood in the developing country range” (FAO, 2008). The study estimated that processed products from developing countries accounted for less than 10 percent of retail sales of processed fish and seafood in those markets. Fish and seafood from developing countries tend to be imported as frozen whole fish or fillets: “most fresh fishery products exported from developing countries undergo minimal (if any) value addition at the developed country level” (OECD/FAO, 2007, p. 287). These products demand few requirements above those mandated by public regulation. A large proportion of value-added seafood products on sale in Europe, with the exception of canned fish (tuna, anchovies, sardines), has been processed in factories located in Europe (or some other third country). This is where the responsibility for complying with private standards would fall.

5.11.3 The impact of different supply chains

As noted above, differences in supply chain structures result in differences in the implementation of food safety and quality control systems and exposure to pressure to comply with private standards. Three types of supply chains are discussed below in relation to developing countries.

5.11.3.1 Vertically integrated supply chains

“In the vertically integrated supply chain, the chain activities of fish farming, processing and transportation to the European wholesaler/retailer are fully under the control of one transnational company (in most case of Western origin)” (World Bank, 2005a). Large retailers or processors typically source fishery products from developing countries through “wholly or partly owned processing facilities in these countries or through contracts with independent firms in the developing countries” (FAO, 2008). Under this scenario, information about safety and product specifications flows down to producers, sometimes via representatives of the company based in the producer country. Producers are therefore linked into the production process and are supported in their activities, including with compliance to private safety and quality standards.

This would be the minority scenario for most developing country producers and processors. While acknowledging the limited evidence of its own inquiry, an FAO study concluded that: “developing countries have yet to exploit the benefits from value addition gains associated with product certification” (FAO, 2008). Even in Asia, where certification is more prevalent compared with other areas (especially in relation to the growing aquaculture industry), certified farms tend to be those closely associated with, if not owned by, companies from developed importing countries. For example, an FAO study in Asia-Pacific found that: “the distribution of certified farms appears to be strongly biased towards American businesses, with Asian farmers being poorly represented” (FAO, 2007d).

5.11.3.2 Collaborative supply chains

A second type of supply chain is characterized by larger producers or groups of producers that work with exporters. In their turn, these, via their relationships with importers, translate market specifications back down to those producers. This can apply to both the wild-catch sector and to aquaculture. In terms of developing countries, “most European importers who source fish from a particular country or from selected traders have established local offices in the developing countries to coordinate activities in the supply chain (processing, transportation, quality control, export papers)” (World Bank, 2005a). The importer advises the chain actors as to food safety and quality requirements, both public and private. This type of chain was found

to be operating for Nile perch (from Lake Victoria in East Africa) and some farmed tilapia. Under this scenario, importers are the link between the source and the market, making the complexity and evolving nature of the market requirements understood by producers. It is this intermediary that experiences the most pressure to respond to private standards, including by seeking additional information about methods implemented at earlier stages of the supply chain.

5.11.3.3 Importer-driven or fragmented supply chains

Where there is a more fragmented supply chain, categorized by a range of small-scale suppliers, there are less direct relationships by which information about food safety and quality requirements can be passed on to producers. Those producers typically sell into open commodity markets via an intermediary buyer or exporter. At the production end, there is little information about the specifications required at the import end. Under this scenario, there is a reliance on product testing at the point of importation, as safety management systems further down the chain cannot be guaranteed. Most of the exports from developing countries are traded in this type of supply chain. As an FAO (2007f) study of the Asia-Pacific area explained: “For small-scale farmers, establishing a direct link with the market would be in most cases almost impossible. Farming systems in the Asia-Pacific region are in fact dominated by networks of traders which are making quality assurance and traceability huge challenges for all stakeholders... for small-scale producers to have access to and benefit from a certification schemes they would have to be part of more direct supply chains.”

5.11.3.4 Conclusions

In terms of the three chains, only producers in the first and the second would have any interface with private standards, the first directly, and the second indirectly whereby standards are translated via close exporter–importer relationships. However, most of the fish from developing countries is traded via the latter type of supply chain, that is: “in commodity trade arrangements where little is traded in more secure supply contracts or conducted as a result of transfer trading between companies that relate to each other through shared equity” (OECD/FAO, 2007, p. 26). Therefore, it seems that, to date, developing country producers, and most processors, have experienced minimal pressure to comply with and be certified to a private standards scheme. However, their limited interface with private standards also reflects their inability to engage with such schemes. The result is that they are missing out on the opportunities that such schemes might offer in terms of the potential to produce more value-added products and to access lucrative segments of developed country markets.

5.12 COSTS AND BENEFITS OF PRIVATE STANDARDS – STAKEHOLDER ANALYSIS

This section describes the potential costs and benefits of compliance with private standards, as they apply to the various stakeholders. Examples of the actual costs of certification and audit are given first. These are based on a limited number of respondents interviewed for this technical paper and published material, and are indicative only. The FAO study of certification in the Asia-Pacific region (FAO, 2007c) found that it was difficult to determine the actual costs of certification, also because the actual fees are set by certification bodies and are subject to market conditions. Certification costs are also difficult to disaggregate from the costs of complying with mandatory regulatory requirements (which typically form the baseline of compliance with private standards). Moreover, costs are dependent on the size and type of business being certified. In addition, product specifications increase as the level of processing and value-added increases, which is also reflected in the costs of certification and audit (more specifications against which to verify compliance).

5.12.1 Compliance costs

The actual costs of compliance include:

- costs associated with upgrading infrastructure and practices including staff training; and
- certification and audits.

Based on information gained from a limited number of respondents interviewed for this study, the cost of certification against one or other of the FSMSs ranges from several thousand to hundreds of thousands of United States dollars, depending on the size of the company, the type of operation, and the gap between current systems and those required by the private standard schemes. Some costs are direct (e.g. the actual certification fee) while others are indirect (e.g. management time spent in planning and implementing any improvements required, developing new systems, and the costs of actual upgrades and staff training). Often it is difficult to disaggregate the costs related to certification or the introduction of an FSMS because these are part of wider quality management systems.

Companies that need more than one certification might try to have them established at the same time to maximize synergies. Similarly, many try to reduce the costs of multiple audits by finding a certification company accredited to more than one FSMS and able to audit against more than one set of standards at the same time. Audits are typically carried out annually.

Some examples of FSMS certification costs are:

- A processing company in Indonesia reported costs associated with certification and audit to BRC standards at US\$10 000.
- A processing company in Viet Nam reported costs of audit and certification related to SQF certification at US\$6 500.
- A European company reported costs associated with certification to the BRC and the IFS at EUR4 000.

Examples of costs or aquaculture-specific certifications are:

- Friend of the Sea – FOS has a maximum audit period for a plant of one day, which would mean that costs would vary between auditors depending on their daily rate. Audit is conducted once every three years.¹⁶⁰ A licensing fee is also payable for companies using the logo.¹⁶¹
- GAA/ACC – Certified facilities pay a processing fee (US\$500 in 2007) and an inspection fee, which includes a daily consultation fee that can vary from US\$400 to US\$800 depending on location (a shrimp farm or facility takes several days to assess) and the expenses of the auditors (travel, accommodation, etc.) (FAO, 2007c). Processing facilities also pay a fee based on the amount of product exported from the facility in the previous calendar year. A recent estimate costed an overall inspection or re-inspection of a hatchery or farm at US\$3 000, or US\$5 000 for a processing plant.¹⁶² The ACC's Web site notes that it has: "simplified and standardized program application forms and basic facility certification agreements. Fees have also been revised to relate more closely to facility production volumes, with minimums and maximums...fees for the certification program... should be less than US\$005/lb of product produced."

However, it should be noted that most of the financial burden does not come from certification or audit *per se*, but from the changes required to practices and infrastructures to comply with the standards criteria. One respondent to this study perceived these to be significant: "Moving from HACCP to one of the GFSI standards

¹⁶⁰ P. Bray, Friend of the Sea, presentation to OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, The Hague, April 2009.

¹⁶¹ www.friendofthesea.com, accessed 2 December 2009.

¹⁶² "Freedom of choice", Seafood International, February 2009, p. 34.

is not easy and will be financially taxing on the industry, especially in emerging markets. Depending on the current system you employ, the bridging exercise may cost millions”.¹⁶³

This might be particularly burdensome for producers and processors in some developing countries where the pre-existing infrastructure (public and private) can be poor, although those with well-entrenched HACCP systems (a prerequisite for any private certification) will have a head start. Moreover, the costs of compliance are disproportionately higher for small operators – the norm in many developing countries – where there are few economies of scale. Even the cost of acquiring information and introducing management systems is proportionately heavier for smaller operators.

5.12.2 Producers – costs and benefits

The costs to producers of compliance with private standards are likely to vary depending on the pre-existing state of the operations. As noted above, for bulk unprocessed fish and seafood, there are very few requirements demanded on top of the mandatory regulatory requirements associated with exporting to developed country markets. For producers already operating effective hygiene and management practices, and with an HACCP system in place, the costs of complying with any private standards would be marginal – some fixed costs associated with certification, and some ongoing costs related to audit and record-keeping (including for traceability purposes). This would be the case for many developed country fishers and fish farmers.

The costs of certification escalate if a variety of certifications are required, which might mean multiple audits against a variety of standards (although, as noted above, there is often an attempt to be audited by one certifier that is accredited to audit against more than one standard). The pressure to comply with private standards is in addition to requirements to meet public regulatory standards. Producers exporting to Europe, for example, have to comply with EU regulations, various national safety regulations, and any private standards. For those exporting to France or Germany and the United Kingdom, both IFS and BRC certification might be required.

Producers in developing countries already struggle to meet mandatory requirements. Certification might require the introduction of new management systems, record-keeping and even gear, the costs of which would be prohibitive for small operators. Moreover, they are often not supported by the public infrastructure. An FAO study concluded that, “achieving certification appears to come at a heavy cost for producers... conformity assessment frequently requires relatively large financial inputs to be paid by farmers” (FAO, 2007c).

Overall, the costs of complying with private standards, varies considerably from one operator to another, depending on the gap between the current status and that required by the private standard. However, the costs need to be weighed against the potential benefits of being certified to an FSMS. These benefits might include:

- Access to new markets or consolidation of position in existing markets. This is particularly true where certification offers access to an integrated value chain and long-term contractual supply relationships.
- Improved quality of products and subsequent reductions in costly rejections based on poor sanitary status or inferior quality.
- While there is no evidence of a price premium generally, more stable supply relationships are likely to mean less price volatility. Premium-quality products might attract a price premium.

¹⁶³ D. Brickles, Quality Assurance Manager – RSA Operations, Irvin and Johnson Ltd, South Africa, personal communication, 2009.

In the Asia-Pacific region, there was some evidence that GLOBALG.A.P.-certified shrimp farmers were enjoying some benefits from being treated as “preferred suppliers”, having access to a larger market, and receiving prompter payment (indicating enhanced relationships with buyers) (FAO, 2007f). There was also some evidence of a price premium, although this was put down to superior quality (GLOBALG.A.P itself does not raise expectations of any price benefits from certification).

Producers, particularly in developed countries, but also in developing countries where production is geared towards export to developed countries, are increasingly seeking certification against multiple standards. For example, an Irish salmon farming operation has a stable of certifications, including: FOS, Label Rouge, ISO 9001, ISO 14001, Occupational Health and Safety Advisory Services (OHSAS) 18001 and BRC.¹⁶⁴ The extent to which producers decide to seek certification is an indicator of the perceived, if not actual, benefits.

Overall, general concerns have been raised that, whatever the costs of certification, fish farmers and processors bear a disproportionate share of the burden compared with those at the retail end of the supply chain (where demands for certification generate). In terms of aquaculture, both producers and processors are likely to assume a significant proportion of the costs of certification to an FSMS. In the wild-capture area, processors are likely to feel the weight of private standards more than their counterparts in the harvest sector.

5.12.3 Processors – costs and benefits

Fish and seafood processors are likely to feel some pressure to comply with private safety and quality standards, depending on the level of value addition and the types of products produced. For those producing brand products or private label products for large-scale retailers, certification would be essential. In developed countries where plants are likely to be fairly attuned to safety requirements, including as a result of robust national regulations, the costs of certification might be limited to the fixed costs of the initial certification process and the costs of ongoing audit. As noted above, the costs increase if multiple certifications are required. A World Bank survey found that: “Currently some processing companies deal with retailers that require one or more of the following: BRC certification (mainly European retailers), HACCP and ISO certification (Netherlands retailers), IFS certification (German retailers) or SQF 2000 certification (mainly retailers in Australia and the United States)” (World Bank, 2005a).

The costs of certification are perceived to be far greater where significant upgrading of plant and methods is required to achieve certification: “Our two major plants in Cape Town have been certified to both the BRC Global Food Standard and IFS standards. The process took between 2 to 3 years as we have had to move from HACCP certification, which concentrates on food safety to an all inclusive standard (food safety, quality, traceability, allergens etc.) Some structural changes were necessary and new requirements like allergen inclusion was some of our biggest challenges”.¹⁶⁵

Other respondents to this study suggested that upgrading existing premises was often more problematic than creating new plants specifically designed to conform to criteria set by the BRC and the IFS.

Clearly, in the processing sector, economies of scale lower the relative costs of safety and quality systems. Those costs might also be offset by the potential benefits. For example, it has been suggested that the costs of installing and operating HACCP systems remain low in comparison with the potential revenue lost by exporters when product is rejected at the border (FAO, 2005). Similarly, some respondents interviewed

¹⁶⁴ “Marine Harvest Irish salmon farms certified Friend of the Sea”, Sustainable Seafood News, Friend of the Sea Newsletter, 22 January 2009.

¹⁶⁵ D. Brickles, Quality Assurance Manager – RSA Operations, Irvin and Johnson Ltd, South Africa, personal communication, 2009.

for this technical paper suggested that, while the costs of certification to private standards were high, they amounted to a worthwhile investment, noting improvements in quality management and products, increased customer confidence, and access to more sophisticated market segments (private label, high value-added products), with potential for some price premium.

Certification to private standards might provide new opportunities for developing countries in the processing sector of the fish and seafood industry. Processing rather than primary production is where globalization of the seafood sector is developing most. The growing importance of China as an importer, processor and subsequent exporter of value-added seafood products is a key example of this trend. China is now the world's largest fish exporter, but also the sixth largest importer (FAO, 2009a).

Developing countries have a competitive advantage in terms of lower labour costs. Certification to developed-country private standards might help to overcome some of the traditional prejudices towards fish and seafood products from certain geographical origins. As was suggested at an OECD/FAO workshop on globalization: "Consumer purchasing patterns suggest that customers are neutral on origin, provided that they can be assured about safety and integrity ... Fish products are being packed under the most well known of European, American or Japanese household brand names in China, Thailand and Viet Nam and consumers are buying them without obvious sensitivity to their countries of origin, but with confidence in the integrity of the brands" (OECD/FAO, 2007, p. 18). Private standards might open new opportunities for value-adding in developing countries.

5.12.4 Importers and export agents

Importers and agents in exporting countries play an important role in translating standards up and down the supply chain. They are particularly important where supply chains are less integrated. The costs to these actors would include those associated with more record-keeping and explaining clients' requirements to their suppliers. Importers interviewed for FAO research¹⁶⁶ had diverse views. One seafood importer based in the United Kingdom described this as problematic but a growing fact of doing business: "The United Kingdom retailers now ask our suppliers to comply with BRC, a very detailed system that regulates all, from the thermometer to the colour of the plaster.¹⁶⁷ Our suppliers don't understand the rationale of these stringent criteria. We must accompany them."

Another importer noted the increasing pressure to provide information about production processes implemented at the production and processing level in order to meet buyers' standards, although this had not yet extended to requiring certification: "When I receive from my clients their private standards (cahier des charges), I translate them, and make them intelligible to my suppliers. On regular basis, I run audits at my suppliers' processing plants; encourage them to change their practices. I may run on their behalf, chemical/ bacteriological analysis that are easier and faster to order here than at the source. I do not necessarily ask them to go for certification. I consider that a well-implemented HACCP method guarantees the safety of the products. My clients ... increasingly require information about the methods implemented upstream. Associated cost for us to comply with private standards includes some additional time compared with what is necessary to comply with the stringent EU rules. Altogether, the quality issue means the employment of one of us for a third of the time, and five weeks or more of traveling for the manager for inspecting suppliers." (European based seafood importer of shrimp and cephalopods from developing countries).

¹⁶⁶ Interviews conducted by M.C. Monfort in 2007.

¹⁶⁷ This refers to a "detectable blue metal strip" attached to the fish.

In contrast, another importer argued that certification reduced uncertainty and provided the benefit of easing business transactions: “According to our clients needs, we look for potential suppliers who have FSMS certification. Dealing with a quality conscious operator in a developing country will considerably ease the business downward and upward.” (large-scale European importer).

5.12.5 Retailers

Retailers are the main drivers of the private food standards trend. As noted above, food safety is increasingly considered a pro-competitive issue, which drives groups like the GFSI to benchmark a range of FSMSs to assist their members. Other retailer groups are encouraging their members to include private standards in their procurement strategies. For example, the FMI, which represents three-quarters of all grocery sales in the United States, includes on its Web site a list of relevant (wild capture and aquaculture) certification programmes.¹⁶⁸ The seafood industry media also offers advice to buyers related to certification, advising them to ask suppliers if seafood is certified and to check the acceptability (by various means) of certification standards.¹⁶⁹ Requiring suppliers to be certified is a growing trend: “There is no question that there is increasing pressure to source seafood from approved sources ... In the future there are likely to be more strategic cross-border alliances, particularly to gain security of supply, quality and traceability” (OECD/FAO, 2007, p. 83).

Retailers, alongside commercial brand owners, stand to reap the main benefits of private standards, including:

- The ability to impose more detailed safety and quality specifications on suppliers, thereby offering more security in terms of product safety and consistency of quality and supply, as well as providing an insurance policy against litigation related to food safety failure (and in the area of sustainability protection against negative attention from NGOs and the media).
- More secure supply relationships: certifications act as a link between the supplier and the retailer. When the supplier has invested in certification there is likely to be more commitment to the ongoing business relationship. Certification acts as an integrating factor in supply chains, which in the light of globalization are characterized by increasing complexity.
- Guarantees of traceability up the supply chain.
- Reputation enhancement, where private standards are linked to a retailer’s private label. Private standards can be used as a marketing tool to improve customer confidence in quality, safety and sustainability, and to build brand loyalty.

For retailers, any costs involved in developing private standards or managing membership in an FSMS are seen as investment in reputation. Adherence to an FSMS run by a coalition of retail firms (IFS, BRC, GFSI) offers efficiencies in that each retailer is not obliged to “re-invent the wheel”.

When buying packaged or processed food products, large-scale retailers increasingly require their suppliers to be certified against their own FSMS standard or to a private one that they are aligned to. Interviews conducted for this technical paper suggested that, if processors are not certified, retailers carry out their own audit of the supplier’s premises (or will contract an external audit company to do so). The costs of these audits are typically charged to the processor (such as in the Whole Foods Market example described above).

Pressure for certification also appears to be moving further and further down the supply chain. For example, Wal-Mart first required aquaculture processing facilities

¹⁶⁸ “Largest U.S retail trade group OKs sustainable seafood policy”, www.intrafish.no, 23 January 2009.

¹⁶⁹ See for example, “Making sense of farmed-salmon certification”, www.seafoodbusiness.com, 15 June 2007, accessed 26 January 2009.

to be ACC-certified (in 2006), following which it turned its attention to producers (requiring they be certified by early 2008), explaining that: “The intention of certification at the farm level is to coordinate supply, ensure strategic partnerships with suppliers, processors and companies and countries they source from. The other tangible benefit of farm certification is food traceability and food safety. Food traceability and food safety are clearly issues that require risk mitigation” (OECD/FAO, 2007, p. 79).

5.12.6 Governments – costs and benefits

The trend in food safety regulatory regimes in the last 20 years, especially in OECD countries and developing countries exporting to the OECD market, has been to restructure “away from command and control towards performance auditing of self managed food safety systems that the food producers own ... In food safety management, it is up to the producer to identify food safety hazards and appropriate controls to manage them. The role of the regulator is to set the standards for performance outcomes and audit the producer’s performance against the standards” (OECD/FAO, 2007, pp. 24–25). Public management reforms encouraged by the World Bank and the International Monetary Fund mean that this “performance-based management” is starting to permeate the developing world as well.

Under this scenario, the role of government is to impose performance-based regulation coupled with process standards based on the HACCP system. The proliferation of private standards might be seen simply as the private sector responding to incentives set by government – by developing robust food safety systems based on mandatory regulation, with certified verification that standards have been met, and with guarantees of traceability. Indeed, the organization responsible for the GFSI, the Comité International d’Entreprises à Succursales, lists in a recent paper the benefits to government of its activities as follows: “Business is promoting compliance with legislation; and business is self regulating and is driving continuous improvement and best practice” (CIES, 2007).

In theory, this is all well and good. In practice, however, some concerns have been raised about the impacts of private standards on various aspects of government policy. In essence, private standards represent the introduction by the private sector of parallel systems to counter shortfalls, either perceived or real, in governments’ abilities to carry out their responsibilities to ensure food safety, including in relation to imported products.

5.12.6.1 Compliance costs to business

One of the drivers for a shift in regulatory regimes away from command and control towards performance-based systems is the desire to promote a risk-based approach, to improve efficiency and innovation and to reduce the compliance costs to business. Private FSMSs might be viewed as undermining this trend by imposing additional compliance costs. Moreover, private standards tend to be prescriptive and highly detailed, rather than performance-based, with little recognition of different ways of achieving the same outcome (referred to as the acceptable level of consumer protection). As one commentator noted: “private certification schemes tend to be prescriptive, based on blind compliance to a set of structured checklists, while the contemporary approach for seafood safety management is based on outcomes”.¹⁷⁰

In addition, as noted above, the compliance costs are borne disproportionately by those at the front end of the supply chain (producers as well as processors) rather than those downstream where the demands for certification generate.

In developed countries, where producers and processors have robust food safety management arrangements in place, the costs of certification are arguably minimal

¹⁷⁰ F. Blaha, FAO, personal communication, 2009.

(involving the actual certification fees and the costs of additional documentation). Under this scenario, private standards might be seen as of no particular concern to government as they form part of purely commercial relationships between private sector buyers and sellers, which OECD governments at least, are reluctant to interfere with. Moreover, in those countries, in relation to imported fish and seafood, private standards might be seen as an additional food safety guarantee and a protection for consumers. Indeed, concerns about compliance costs and market barriers have been raised almost exclusively by exporting countries, and in particular developing countries (discussed further below).

5.12.6.2 Shift of food safety governance to the private sector

Some countries, again especially developing countries, fear a loss of sovereignty with large international firms making demands on local producers and processors, or seeking safety assurances that go beyond those that have been deemed adequate by local legislators and/or public authorities in importing countries. Private standards relating to food safety in essence indicate a lack of confidence in local food safety management. This is particularly irksome for governments in exporting countries that have been certified by public authorities in importing countries as having an effective food safety management regime. For example, to export to the EU, a country must be certified by the EU as having a “competent authority” responsible for food safety management. In essence, following a country evaluation by EU inspectors of the exporting country’s legal and technical competencies as well as its human resources and infrastructure capacities, the EU “delegates the control of food safety to a Competent Authority in each country, who in turn ensures that exporting farms, vessels and processing plants are producing safe food under a system equivalent to that in the European Union – the principle of equivalence” (FAO, 2005). Without a country being certified as having a competent authority, products from that country – regardless of how modern and efficient particular producers or processors might be and how many private certifications or labels their products carry – cannot enter the EU market.

Critics of private standards argue that not only are retailers who request certification to a private standard displaying a lack of confidence in the competent authority of the exporting country, they are also showing a lack of confidence in their own country’s food safety policy and administrative frameworks – in the case of EU countries, in EU food safety management systems. Other markets too rely primarily on guarantees from competent authorities (albeit, as in the EU, backed up by checks at the border, with some also sending inspectors into exporting countries).

A relatively new development is the use of private voluntary standards in public policy frameworks. For example, the United States FDA is undertaking a voluntary third-party certification pilot programme for imported farmed shrimp.¹⁷¹ A range of certification bodies, including private certifiers like the ACC, as well as public bodies such as the Thai Department of Fisheries for Thai Quality Shrimp, and the United States Seafood Inspection Service of the National Marine Fisheries Service are part of the pilot. The intention is to evaluate third-party certification schemes with the possibility of eventually allowing products from facilities certified by those bodies expedited entry into the United States. The programme responds to the “President’s Action Plan for Import Safety”, which called for the development of voluntary third-party certification programmes for foreign producers who export to the United States. The FDA’s Food Protection Plan (November 2008) “emphasizes qualified and legitimate third party certification as a way to help verify the safety of products from both foreign and domestic food companies”. The FDA defines a third-party certifier

¹⁷¹ www.fda.gov, 2 December 2008.

as any entity, private, NGO, government or stata with no conflict of interest with the FDA.

This programme might signal the increasing importance of private standards and certification schemes as facilitators of entry to important fish and seafood markets. Indeed, the ACC is referring to the pilot as an indicator of its “regulatory recognition” and suggesting that ACC certification has “the potential for expedited entry for certified products”.¹⁷² The results of the pilot and future developments should be closely monitored.

5.12.6.3 Fisheries and aquaculture policies

A recent FAO report on the state of world fisheries notes that opponents of private standards “see them as a private-sector attempt to replace/duplicate governmental policy in fisheries and aquaculture” (FAO, 2009a). For example, private standards in the sustainability area are effectively questioning governments’ abilities to manage their natural resources effectively. Ecolabelling schemes inevitably involve private outside interests passing judgment on the effectiveness of a country’s fisheries management regime. Similarly, private aquaculture standards seem to suggest that governments are not capable of managing not only the food safety aspects but also the environmental impacts and even the labour conditions and social impacts associated with the aquaculture industry. These concerns have been more acute in developing countries where policy frameworks and administrative systems can be weaker. However, the question is raised as to whether private standards are creating confusion among local producers and processors as to their obligations (to meet private or public requirements) and/or undermining governments’ attempts to develop and implement more robust policies and administrative systems by diverting attention and resources towards meeting private rather than public requirements.

5.12.6.4 Potential barriers to trade

Concerns have also been raised that private standards schemes might undermine international attempts to reduce non-tariff barriers to trade, and that requirements on exporting country fish producers and processors to comply with standards set by private sector actors in importing countries might amount to a non-tariff barrier to trade. This is discussed below in relation to discussions of private standards in the WTO.

5.12.7 Developing countries – particular costs and potential benefits

Fish and seafood are crucial income earners for many developing countries. As noted above, developing countries account for about half by value, and about 60 percent by volume, of all seafood traded internationally. Trade liberalization has reduced tariff barriers, which should have a positive impact on developing countries’ access to developed country markets. However, it is increasingly clear that the main barrier to increased exports is no longer import tariffs but the difficulties developing countries have in meeting import market quality and safety related import requirements (FAO, 2009a).

Developing countries have pointed to the challenge presented by government safety and quality control regimes that vary from one jurisdiction to the next. This multitude of approaches imposes significant costs on exporters in countries where there is limited capacity to develop comprehensive safety and quality management systems and infrastructures, let alone several different systems to meet diverse import market requirements. Although progress has been made in terms of harmonization, in particular via the WTO and Codex, it has been slow and more work is required.

¹⁷² D. Lee, ACC, presentation to IAFI World Seafood Congress, Morocco, October 2009.

The concerns expressed by developing countries in relation to public regulation in importing countries are mirrored in their concerns related to private standards: the costs of compliance (including the duplication of effort required to complete various levels of documentation), the need to respond to a multiplicity of different standards, the increasing specificity of those standards, and the lack of harmonization between them. A great deal of effort has gone into meeting EU and other requirements in many developing countries. Consequently, some 102 of them are included in the List 1 of countries authorized to export to the EU because they have FSMSs equivalent to the EU one. However, for other developing countries, poor public infrastructure challenges their abilities to meet either public or private overseas standards. Specific hurdles include:

- The absence of a national strategy on food safety and supporting regulatory frameworks consistent with market requirements in key import markets.
- Poor institutional capacities: an absence of, or poorly performing, competent authorities, weak inspection and monitoring services, insufficient data collection and analysis, weak or non-existent testing facilities, and the absence of technical and advisory services (including advice on food safety management and international import market requirements).
- Poor physical infrastructure: including transportation networks, and a reliable electricity supply. For example, the activities of a well-performing processor might be undermined by an inconsistent power supply (necessary for effective refrigeration), or not being able to shift fresh product fast enough because of poor transportation systems.

Similarly, some of these hurdles make it costly and more difficult for exporting countries to maintain the equivalency status, especially as food inspection services are competing with other departments for shrinking public funds.

The fish and seafood industry in many developing countries is highly fragmented, characterized by small production units in both the farming and wild capture sectors. For example, it is estimated that more than 80 percent of the 12 million aquaculture farmers in Asia operate small-scale farms (FAO, 2009a). An FAO study found that small-scale operators were typically unable to break into the market for certified fish and seafood and that “only a few and relatively larger producers appear able to access” those markets (FAO, 2007c). The costs of certification are proportionately higher for smaller operators. Moreover, without some form of cooperative arrangements, small-scale operators are not able to deliver the volumes of supply required by buyers, nor do they have the wherewithal to engage in direct supply relationships or to manage contracts with large-scale international buyers.

Developing countries have sought assistance to build their food safety infrastructures, including legislative and regulatory frameworks, institutional capacities and physical infrastructures. Progress in all of these areas would provide the foundations for developing countries to further exploit their trade potential as well as having the positive effect of reducing the health risks for local populations. Well-functioning public physical and institutional infrastructures are prerequisites to meeting both mandatory standards in importing countries as well as the growing volume of voluntary private standards.

During a recent WTO discussion on private standards, members discussed how to focus technical assistance to help developing countries respond to demands for certification to private standards schemes. A number of countries insisted that a continuing focus on government requirements was a more effective strategy than branching out too much into private-sector territory.¹⁷³ In any case, developing basic

¹⁷³ “WTO body debates public, private food safety standards”. *Bridges Trade BioRes* Vol.7 no.5, 16 March 2007.

but robust food safety systems would provide the foundations for future responses to private standards, if and when this was deemed necessary.

As discussed above, developing countries have not yet experienced a great deal of direct pressure to respond to private standards, except in relation to several species in the aquaculture area. However, as the dominance of supermarkets continues to grow internationally and as large retailers impose more and more requirements on their suppliers, this pressure to become certified to private standard schemes is likely to increase. Moreover, private standards might offer opportunities for developing countries to diversify away from the traditional raw-commodity products (unprocessed or minimally processed fish and seafood) to more value-added products.

5.12.7.1 Opportunities for more value-added products

To date, many developing countries have been unable to access the growing market for higher value-added products. Instead, their processing activities have been limited to less sophisticated types of processing (filleting and canning). Private sector companies appear unwilling to invest in more sophisticated production equipment in developing countries if their activities are not supported by the public infrastructure. Companies can and do relocate processing to developing countries – including to take advantage of lower labour costs – if they are confident in the local administrative systems (including safety and quality management regimes). The importance of China as a fish and seafood processor provides a good example of this: “China has become a leading location for processing imported fish raw material in Customs free zones for re-export to developed country consumer markets. In the period 2002 to 2004 more than US\$580 million of seafood products were exported on average annually from North America to China and more than US\$1.4 billion imported. Much of that trade was relatively unprocessed frozen fish products exported to China for further processing and re-importation back into the United States” (OECD/FAO, 2007, p. 19). However, reports of contaminated Chinese fish and other products entering the United States market shows how dependent this trade is on robust food safety management systems and how fragile buyer confidence can be.

5.12.7.2 Linking into supply chains

As discussed above, integrated supply chains mean closer collaboration with import markets. It could also mean opportunities for transfers of technology and expertise in developing countries.

A World Bank project in the United Republic of Tanzania found two distinct fish supply chains in operation. The first was an international supply chain characterized by “good integration, low transaction costs, high levels of investment and well-employed technologies”, where specialized agents to the export processors input equipment, finance and training. The second was a domestic chain characterized by “poor organization and little information sharing, which results in high risks for fishermen and boat operators and high transaction costs” (World Bank, 2005a). Indeed, this scenario is fairly typical for many fish-exporting countries in Africa. Similar dual supply chains were also found in Thailand in relation to shrimp, with larger processing factories supplying the international high-end markets while “smaller factories with less capital investment to implement good quality management systems are supplying local markets and countries with less stringent sanitary requirements” (World Bank, 2005b).

An option for developing countries is to seek ways to transfer information and expertise from one chain to the other. Indeed, some countries have taken important steps in this direction, which are briefly described below.

5.12.7.3 Utilizing market mechanisms

Some countries have introduced State-mediated certification procedures to certify their safety and environmental credentials, in particular in their aquaculture industries. This can be seen as a proactive strategy to respond to safety and quality demands from import markets by promoting themselves as suppliers of safe and high-quality fish and seafood. In some cases, this has involved the development of a public certification scheme (see Box 17). Three States that are members of the East African Community (Kenya, Uganda and the United Republic of Tanzania) have developed a trademark as part of their efforts to promote Nile perch as a safe, high-quality product in export markets. In this way, governments are using market mechanisms as tools to gain traction in their own policy frameworks.

BOX 17

Thai Quality Shrimp

Thailand has taken a proactive strategy to access high-end markets by trying to build its national reputation as a producer of safe quality products. Ninety-five percent of Thai shrimp is destined for export markets. In the last ten years, it has increased the proportion of value-added prepared and processed shrimp it exports – now well over half is exported in this form. In 1995, three-quarters was exported in frozen form (World Bank, 2005b).

The strategy pursued by the Government of Thailand has included: a code of conduct (COC) for sustainable shrimp aquaculture; a one-stop-shop service agency for food safety; the creation of a national committee on food safety; the alignment of national sanitary standards with international standards; and a strengthened approach to food safety management generally (even distributing a simple testing kit to shrimp farmers to undertake disease diagnostics themselves) (World Bank, 2005b).

The Department of Fisheries is actively encouraging Thailand's shrimp farmers to meet good aquaculture practice (GAP) standards or better for marine shrimp farming, incorporating various international standards including Codex, ISO 14001 and relevant FAO codes. If farms are up to standard, the Department of Fisheries issues a one-year GAP certification. Standards for distributors and processing plants have also been developed to meet international standards, namely Codex and the HACCP system. Products are marketed as COC-certified Thai shrimp. Processing plants are HACCP certified.

The Thai Department of Fisheries uses the COC as: “a guideline for certifying the whole shrimp production line, from farm to table, to create a sustainable shrimp culture industry in Thailand. Furthermore, DOF has established quality shrimp guidelines that allow producing safe products for consumers without therapeutic agents and chemical residue and impacts to the environment.”¹

It has been argued that these improvements have allowed shrimp farmers to enter into direct supply contracts with supermarkets: “Shrimp farmers now have more experience in making contracts with foreign foodservice providers themselves without using any brokers”.² Moreover, to help promote exports, the Department of Fisheries has entered into mutual recognition agreements with buying countries – for example, with the Republic of Korea – to speed product inspection procedures. The Department of Fisheries is also one of the third-party certification bodies chosen as part of the United States Food and Drug Administration's pilot programme for farmed shrimp.

¹ www.thaiqualityshrimp.com accessed 1 December 2009.

² V. Sowanapreecha quoted in “Carrefour leading trend to buy shrimp direct from farmers”, IntraFish, 7 October 2008.

5.12.7.4 Organizing fishers and fish farmers

Organizing small fishers in developing countries, for example, by encouraging farmers and fishers associations or clusters (Box 18), would enable them to respond collectively to the requirements of both public and private standards, and would ensure that they are able to take advantage of available technical assistance. Industry groups can play a vital role in disseminating information (on import country specifications), good practices (good hygienic practices, good management practices, record-keeping) and technology, and provide a link to government (including pressuring government to provide an enabling infrastructure – both regulatory and physical – for developing export potential).

Some FSMSs such as GLOBALG.A.P will certify private sector industry groups or cooperatives, and not just individual operators. Industry bodies might also help to develop criteria against which local operators could decide when evaluating whether seeking certification to a private standards scheme would be a cost-effective option (along the lines of the decision tree developed by the FAO for Asia-Pacific fisheries operators) (FAO, 2007c). In Viet Nam, an industry group has developed a programme to encourage its members to comply with a private standards scheme required by buyers in the key United States market (Box 19). Success stories in developing countries need to be better documented and shared with other groups and countries facing similar challenges.

5.12.7.5 Improving audit and accreditation capacities

The costs of certification to an FSMS are typically prohibitive for small-scale operators in developing countries. Often, the costs include flying in overseas auditors and certifiers. Accrediting auditing agencies in developing countries would reduce the costs of having to contract-in foreign certifiers. Where the market is too small to sustain an accreditation agency, some regional solution might apply. For example, the countries of the East African Community have agreed on shared laboratory and testing facilities.

5.12.7.6 Compliance with public requirements first

For developing countries to take advantage of the opportunities presented by private standards, they must first be able to meet the requirements of mandatory regulatory requirements in importing countries. This would create the foundations for future responses to private sector standards. Indeed, an FAO study (FAO, 2007c) on the costs and benefits of certification concluded 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).” As noted above, compliance with mandatory requirements is a prerequisite for any private sector certification, but the reverse is not true. Certification to a private standards scheme will not allow access to the EU market for example, if the exporting country itself (and its competent authority) has not been given the green light to export to the EU.

5.13 PROTECTION OR PROTECTIONISM? IMPACTS OF PRIVATE STANDARDS ON GLOBAL TRADE

As noted above, the WTO has generated a regulatory framework to facilitate international trade. The SPS Agreement and the TBT Agreement of the WTO are particularly relevant to trade in fish and seafood products.

The impact of private standards on international trade has been raised for discussion at the WTO, first at the 2005 meeting of the SPS Committee, and subsequently in March 2007. In 2008, the chair of the SPS Committee circulated a list of questions to members seeking their views on what the committee could and should do about private standards. Responses were received from 30 members and were summarized

by the Secretariat along with a three-phase proposal for future work in the area (WTO, 2008a).

A note by the WTO Secretariat produced for the 2007 meeting outlined the main ongoing concerns of member countries in relation to private standards. They included concerns related to the content of private standards, issues related to compliance with private standards, and their overall implications for international trade. These and other issues are briefly summarized below.

BOX 18

India – clustering fish farms to improve production and market access

Ninety five percent of Indian aquaculture shrimp and prawns are exported. The demands of international markets, including for certification, have been problematic for Indian farmers. As 90 percent of them operate ponds that are smaller than two hectares, traceability and meeting certification requirements and costs is especially difficult. To counter some of these problems, the aquaculture industry is now regulated by the Coastal Aquaculture Authority Act, which includes codes of practice for aquaculture operators and registration of farms, hatcheries and processors.

In 2006, the Marine Products Export Promotion Authority (MPEDA) of India, which operates under the auspices of the Ministry of Commerce and Trade, created the National Centre for Sustainable Aquaculture (NACSA), headquartered in Kakinada, Andhra Pradesh, with the mission to organize small-scale fish farmers into societies that can collectively benefit from the NACSA's technical support and advice to address production and market access issues. The aim is to promote sustainable small-scale aquaculture through empowerment of farmers to access credit, quality seeds, feeds and other inputs and to implement better management and good aquaculture practices to reduce fish diseases, improve product quality and access international markets, including through certification.

The farmers' societies have clear organization with strict conditions for membership and elected board members. In addition to training and awareness improvement programmes for society farmers, the NACSA technical staff monitor inputs (seed, feed) to ensure the use of disease- and residue-free inputs and proper traceability. The NACSA is developing a digitalized database supported by GIS for all society farms. Ponds will be identified by a nine-digit code, with each society maintaining a complete record from stocking to harvest, including traceable seed and feed.

In 2009, the NACSA reported more than 7 000 farmers organized into 250 societies. The NACSA aims to organize 75 000 farmers into 1 500 societies by the end of 2012. The experience since 2007 has demonstrated major benefits for farmers in terms of access to microcredit, better bargaining position for inputs and final product prices, as well a better integration of the sector (hatchery–society–processor/exporter).

Source: OECD/FAO (2007).

BOX 19

Viet Nam and SQF 1000

In Viet Nam, the Fresh Water Fish Association is training catfish breeders on the Hau River in the southern province of Can Tho to introduce technologies and processes to meet SQF 1000 standards favoured in the important United States market. The Fresh Water Fish Association controls the programme and monitors farmers against the standard. Farms are audited at least once every three months, and any farm not in compliance is removed from the programme.

5.13.1 Non-scientific basis and lack of consistency with SPS obligations

Article 2 of the SPS Agreement states that: “Members shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles and is not maintained without sufficient scientific evidence” (WTO, 1994). Private standards schemes cover a broad range of specifications relating to food safety, environmental protection, animal welfare, labour standards, etc. Some members of the SPS Committee have argued that private standards invariably exceed the minimum standards set by government regulation, that those related to food safety are not backed up by science-based risk analysis, and that related product and process specifications often include non-safety and quality criteria (that have no particular scientific rationale). A note by the OIE circulated to the SPS Committee in February 2008 concurred with this assessment: “The OIE considers that private standards seldom have a scientific basis, especially if they are introduced for purely commercial reasons (e.g. to differentiate in the marketplace products that are equivalent in sanitary terms)”. The OIE also noted that, “there is reason to believe that many private standards are not consistent with SPS obligations”.

The OIE insisted that private standards had never been tested for compliance with the SPS Agreement. Indeed, comparisons of private standards and relevant international public standards (OIE, Codex and the IPPC) formed part of the 2008 proposals put to the SPS Committee, albeit with varying views on who should conduct such comparisons. To date, there has been no robust analysis of whether private standards are, or are not, consistent with international standards or with SPS obligations.

It should also be noted that some of the “international standards” referred to in these discussions are not themselves mandatory. In terms of consumer protection and food safety, Codex has taken on unprecedented international importance. Yet Codex standards themselves are meant to be voluntary and adopted by consensus. However, given their importance under the SPS and TBT Agreements, whereby they are used as a reference in trade disputes, Codex standards in practice are neither voluntary nor fully mandatory, but fall into a category known as “voluntary under duress”.

5.13.2 Interface between official SPS measures and private standards

There are concerns that private standards might start to influence government regulatory frameworks, including those affecting trade. For example, a government standards body might develop an official standard based on ISO 22000, or might give the “green light” in terms of ease of entry to imports certified against a trusted private FSMS, thereby offering those products preferential treatment. Again, there is little empirical evidence to respond to these concerns, or to quantify any potential impacts on trade.

5.13.3 Costs of and access to certification

Members of the SPS Committee, in particular from developing countries, have raised concerns about the costs of third-party certification to private standards, especially the burden they place on small- and medium-sized enterprises and producers in developing countries. Multiple audits, as a result of a lack of mutual recognition between schemes, have also been identified as costly and burdensome. The requirement of many FSMSs to use a limited number of accredited certification bodies has also been seen as a barrier to entry of developing country products into lucrative import markets.

5.13.4 Technical barriers to trade

The TBT Agreement is also relevant to a discussion of private standards. The TBT Agreement makes a distinction between “technical regulations”, which are mandatory, and “standards”, which are voluntary requirements. In its Code of Good Practice for the Preparation, Adoption and Application of Standards, the TBT Agreement prohibits

both technical regulations and standards from discriminating between domestic and foreign products that are alike (the national treatment principle) and between “like products” from different WTO members (the most-favoured nation principle). Where a technical regulation is applied in accordance with a relevant international standard, then it is presumed not to create an unnecessary obstacle to trade. However, there is no such interpretation in relation to voluntary private standards. While, as discussed above, private standards schemes are often based on international Codex Alimentarius standards (including the HACCP system), they invariably go beyond them – in terms of specificity if not in stringency – rather than being applied “in accordance” with them. As noted above, there has been no analysis comparing the requirements of international standards with those of private standards.

5.13.5 Jurisdiction over private sector actors

While governments have the right to challenge the actions of other governments within the context of the WTO, the grounds for challenging non-governmental actors is less clear. A note by the WTO Secretariat discussed governments’ responsibilities *vis-à-vis* non-governmental bodies in relation to private standards. The note explained that: “Were a particular private standard to fall within the definition of a standard under the TBT Agreement, then Article 4 would apply. This Article requires Members to take reasonable measures to ensure that non-governmental bodies accept and comply with Annex 3 to the TBT Agreement (the Code of Good Practice for the Preparation, Adoption and Application of Standards)” (WTO, 2007).

It is not clear what mechanisms governments have to control the private contractual relationships of private sector firms. Jurisdiction over transnational firms, or coalitions of firms, would be even more problematic. The SPS Agreement offers no direction on this front and “there is no jurisprudence on this matter” (WTO, 2007, para. 26).

5.13.6 Trade enhancing or trade restricting? – divergent views

In the context of discussions on private standards at the SPS Committee of the WTO, differences of opinion have been expressed, including differences between members from developing countries. For example, while some countries have argued that private standards help to expand trade, others counter that they pose challenges to small producers, processors and traders, noting the relative costs of compliance, the multiplicity of schemes and the lack of mutual recognition between them. Some members have gone as far as to claim that private standards are “in conflict with the letter and the spirit of the SPS Agreement, veritable barriers to trade and having the potential to cause confusion, inequity and lack of transparency”.¹⁷⁴ They point to compliance costs and the perceived arbitrariness and lack of objectivity of verification systems, which they argue should be more flexible and take into account country differences.

Differences of opinion have also been expressed on the way forward for the SPS Committee in relation to private standards. Some members have called for clarity in terms of the legal relationship between private standards and WTO agreements, suggesting that the legality of the situation should be ascertained before any further analysis is undertaken on the negative or positive impacts of private standards on international trade.

Clearly, further evidence is needed of the actual effects of private standards on trade opportunities, especially for developing countries. The SPS Secretariat noted that the number of SPS Committee members in favour of a study comparing private standards with the corresponding Codex, IPPC or OIE standards “is a clear indication of the

¹⁷⁴ “WTO body debates public, private food safety standards”, Bridges Trade BioRes Vol. 7 no. 5, 16 March 2007.

desire for the Committee to take some concrete steps on this matter” (WTO, 2008a, para. 5). Part of the proposal for future work of the SPS Committee is for members to submit information related to the impact of private standards on specific export products, so as to generate some concrete evidence as to the actual impacts on trade.

5.14 FUTURE SCENARIOS AND AREAS FOR ATTENTION

The impact of private safety and quality standards is likely to increase as supermarket chains increasingly dominate the distribution of fish and seafood products, and as their procurement policies move away from open markets towards contractual supply relationships. These supply relationships are increasingly defined by private standards with detailed product and process specifications. As large European retailers (the vast majority of leading retail transnationals, with the exception of Wal-Mart, are west European) become increasingly globalized, their buying strategies will influence retail markets in East Asia, Africa, Eastern Europe and Latin America.

While there are a myriad of opinions on the impacts of private standards on global food governance and international trade generally, there remains a dearth of empirical evidence. In terms of international trade and marketing of fish and seafood, the gaps in evidence are even more pronounced. Some key questions remain.

5.14.1 Are private standards adding value to food safety governance?

Whether or not private standards are adding value to food safety governance is arguably in the eye of the beholder. For retailers seeking quality assurance, robust risk management and clear lines of traceability, then the answer is undoubtedly “yes”. They do address additional quality requirements, document the implementation of good practices and provide a separate level of assurance for liability purposes. In terms of bottom-line food safety and consumer protection however, the answer is probably “no”. Most private FSMSs are based on mandatory regulation with additional specifications related mainly to quality aspects and the aforementioned risk and traceability assurances. While there has been no systematic comparison of the private sanitary requirements of individual firms with those encapsulated in public regulation, industry sources supplying to those firms suggest that key safety criteria (such as “use by” dates, and acceptable levels of additives or contaminants) are not more stringent than those required by public authorities. In any case, both public and private standards are typically based on Codex and the HACCP systems. Despite some misconceptions that private standards schemes encapsulate lower levels of “tolerance” – or zero tolerance (see Box 20) – there is no evidence that they are stricter in terms of food-borne hazards, or that they have reduced the incidence of food scares, or that they result in safer food.

Some research comparing private standards with mandatory public standards (at least in the main fish and seafood import markets) to test the relative value added by private schemes would be useful. This would, however, probably be limited to a selection of the larger food safety management certification schemes (given commercial sensitivities and the confidential nature of individual firm-based specifications). Any such enquiry would need to cover both the content of the schemes and their related standards, as well as the compliance and verification procedures, as it is often the audit requirements and traceability aspects that those seeking certification find most burdensome and that the organizations demanding certification consider most important (and readily accessible in public food safety management regimes).

BOX 20

Zero tolerance

Zero tolerance is a powerful term, with the intended connotation of the complete absence of the hazard¹ or inappropriate behavior at issue, and it is popularly perceived as assurance of protection against--or at least official intolerance of--that hazard or behavior. The term zero tolerance is commonly used in the media in many contexts, including food safety. For example, zero tolerance has been used to comment about drug-law enforcement, drug-testing policies in sports, crime, and security violations. Businesses frequently highlight their zero tolerance of offensive behavior (for example, zero tolerance for hate messages in chat rooms and message boards) or consumer protection.

In food safety, the term zero tolerance often resonates well with the public which is seeking assurance of the safety of the products it consumes. Consequently, food safety regulators often confront the notion that they should have “zero tolerance” policy for anything that is deemed to pose a risk² to public health or safety, including in reference to a pathogen or environmental contaminant to indicate that whenever a particular problem is found, strict regulatory action will be taken.

But, zero tolerance in food safety does not always mean zero risk or total absence of a contaminant in a food. For example, there can be no zero risk (total absence) for some contaminants such as mercury in fish and seafood, because mercury is a natural contaminant of the aquatic environment which naturally finds its way through the aquatic food chain and bio-accumulation into some seafood. Likewise, certain bacteria such as *Vibrio parahaemolyticus* are part of the normal flora of the aquatic environment, but represent a hazard only at high concentrations. In this case, the regulatory zero tolerance policy will aim to ensure the presence of the contaminant only at levels far below the hazard level, to ensure no health risks to consumers.

Scientists are often dismayed by the use of this term because they recognize the inability to ensure, in many situations, the complete absence of certain pathogens and contaminants from the food supply and the limitations of feasible sampling plans to check for their total absence (see box 12). But, scientists do recognize that a preference for zero “is influenced by the wish to emphasize that absence of the hazard is the desired objective (although it cannot be always guaranteed) and by the knowledge that once pathogens or contaminants are found, the finding cannot be ignored”. The various uses of and limits of this term, therefore, must be properly analyzed and understood.

¹ In food safety, hazard is defined as a biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect (*Codex alimentarius*)

² A risk is defined as a function of the probability of an adverse health effect and the severity of the effect, consequential to a hazard(s) in food.

Comparing private standards with international public standards, such as Codex, the IPPC and the OIE, as envisaged in WTO discussions would also be useful. However, it should be noted that, while these standards are developed in an international context and by mutual agreement, the monitoring and verification aspects of compliance are left to individual national authorities. As noted above, large-scale retailers requiring certification to private standards express a lack of confidence (whether justified or not) in the “competence” of some competent authorities.

What is definitely not adding value to global food safety governance is the growing proliferation of private standards and certification schemes. It has led to confusion and could undermine confidence in standards overall. Various stakeholders at different levels of the supply chain have expressed concerns about the number and varying quality of schemes. Producers and processors are unsure as to what scheme to seek

certification with and even retailers and large brand owners have doubts about which FSMSs are most robust. Signing up to a rainbow of schemes – for example, an FSMS, a specific aquaculture certification, and some environmental standard, or some combination of these – creates inefficiencies and unnecessary costs. A plethora of labels on one product is likely to result in confusion rather than customer confidence.

5.14.2 Evaluating the relative quality of private standards certification schemes

As in the area of ecolabels, industry sources have highlighted the need for a benchmark against which to judge the quality and credence of the various certification schemes. The aforementioned GFSI has a mechanism for this in terms of FSMSs. A gap exists for aquaculture certification schemes. The forthcoming FAO aquaculture guidelines, once agreed, will provide minimum substantive requirements against which aquaculture certification schemes can be assessed. However, as in the ecolabels area, there is likely to be some debate as to assessment methodologies and who should carry out any benchmarking exercise. While the FAO Members are likely to agree to guidelines for aquaculture, there is less agreement – and no clear mandate – as to whether FAO should assess any private scheme against those criteria.

Assessing the quality and utility of private standards and certification schemes that cover a range of criteria – from safety and quality to environmental impacts to social and economic sustainability – is arguably even more problematic than assessing the quality and credence of ecolabelling schemes. Methodological issues such as the lack of any consensus on definitions of “sustainability” or “social sustainability” are particularly challenging. The WWF has attempted to benchmark a range of private aquaculture certification schemes, albeit against criteria of particular interest to the WWF (see Box 21). Despite this, the study might provide a useful analytical model for any future benchmarking or evaluative studies.

5.14.3 Do private standards conflict with, complement or duplicate public regulation?

Again, because there has been no systematic comparison of private standards with public regulation, there is no concrete evidence to assess the relationship between public and private standards. Several areas are especially pertinent.

5.14.3.1 Food safety

As noted above, private standards are typically based on mandatory regulation and, therefore, are not likely to demand more in terms of acceptable levels of contaminants, or more stringent “use by” dates, etc. Hence, they are unlikely to conflict with public food safety regulation. Duplication is more likely to be an issue, if not in relation to the content of requirements, then in methods of compliance and verification (including multilevel documentation).

Concerns about having to comply with a variety of standards need to be addressed. Those concerns are likely to mirror concerns about the relative lack of harmonization of public regulation, including the lack of harmonization between the safety and quality requirements of public authorities in various export markets. Some harmonization and mutual recognition of public regulatory frameworks for food safety would go a long way towards reducing the current complexity in global food safety governance and would facilitate international trade. It is perhaps disingenuous of public authorities criticize the private sector when the private sector has arguably been as active as the public sector in terms of harmonization of food safety standards (the activities of the GFSI is a case in point). Improved dialogue between the public and private sectors at the international level, with the aim of reducing the complexity of food safety

governance overall, would be useful (the dialogue between the ISO and the GFSI might act as a harbinger).

There is little evidence to suggest that compliance with private standards might facilitate the implementation of public standards. Indeed, the inverse is a more likely scenario. Compliance with public standards provides a baseline, and is therefore essential, for meeting the requirements included in private standards schemes.

As noted in Chapter 4, fisheries that typically achieve certification to a private ecolabelling scheme are those that are already well managed. The same might apply to certification for safety and quality: Do demands from buyers for suppliers to be certified and the certification process itself incentivize better food safety management, or are operators who achieve certification mainly those that already run effective food safety management systems? A further key question for policy-makers, especially in the context of an apparent shift in responsibilities from the public to private sector for food safety management is: Are profit-maximizing private sector firms the best agents for incentivizing better food safety management throughout the supply chain?

BOX 21

WWF benchmarking study of certification programmes for aquaculture

In 2007, the World Wide Fund for Nature (WWF) conducted a study on standards and certification schemes currently used in aquaculture, whereby a wide range of schemes was evaluated and benchmarked against a range of criteria. It found significant shortcomings in all of the schemes studied, including:

- limited openness in standards governance, and insufficient multistakeholder participation in their development;
- inadequate meaningful, measurable and verifiable criteria for addressing key areas of concern (as defined by the WWF);
- weak independence in the operations of the bodies responsible for creating, holding, inspecting and certifying standards;
- deficient mechanisms for certification of chain of custody; and
- poor mechanisms for applying corrective measures and sanctions.

While all of the schemes studied were considered inadequate, it should be noted that they were judged against criteria set by the WWF (mainly environmental impacts, social issues and animal welfare), some of which were arguably outside the objectives set by the schemes themselves. For example, several schemes in Europe or developed nations were judged inadequate because they did not specifically encompass labour rights and social issues, which in those countries would be a “given” and well controlled by public regulation and authorities. The WWF counters stating that “WWF does not accept that any key impacts can be ignored because an industry or stakeholder group decided not to work on them”.¹ However, the benchmarking study excluded issues concerning “food safety, product hygiene and product quality”, which are the primary focus of many of the standards and certification schemes.

¹ WWF. 2007. *Benchmarking study: certification programmes for aquaculture: environmental impacts, social issues and animal welfare*. Zurich, Switzerland, and Oslo, Norway. p. 13.

5.14.3.2 Traceability

The traceability requirements of private standards schemes – often requiring full traceability from farm or boat to fork – are likely to be as robust as most public requirements. The EU traceability requirements are arguably the most stringent in terms of public regulatory requirements, based on the principle of “one step backwards, one step forwards” (International Trade Centre, 2008), and requiring all aspects of the

supply chain¹⁷⁵ to be approved for purpose by the EU-approved competent authority. However, as noted earlier, private standards schemes require traceability requirements to be verified by private sector certification companies, possibly owing to a lack of confidence in the capacities of local competent authorities (even those that have been approved as fit-for-purpose under strict EU criteria) because public audit reports are not readily available to buyers. Assisting with capacity building in countries with weak administrative systems would arguably be a more effective strategy than imposing a parallel private system to compensate for perceived or real administrative shortcomings. Moreover, a company certified to a private standards scheme will still not have access to certain markets, such as the EU, if the competent authority of the country in which it operates, has not been approved by public authorities in key import markets. Traceability, and potential options for integrated traceability to achieve various traceability goals, is discussed further in Chapter 6.

5.14.3.3 *Audit and documentation – duplication and complexity*

It is in the area of audit and verification, and the related documentation required, where duplication between public and private requirements is perhaps most evident. Separate sets of compliance documents relating to public and private certification (or even several public and several private certifications) amount to heavy compliance costs. Those costs are especially burdensome where there is a prescriptive rather than an outcomes-based approach to compliance. It has been argued that while the public sector trajectory is towards more outcome-oriented systems (defining outcomes or the acceptable levels of consumer protection and allowing operators the flexibility to choose how to achieve them), private standards schemes remain wedded to a substantive checklist approach including precise product and process requirements. There is a need to promote more outcome- or performance-based compliance management and verification. Producing two (or more) compliance documents according to who is conducting an audit is not only “a waste of resources, it diminishes the value of true compliance, as it is seen as a paper exercise”,¹⁷⁶ rather than as a tool for continuous management and quality improvement.

5.14.4 **Do private standards facilitate market opportunities or act as a barrier to trade?**

There is still no definite consensus on whether private standards are a bonus or pose a barrier to international trade. On the one hand, they can be trade-creating in that compliance offers opportunities to access lucrative markets in developed countries, where large-scale buyers increasingly include private standards and requirements for certification in their fish and seafood procurement strategies. However, as noted above, compliance with private standards schemes is highly problematic for some operators, especially small-scale producers and processors in developing countries.

Market liberalization and the reduction of trade barriers negotiated by national governments in the WTO will not facilitate market entry for developing countries if public requirements are replaced by new rules set by large international private firms or coalitions of them. Moreover, while private standards are on the surface “voluntary”, they could become de facto mandatory standards if compliance with them becomes necessary to access developed country markets.

¹⁷⁵ Vessels, landing sites, transporters, processors, etc. for capture fisheries, and feed producers, hatcheries, farms, transporters, processors, etc., for aquaculture products.

¹⁷⁶ F. Blaha, FAO, personal communication, 11 February 2009.

5.14.5 Areas for attention

This chapter has highlighted the dearth of empirical evidence and the need for further research and some action in the following areas:

- **Comparing public with private standards for safety and quality management.** Comparisons of public with private food safety management requirements are needed in order to determine where there are synergies to be exploited, efficiencies to be gained, and duplication to be avoided. Moreover, what role can and should the public sector take in regulating the activities of private sector standards schemes?
- **Private safety and quality standards and impacts on international trade.** There is a need for more evidence and analysis on the impacts of private standards on international trade based on concrete country evidence. Do they really act as non-tariff barriers to trade, generally, and specifically in relation to fish and seafood?
- **Assessment tools and methodological advancement.** There is a need for some guidelines or assessment criteria so that industry players can judge the quality of private standards schemes to assess which certification schemes carry most value and have most credence in the market. The GFSI provides a mechanism for benchmarking FSMSs and food safety generally, which covers fish processing activities whether from wild capture or aquaculture sources. The FAO aquaculture guidelines provide minimum criteria for aquaculture certification schemes.
- **Harmonization and mutual recognition – public and private.** There is a need for further harmonization of government food safety regulations. This is gradually being implemented by the relevant Codex committees and by the OIE. The GFSI goal of “once certified, accepted everywhere” is a step towards harmonization of private FSMSs. The FAO aquaculture guidelines could provide the basis for mutual recognition of certification schemes specific to aquaculture. The interface between public and private harmonization efforts could be explored further. The key question is: Which overall global food safety governance framework will best serve consumer protection and public health, as well as industry needs for traceability and risk management, while also promoting efficiencies for the various stakeholders in the supply chain? Some sort of roadmap with desired outcomes and interim deliverables would need to be developed with both public and private sector participation. This would facilitate trade, and would decrease the current complexities in global food safety governance.
- **Support to developing countries.** Support to developing countries would likely be best in the form of assistance to improve the infrastructure (physical, regulatory and institutional) that is a prerequisite for compliance with both public and private food safety and quality standards. This might involve some supply chain development. The transfer of information, technology and expertise from integrated supply-chain actors to other parts of the industry might help fisheries stakeholders move beyond “entry-level commodity trading relationships with international markets” (OECD/FAO, 2007, p. 26) to take advantage of opportunities for more value-addition and subsequently improve access to more lucrative markets or market segments in importing countries. Documenting success stories and sharing these with industry stakeholders in other developing countries would be valuable. In particular, sharing examples of how small-scale fisheries and aquaculture operations have organized to achieve export success, including through group certification, would be useful (see Box 18).

6. Key policy and governance issues

Private standards and related certification is becoming a significant feature of international fish trade and marketing. However, as outlined in previous chapters, the impact of private standards is not uniform across markets, species or types of products. Demands for ecolabelled fish and seafood are currently concentrated in certain species and in certain markets. Demands for certified aquaculture products are also fairly concentrated. The demands for fish and seafood to be certified to an FSMS increase according to the level of value addition involved and the product risk category, and they affect products destined for sale in supermarkets and/or as commercial brand and private label products.

Demands for certification are driven mainly by large-scale retailers, as well as commercial brand owners (supplying to those retailers) and the foodservice industry (especially in the United States). Large-scale retailers are selling more fish and seafood as they attempt to offer consumers a “one-stop-shopping” experience. As described above, private standards add to the value of the retailer’s brand, often forming part of their CSR strategies, and provide an important and cost-effective risk management function. They enable more direct supply relationships by communicating detailed supply specifications to operators upstream in the supply chain. Robust private standards schemes can offer guarantees of traceability, chain of custody and good governance.

The impact of private standards in the trade and marketing of fish and seafood is likely to increase as supermarket chains consolidate their role as the primary distributors of fish and seafood products, and as their procurement policies move away from open markets towards contractual supply relationships. These supply relationships are increasingly defined by private standards with detailed product and process specifications. As the leading retail transnationals extend their global reach, their buying strategies are likely to progressively influence retail markets in East Asia, Africa, Eastern Europe and Latin America.

The preceding chapters have raised some key questions and issues related to the impact of private standards in fisheries and aquaculture, and how they affect various stakeholders. These issues require resolution or further enquiry.

6.1 HOW CAN THE QUALITY AND CREDENCE OF PRIVATE STANDARDS AND RELATED CERTIFICATION BE ASSESSED?

The proliferation of private standards causes confusion for many stakeholders: fishers and fish farmers trying to decide which certification scheme will bring most market returns, buyers trying to decide which standards have most credence in the market and will offer returns to reputation and risk management, and governments trying to decide whether to take a “hands off” or “hands on” approach to market-based mechanisms introduced by the private sector and NGOs.

From an overall fisheries and aquaculture industry perspective, the range and breadth of private standards is significant, especially when set alongside parallel regulatory requirements. However, when taken separately, in each sector – wild capture ecolabels, aquaculture certification schemes, overall food safety and quality management schemes – the “proliferation” story is a little more muted. There do not appear to be “too many” private standards in any one sector. In any case, there is no

optimal number of private certification schemes. Too many might cause confusion, too few might lead to a monopoly situation with industry becoming beholden to one scheme, with standards that could ratchet up over time or become less accessible and/or credible. Transparency and good governance in private voluntary schemes is imperative. The question is: How can the quality of schemes be determined?

A mechanism for judging the quality of schemes (from a buyer's perspective) has been proposed by Peter Hajjipieris, Director of Sustainability and External Affairs for Birds Eye Iglo. His "wish list" outlines his view of the essential quality attributes of any certification scheme in the fisheries and aquaculture sector (see Box 22).

BOX 22

Buyers' wish list for certification schemes

- Does it operate to an internationally agreed or harmonized reference, such as the FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries?
- Is the certification process compliant with relevant international standards, e.g. ISO 65, ISEAL?
- Is the governance and transparency of the organization and/or standard robust?
- Does the issuing organization have credibility (related to above)?
- Is the scheme easily used by industry (e.g. easily understood using simple language)?
- Is it affordable? Does the cost structure incentivize the market to adopt the standard?
- Is a continuous business improvement process built into the scheme?
- Do its label declarations align to international standards (i.e. ISO 14020 aspects)?

Source: P. Hajjipieris, presentation to the OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector.

6.1.1 Benchmarks and evaluation tools

Industry stakeholders have highlighted the need for a benchmark against which to judge the quality and credence of the various certification schemes in each sector: ecolabelling schemes, aquaculture schemes, food safety and quality management schemes. The aforementioned GFSI has a mechanism for benchmarking FSMSs. The FAO Guidelines on Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries, and from inland capture fisheries, and the FAO guidelines for certification in aquaculture, provide minimum substantive criteria and an agreed international reference for capture fisheries and aquaculture respectively. In all areas, however, there is likely to be some debate on assessment methodologies, and on who should carry out any benchmarking exercises. While the FAO Members have agreed to the development of an assessment methodology for ecolabels, there is less agreement – and no clear mandate – as to whether the FAO should assess any private scheme against those criteria.

In each area, key questions remain: Who should evaluate schemes, how, and for what purpose? Several "levels" of evaluation are possible:

- a methodological tool that could be used by all stakeholders to make their own assessments against the agreed criteria (as is in train for ecolabels);
- an actual benchmarking exercise to determine which schemes are most robust (with the potential for "league tables"); and
- a benchmarking exercise to establish mutual recognition or harmonization.

6.1.2 Some stumbling blocks

6.1.2.1 *A moving target*

As noted above in relation to benchmarking exercises that have been undertaken in the ecolabels area, a benchmarking exercise to determine the relative quality of schemes might only provide a snapshot in time. Schemes are constantly evolving (as they should to ensure continuous improvements) and often adjust in the light of questions raised or weaknesses highlighted during the evaluation process.

6.1.2.2 *Lack of consensus on key definitions*

Assessing the quality and utility of private standards and certification schemes, such as those in aquaculture that cover a range of criteria – from safety and quality, to environmental impacts, to animal health, to social and economic sustainability – is highly problematic. For both aquaculture schemes and wild-capture ecolabelling schemes, methodological issues such as the lack of any consensus on definitions of “sustainability” (or even more complex concepts like “social sustainability”) are particularly challenging.

Some advancement on how to define sustainability would be useful, not only in relation to evaluating private voluntary standards, but more importantly in fisheries and aquaculture governance generally. Governments, individually and collectively, will need to take the lead on this. As one senior fisheries policy manager commented: “Agreeing how sustainability is defined becomes the starting point for governments.”¹⁷⁷

The OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector urged caution in attempting to build broader aspects of sustainability (like economic and social sustainability) into an internationally applicable definition applying to fisheries and aquaculture. It concluded that: “However ‘sustainability’ is eventually defined, it needs to be transparent, consistent with multilaterally agreed standards, standardized, and comprehensive” (OECD/FAO, 2009, p. 22). There is some way to go on this.

6.1.2.3 *Harmonization and mutual recognition*

Greater harmonization or mutual recognition of standards and certification schemes would both reduce the confusion inherent in the proliferation of private standards applying to fish and seafood and would help to reduce some of the costs associated with multiple certifications. This applies to both public and private systems. Exporters have lamented the multiplicity of government food safety import requirements that differ between jurisdictions. The range of private certification schemes adds to those concerns. Developing country operators, in particular, struggle to keep up with mandatory requirements let alone the range of private standards.

Some attempts at increasing harmonization in voluntary standards have been outlined in previous chapters. For example, in the food safety and quality area, the communication between the public/private hybrid ISO and the retailer coalition GFSI, and in aquaculture, the private GLOBALG.A.P.’s add-on assessment module based on the NGO WWF’s Aquaculture Dialogues, and GLOBALG.A.P.’s joint checklist approach with the ACC, are all attempts to find some common ground in order to reduce duplication.

In terms of food safety and quality assurance, common ground already exists in the form of mandatory HACCP requirements. Indeed private safety and quality standards are based on the HACCP system and were developed to operationalize and verify prerequisite and HACCP compliance. There is less evidence of the potential

¹⁷⁷ J. Willing, Manager, International and Biosecurity, Ministry of Fisheries, New Zealand, personal communication, 2009.

for harmonization in the ecolabels arena. Some, such as Dolphin Safe and the MSC, were developed prior to any international guidelines (although the MSC subsequently adjusted in the light of the FAO ecolabelling guidelines). Despite this, while ecolabelling schemes argue that they are consistent with the FAO ecolabelling guidelines – which could form the basis of some mutual recognition – they are explicit in stating that they are not doing the same thing and, therefore, are not interchangeable.

Further avenues need to be explored towards greater harmonization and mutual recognition of schemes in the three sectors – safety and quality, ecolabels, and aquaculture – to move towards the goal expressed in the GFSI's attempts at harmonization: “once certified, accepted everywhere”. Moreover, if there is no equivalence in certification requirements, then products rejected in one market can find their way into another market with lower requirements, resulting in negative implications for overall global outcomes in food safety and quality, and for sustainability.

6.2 A “FAIR” DISTRIBUTION OF COSTS AND BENEFITS

The costs of certification vary between schemes, between sectors, between the various stakeholders in the same sector, and at various levels of the supply chain in relation to the same private certification scheme. Illustrative examples were provided above related to various stakeholders in ecolabelling schemes, aquaculture certifications and food safety management standards schemes. As explained above, the costs include the actual costs of certification (audit fees, logo-licensing payments, etc.) and the indirect costs associated with management changes (upgrading plant or gear, updating management systems, record-keeping and data collection, etc.) required to achieve certification. With such diversity in schemes, it is difficult to identify any specific areas for cost reductions. However, some efficiencies could be pursued by reducing the costs of multiple documentation and audit, and dealing with some of the issues raised in relation to the quality, consistency and capacity of certifiers.

6.2.1 Reducing compliance costs

Stakeholders interviewed for this research identified the duplication and inefficiencies associated with multiple audits as particularly burdensome. For example, in the food safety and quality area, a fish processor might have to be certified to several different FSMSs and have chain-of-custody certification for an ecolabelling scheme and/or an aquaculture certification scheme. Moreover, these requirements will be in addition to any regulatory mandatory requirements.

It is in the area of audit and verification, and the related documentation required, where duplication between public and private requirements is also most evident. Separate sets of compliance documents relating to public and private certification (or even several public and several private certifications) amount to heavy compliance costs. Harmonization or mutual recognition between private systems (in FSMSs) and the chain-of-custody requirements between various schemes, might help to reduce unnecessary duplication and overall costs.

6.2.2 Certifiers – improving quality, consistency and capacity

The big winners in the proliferation of private standards are undeniably the certification bodies that conduct audits and certify against private standards. Certification is a lucrative and competitive industry. Indeed, it has been suggested that in some countries aggressive marketing by certification companies is giving an exaggerated impression of the extent to which buyers are requesting suppliers to be certified.¹⁷⁸

¹⁷⁸ This comment was made in relation to FSMS certifications. F. Blaha, FAO, personal communication, 2009.

Issues related to certifiers have been raised in various fora. At the OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, some fisheries representatives complained that the certification process is not always consistent and that different certifiers apply the same standard differently. This applies to fisheries in different countries, or even different operators in the same fishery seeking certification to the same ecolabelling scheme. Certifiers present at the Round Table stressed the importance of the quality of the standard and the clarity of assessment indicators – they should leave minimal room for certifier “interpretation”. They argued that consistency improves over time as certifiers become more familiar with applying any given standard.

In terms of ensuring the overall competence of auditors, international standards for auditing and accreditation should apply. As noted earlier, third-party independent certification is essential for the credibility of any certification claims. This means that certifiers must be impartial, having no conflict of interest in the products, processes or facilities they audit.

There is an apparent shortage of certifiers in some jurisdictions, especially in developing countries, where bringing in overseas auditors adds considerably to the cost of certification. As the demand for certification grows, the pool of auditors will need to expand. The range of certification schemes – ecolabels, safety and quality, and aquaculture – will put increasing pressure on existing capacity. Will the market provide or is some specific capacity building required? Should governments take some initiative on this front? These questions require more discussion.

6.2.3 Redistribution of costs and benefits

Arguably more problematic than the actual costs of certification is the distribution of those costs. In all of the areas discussed in this technical paper, the compliance costs associated with certification to a private standards scheme are borne disproportionately by those upstream in the supply chain rather than those downstream where the demands for certification generate.

The costs of certification to an ecolabelling scheme are generally borne by harvesters. Yet the most robust evidence of price premiums accruing to ecolabelled fish and seafood suggests that they accrue to the retailers that demand certification – they generally have minimal associated costs, in the form of chain-of-custody audits or licensing fees. Should they help foot the bill for certification?

The “distribution of costs” issue for environmental certification is particularly acute when the improvements required in fisheries management or practices (the “conditions of certification”) relate to the overall management of the fishery, which is generally the responsibility of public authorities. If fish from a particular fishery is excluded from a market or buyer (one requiring only certified product) on the basis of judgements about whether a government has lived up to its obligations for sustainable fisheries management, then should governments help pay for improvements?

As noted in Chapter 4, some governments use public funds to help pay for the costs of certification. Is it possible and/or practical to define a formula whereby industry pays the component of certification that relates to private benefit (market access, price premiums), and government pays the component that relates to its responsibilities to manage marine resources sustainably? This is an area where further dialogue and sharing of experiences would be useful.

The distribution of costs associated with aquaculture certifications and certification to an FSMS are, similarly, unevenly distributed. While, in both cases, it is retailers and other stakeholders downstream who demand certification, it is fish farmers and processors (of both wild capture and farmed fish) that assume the main financial burdens. Is some redistribution of those costs possible, and using what levers?

6.3 INTEGRATED TRACEABILITY

Traceability is the ability to track the origins of a product, the processes it went through, and where it ended up; in the case of fish and seafood – from boat or farm to fork. Chain of custody is a more specific concept and guarantees not only the ability to trace products but also the ability to ensure their integrity throughout the value chain. In terms of certified fish and seafood, chain of custody includes guarantees that certified product is not mixed with non-certified product. It is arguably the traceability aspects of private standards schemes that retailers and brand owners find most compelling – they provide valuable guarantees and risk-management functions when there is a lack of confidence in public systems and when governance in some exporting countries is perceived to be weak. Traceability is especially important in the context of increasingly complex supply and distribution systems and where products pass through multiple hands and even multiple countries before reaching the final consumer. Robust traceability and chain-of-custody mechanisms also prevent fraud, or non-certified products (of inferior quality or different origins) being passed off as certified product. Several large-scale retailers have specific policies related to traceability. For example:¹⁷⁹

- Coop: “Will prioritise the seafood suppliers that can PROVE full traceability (preferably certified), and where COOP is granted online access to the information all the way back to the catch”.
- Wal-Mart: “To improve transparency in the supply chain, Wal-Mart will require direct import suppliers and suppliers of own-label and non-branded products to provide the name and location of the factories they use. A new supplier agreement will require factories to certify compliance with local laws and regulations along with ‘rigorous social and environmental standards’.”

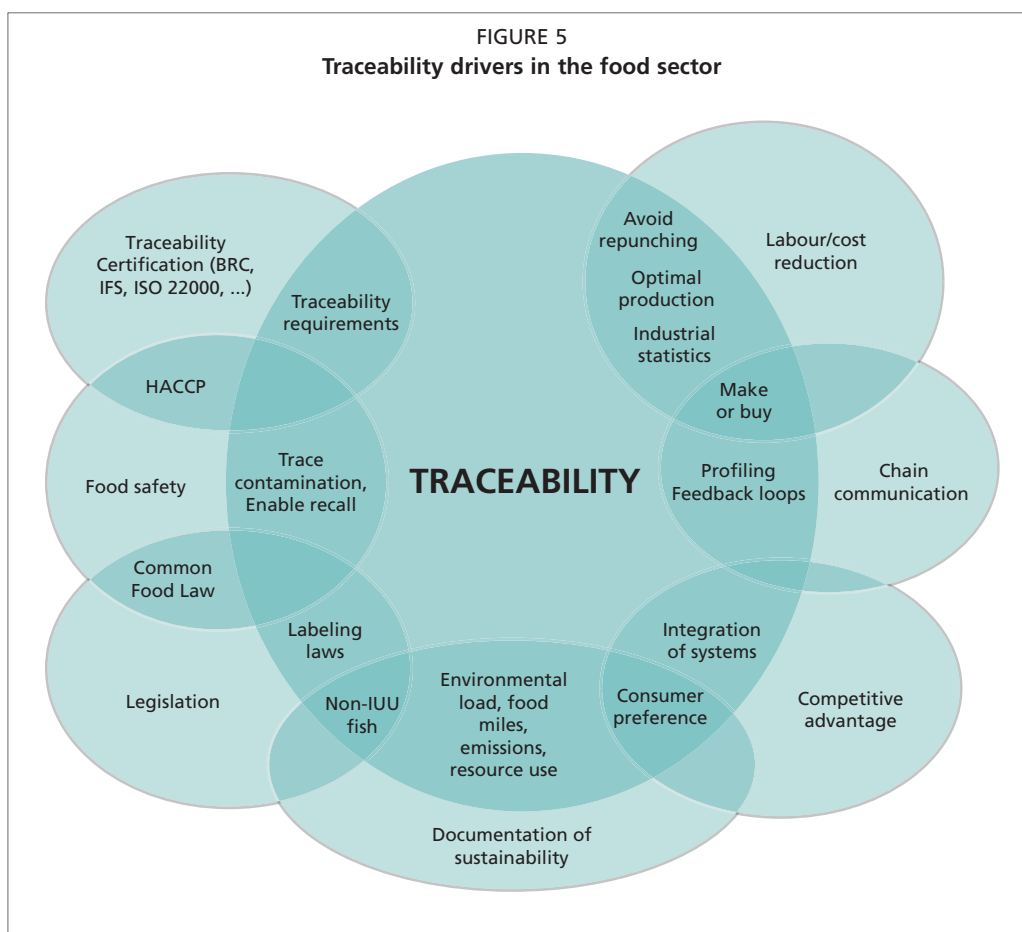
There is a multiplicity of drivers for traceability in the food sector generally: mandatory food safety requirements, private safety and quality certifications, sustainability claims, and business-related drivers such as inventory control, promoting efficiencies, and communication along the supply chain. Figure 5 indicates a range of those drivers and where they overlap.

6.3.1 Multiple traceability requirements

Multiple mandatory traceability systems already operate in the fisheries and aquaculture sector. International traceability norms for food safety assurance are well established. Codex document CAC/GL 60-2006 outlines a set of principles for competent authorities to develop traceability systems able to “identify at any specified stage of the food chain (from production to distribution) from where the food came (one step back) and to where the food went (one step forward).” Other mandatory public traceability systems relate to catch certification, country of origin, and mechanisms for IUU fishing (see Box 23).

As outlined in previous chapters, private voluntary certification schemes also have their own traceability requirements (albeit some based on mandatory public systems). For example, the MSC encourages its client organizations to introduce Codex food safety and quality systems including HACCP and/or ISO 9001 quality management systems; independent third-party chain-of-custody audits verify compliance. All ACC-certified fisheries participate in the traceability system developed by Trace Register Inc. Various stakeholders in the fisheries value chain therefore face multiple public and private traceability requirements, each with their own requirements for verification and documentation.

¹⁷⁹ From O. Henning Fredriksen, Tracetracker, “Practical implications of dealing with a variety of standards along the fisheries value chain”, presentation to OECD/FAO Round Table on Ecolabelling and Certification in the Fisheries Sector, The Hague, April 2009.



Source: P. Olsen, 2009, presentation to OECD Round Table on Ecolabelling and Certification in the Fisheries Sector.

6.3.2 Technological tools for traceability

Businesses of various types have adopted traceability tools, largely for the purposes of inventory control, such as standardized product numbering using barcodes. Other technologies such as standardized electronic product coding (EPC) and radio frequency product identification (RFID) enable products to be traced as they pass along the supply chain. These tools could be used for public purposes, while related synergies between public and private requirements could be identified to enable cost-efficiencies to be realized.

Producing official certificates electronically could provide “a greater level of assurance of document integrity – especially if the document exists solely in cyberspace accessed only through secure business arrangements”.¹⁸⁰ Documents would be harder to falsify or duplicate. The United States National Centre for Trade Facilitation and Electronic Business has developed a standard for electronic certification (eCert) that could provide a starting point for integrating the traceability requirements related to various public objectives.

6.3.3 Integrated traceability serving multiple objectives – possible and feasible?

Are integrated traceability systems serving multiple purposes and multiple agents (public and private) possible and feasible? Is it possible to design one system that would

¹⁸⁰ From “Integrated traceability” a discussion paper prepared for FAO by A. Macfarlane in 2009.

meet multiple requirements: food safety, catch certification, IUU and the chain-of-custody aspects of various private voluntary certification schemes? Multistakeholder discussion would be required on user requirements and whether or not the public and private agents currently requiring various levels of traceability (specificity) would be prepared to give up their own systems in favour of an integrated multipurpose system. Moreover, any solutions would have to consider the risk of “overkill” (systems designed for the highest possible risk – food safety assurance – posing an increased burden for operators with relatively low risk) as well as the impacts on developing country and small-scale operators, which would find the data and technological requirements problematic.

BOX 23

Existing public traceability systems – some examples¹

Food safety

The European Union (EU) mandatory traceability requirements for food and feed, including fish and seafood products, are encapsulated in European Commission Regulation 178/2002 Article 18, which also requires adequate labelling. Traceability is generally required on a “one step backwards, one step forwards” basis.

The United States Food and Drug Administration (FDA) requires importers of seafood into the United States to notify the FDA prior to receiving shipment. Both the FDA and the Bureau of Customs and Border Security require a variety of product data. New legislation is being considered by the United States Senate – H.R. 2749, The Food Safety Enhancement Act 2009, that could enable the FDA to require each person along the value chain to “maintain the full pedigree of the origin and previous history of the food and link that history to the subsequent distribution of the food”, which is a significant change to the “one up, one down” traceability currently required.

Illegal, unreported and unregulated (IUU) fishing

Several regional fisheries management organizations (RFMOs) require that certain fish caught under the authority of member flag states be accompanied by catch or trade documentation when traded. For example, the International Commission for the Conservation of Atlantic Tunas (ICCAT) has established a statistical document program for blufin tuna, bigeye tuna and swordfish that requires each consignment to be traced back to the catching vessel, time and ocean area of catch.

The European Union IUU Regulation 1005/2008 came into force on 1 January 2010 and requires imported wild-caught fish and fish products to be accompanied by a catch certificate (Article 12) validated by the competent authority of the flag state of the vessel where the fish was caught. Where fish is processed in a country other than the flag state, the re-exporter must provide a certificate that identifies the re-exported fish and provide the original or copies of the original catch certificates (validated by a control authority in the re-exporting state). However, these requirements are not linked to the food-safety traceability and certification requirements applying to the same products.

¹ Examples drawn from a discussion paper, “Integrated traceability” prepared for FAO by A. Macfarlane in 2009.

Integrated traceability is part of the current FAO work programme and was discussed at the COFI Sub-committee on Fish Trade in April 2010. The activity of Working Group 1 (traceability of fish products) of the ISO Technical Committee 234

on Fisheries and Aquaculture¹⁸¹ might also offer the potential for a generic but multipurpose traceability standard for seafood. Nineteen countries are participating in the working group while a further 16 are observers. The CAC, FAO and International Union for Conservation of Nature (IUCN) participate as “organizations in liaison”.

6.4 THE SPECIFIC CHALLENGES AND OPPORTUNITIES PRIVATE STANDARDS POSE FOR DEVELOPING COUNTRIES

Fish and seafood are important income earners for many developing countries. Developing countries are crucial for current and future global supplies of fish and seafood products. They account for about half by value, and about 60 percent by volume, of all seafood traded internationally.

As discussed in previous chapters, certification to private standards schemes is problematic for many developing countries. Concerns common to the various types of certification include:

- Certification is typically too costly for small-scale fishers and fish farmers (this is also true for some small-scale and artisanal operators in developed countries). The costs of certification are proportionately higher for smaller operators. Moreover, without some form of cooperative arrangements, small-scale operators are not able to deliver the volumes of supply required by buyers, nor do they have the wherewithal to engage in direct supply relationships and to manage contracts with large-scale international buyers.
- Certification methodologies are often ill-suited to data-poor, highly fragmented, developing country fisheries.

Some private certification schemes have taken these concerns on board and have attempted to develop certification methodologies more suited to data-deficient, small-scale fisheries and fish farms. For example:

- The MSC’s Developing World Fisheries Programme developed a “Risk-Based Framework” for assessing data-poor fisheries (which is now part of the overall MSC Fisheries Assessment Methodology).
- Under its Better Aquaculture Practices (BAPs), the ACC has developed two programmes allowing for group farm certifications: Integrated Operating Modules (IOMs) and Aggregate Farm Units (AFUs),¹⁸² which are both designed to “provide practical certification solutions for group farms at affordable rates”. However, the certifications require some level of organization and an overall sponsor, usually in the form of a farmers’ club or cooperative or a producer organization, or in the form of a group of farmers or fishers supplying to the same processor.

Despite attempts to be more inclusive of developing countries, developing country operators remain underrepresented, particularly among the ranks of certified fisheries (ecolabels) and certified fish processors (FSMSs). Certified operators from developing countries tend to be those that are large-scale, involved in more integrated supply chains with direct links to developed country markets (through equity or direct supply relationships).

Further inquiry is needed to determine whether private standards have a negative impact on developing countries’ market access opportunities. While some developing countries have argued that private standards pose a barrier to trade, there is no solid evidence of markets “drying up” as a result of demands for certification. As noted in previous chapters, demands for certified products tend to be concentrated in certain markets and certain species, many of which are not the main species traded

¹⁸¹ See: www.iso.org/iso/iso_technical_committee?commid=541071.

¹⁸² J. Sedacca, “Case study: small farm certification”, presentation to Global Outlook for Aquaculture Leadership conference, Seattle, the United States, 2009.

by developing countries. Moreover, evidence suggests that meeting mandatory public standards in developed country markets currently poses more of a barrier to trade than requirements to meet private standards. Developing countries often fall short in areas that are crucial for meeting either public or private standards, including:

- the lack of any overarching policy strategy – on food safety, fisheries and aquaculture – with supporting regulatory frameworks consistent with market requirements in key import markets; and
- poor institutional capacities: poor fisheries management, control and surveillance, an absence of, or poorly performing, “competent authorities”, weak inspection and monitoring services, insufficient data collection and analysis, weak or non-existent testing facilities, and the absence of technical and advisory services (including advice on food safety management and international import market requirements).

For developing countries to take advantage of the opportunities presented by private standards, they must first be able to meet the requirements of mandatory regulatory requirements in importing countries. This would create the foundations for future responses to private sector standards.

Any technical cooperation in developing countries would be best focused on ensuring that the public systems are appropriate rather than diverting attention and resources towards meeting private standards. Assisting with capacity building in countries with weak administrative systems is likely to be a more effective strategy than imposing a parallel private system to compensate for perceived or real administrative shortcomings. Any operator wishing to access sophisticated developed country markets must first comply with the basic mandatory requirements of food safety (HACCP compliance) as well as being able to offer quality products, reliability of supply and robust traceability guarantees.

Large-scale buyers will not engage with any business that does not meet mandatory requirements, nor with any operator that is unable to provide sufficient volumes of sufficient quality, as well as providing assurance of safety, quality, provenance and chain of custody (and, increasingly, able to verify minimal environmental impacts).

While certification is problematic for many developing country fishers, farmers and processors, it might also provide a tool for engagement with large-scale buyers. The challenges and costs of certification need to be weighed against the potential opportunities:

- access to high-value and/or niche markets in key importing countries;
- participation in direct supply relationships, with less price volatility than selling through traditional auction markets;
- potential for more value-addition; and
- potential for technical transfers.

In any case, developing countries are a crucial part of international fish and seafood supply chains. Any attempts to further develop global governance for food safety or fisheries and aquaculture sustainability will fail if developing countries are not an integral part of the equation.

6.5 THE EFFECTS OF PRIVATE STANDARDS ON INTERNATIONAL TRADE AND THEIR RELATIONSHIP TO WTO MECHANISMS

As discussed in previous chapters, the WTO has generated a regulatory framework to facilitate international trade. The SPS Agreement and the TBT Agreement are particularly relevant to trade in fish and seafood products. The impact of private standards on international trade has been raised for discussion in both the corresponding

committees. Ongoing concerns of member countries in relation to private standards, include those related to:

- the content of private standards and their consistency with international WTO obligations;
- the discriminatory costs of and access to private certifications;
- a lack of clarity about the jurisdiction over private sector actors; and
- the changing interface between public and private standards.

6.5.1 Content of private standards and consistency with WTO obligations

Some countries have argued that private standards go beyond relevant international public standards (the OIE, Codex and the IPPC), that those related to food safety include product and process specifications (non-safety and quality criteria) that have no particular scientific rationale, and are therefore inconsistent with SPS obligations. However, to date, there has been no robust analysis of whether private standards are, or are not, consistent with international standards or with SPS obligations.

In terms of ecolabels, some countries fear that the allowance of non-product related PPMs could open the door to developed countries imposing their domestic policy frameworks either related to fishing methods and/or other standards (labour, human rights), thereby giving further grounds for discrimination against developing country products. Other countries have supported the inclusion of non-product related PPMs in TBT coverage, emphasizing their importance for global environmental objectives.

The TBT Agreement makes a distinction between “technical regulations”, which are mandatory, and “standards”, which are voluntary requirements. Where a technical regulation is applied in accordance with a relevant international standard, then it is presumed not to create an unnecessary obstacle to trade. However, there is no such interpretation in relation to voluntary private standards, and there has been no robust analysis comparing the requirements of international standards with private standards.

Further analysis is required to determine the consistency or not of private standards with international standards and obligations of the SPS and TBT Agreements.

6.5.2 Costs of, and access to, certification

Members of the SPS Committee, in particular from developing countries, have raised concerns about the costs of third-party certification to private standards, especially the burden they place on small and medium-sized enterprises and producers in developing countries. Multiple audits, as a result of a lack of mutual recognition between schemes, have also been identified as costly and burdensome. The requirement of many FSMSs to use a limited number of accredited certification bodies has also been seen as a barrier to entry of developing country products into lucrative import markets. As discussed above, the costs, the distribution of those costs, and the extent to which demands for certification are discriminatory need to be investigated further.

6.5.3 Jurisdiction over private sector actors

While governments have the right to challenge the actions of other governments within the context of the WTO, the grounds for challenging non-governmental actors is less clear. For example, requirements for only ecolabelled fish and seafood could mean that products can be excluded from the market owing to perceptions of the buyer or retailer about whether governments (from exporting countries) have lived up to their obligations for good management. What recourse governments have to challenge these assessments and their implications is still largely unknown. It is not clear what mechanisms governments have to control what amounts to the private contractual relationships of private sector firms. Jurisdiction over non-governmental actors,

transnational firms or coalitions of firms is problematic. The SPS and TBT Agreements offer little direction on this front and “there is no jurisprudence on this matter” (WTO, 2007).

6.5.4 Interface between official measures and private standards

There are concerns that private standards might start to influence government regulatory frameworks, including those affecting trade. For example, a government standards body might give ease of entry to imports certified against a trusted private FSMS, thereby offering those products preferential treatment. Similarly, could public sector financial support for ecolabel certification be considered a “subsidy”? If governments pay outright for certification, is that a subsidy to its industry? If it leads to a trade advantage or improved market access, then should it be notifiable in the context of the WTO?

As the boundaries between public and private standards and requirements start to blur, there are implications for trade that need to be closely monitored.

6.5.5 Trade-enhancing or trade-restricting? – divergent views

In the context of discussions on private standards at the WTO, differences of opinion have been expressed, including differences between members from developing countries. For example, while some countries have argued that private standards help to expand trade, others counter that they discriminate against developing countries.

Further enquiry and evidence of the actual effects of private standards on trade opportunities, especially for developing countries, is needed. This would require an analysis of shifts in import and export statistics to determine the influence of private standards of various types. As noted above, while volumes of certified products remain modest, the impact on trade is likely to be slight. However, it is a fast-moving area that needs to be closely monitored. Work continues in the area at both the WTO and in the context of the FAO COFI Sub-committee on Fish Trade.

6.6 THE INTERFACE BETWEEN PRIVATE STANDARDS AND NATIONAL PUBLIC REGULATION AND POLICY FRAMEWORKS

Private standards pose key questions for governments: What role do private standards play in overall governance for food safety assurance and sustainable fisheries and aquaculture? What value-addition to they offer? Do they duplicate, complement, or undermine public regulatory frameworks?

6.6.1 Ecolabels and fisheries sustainability

After more than a decade of experience, there is some evidence of improvements resulting from ecolabelling and certification, albeit mainly indirect. Certification of one fishery does appear to result in peer pressure for competitors to also seek certification. Positive environmental impacts, such as significant reductions in bycatch and fewer impacts on ecosystems, have also been documented as well as management adjustments in certified fisheries, such as improved surveillance of bycatch and changes in data management. Moreover, certification methodologies are also being used as self-assessment tools for fisheries, as a means to define gaps in performance and to set a roadmap for improvement. However, in terms of the overall status of fisheries stocks, it is difficult to document evidence of improvements resulting from certification. Most of the fisheries certified to date were already well managed prior to certification. Further empirical evidence is required.

In any case, ecolabels are not a panacea. They were set up in response to perceptions that governments were not doing enough to ensure the sustainability of the world's marine resources. As a market-based mechanism, they are designed to incentivize good management with potential market rewards. As such, they can complement public

measures for responsible and sustainable fisheries management. Indeed, the limits of ecolabelling and certification might serve to highlight the current gaps in those public measures and the overall governance framework for fisheries sustainability.

Governments need to determine, both individually and collectively, what the essential components are of an overall governance framework for sustainable fisheries and how private market mechanisms fit into that framework. Some governments appear to see ecolabelling and certification as a mechanism for gaining traction in their own policy objectives, others have co-opted the mechanism but under public management and ownership, while still others see them more as a marketing tool. The challenge is to determine how a market-based mechanism can complement public measures for responsible and sustainable fisheries management. However, it is important not to lose sight of the fact that voluntary certification schemes are no substitute for good public management. Governments must continue to actively embed the FAO Code of Conduct for Responsible Fisheries into their national management strategies in order to ensure that fish stocks are available for future generations. The role of aquaculture needs to be part of this equation, because the industry relies on the future sustainability of fisheries used in the production of fishmeal and fish oil.

6.6.2 Private standards and food safety governance

As discussed in Chapter 5, private safety and quality standards are typically based on mandatory regulation and, therefore, are not likely to conflict with public food safety regulation. Duplication is more likely to be an issue, if not in relation to the content of requirements, then in methods of compliance and verification (including multilevel documentation). Moreover, there is little evidence to suggest that compliance with private standards might facilitate the implementation of public standards. Indeed, the inverse is a more likely scenario. Compliance with public standards provides a baseline, and is therefore essential, for meeting the requirements included in private standards schemes – a company certified to a private standards scheme will still not have access to certain markets, such as the EU, if the competent authority of the country in which it operates has not been approved by public authorities in key import markets.

Like fisheries certified to an ecolabelling scheme, operators who achieve certification to a private FSMS are mainly those that already run effective food safety management systems. Under that scenario, it is unclear whether certification incentivizes better food safety management. As noted above, it is the verification of compliance and the traceability aspects of private standards schemes – rather than the content – that retailers and other buyers requiring certification find most attractive. It appears that there is sometimes more trust in private certification schemes than in public verification of food safety management assurance in some exporting countries. Moreover, audit reports on individual operators by public authorities are generally not available publicly. In any case, efforts to improve food safety governance either at the national level or internationally are more likely to be effective if they concentrate on ensuring that the public systems are appropriate.

Private standards overall are unlikely to conflict with public regulatory systems; they are typically either based on public requirements or include compliance with public requirements as part of the criteria for certification. They may duplicate public systems (food safety) or expose gaps in governance (lack of a framework to assess fisheries sustainability), but they are unlikely to conflict with or undermine them.

Whether or not private standards incentivize better management remains unclear. Whether profit-maximizing private-sector firms or NGOs are the best agents for incentivizing better food safety management and sustainability in fisheries and aquaculture also requires further debate.

Are private standards an efficient mechanism for achieving public policy goals of food safety assurance and the sustainable use of natural resources? If they are

compensating for perceived shortfalls in public governance, then they might be simply treating the symptoms when a more effective solution would be to invest in strategies to improve those public systems. Governments need to determine, both individually and collectively, how private market mechanisms fit into public policy frameworks for fisheries and aquaculture and how they will engage with them.

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APPENDIX 1

Guidelines for the ecolabelling of fish and fishery products from marine capture fisheries, revision 1, 2009

SCOPE

1. These guidelines are applicable to ecolabelling schemes that are designed to certify and promote labels for products from well-managed marine capture fisheries and focus on issues related to the sustainable use of fisheries resources.

PRINCIPLES

2. The following principles should apply to ecolabelling schemes for marine capture fisheries:
 - 2.1 Be consistent with the 1982 United Nations Convention on the Law of the Sea and the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, the FAO Code of Conduct for Responsible Fisheries and the World Trade Organization (WTO) rules and other relevant international instruments.
 - 2.2 Recognize the sovereign rights of States and comply with all relevant laws and regulations.
 - 2.3 Be of a voluntary nature and market-driven.
 - 2.4 Be transparent, including balanced and fair participation by all interested parties.
 - 2.5 Be non-discriminatory, do not create unnecessary obstacles to trade¹ and allow for fair trade and competition.²
 - 2.6 Provide the opportunity to enter international markets.³
 - 2.7 Establish clear accountability for the owners of schemes and the certification bodies in conformity with international standards.
 - 2.8 Incorporate reliable, independent auditing and verification procedures.
 - 2.9 Be considered equivalent if consistent with these guidelines.
 - 2.10 Be based on the best scientific evidence available, also taking into account traditional knowledge of the resources provided that its validity can be objectively verified.
 - 2.11 Be practical, viable and verifiable.
 - 2.12 Ensure that labels communicate truthful information.
 - 2.13 Provide for clarity.

¹ Consistent with the WTO Agreement on Technical Barriers to Trade.

² See Code of Conduct for Responsible Fisheries Article 11.2.

³ See Code of Conduct for Responsible Fisheries Article 11.2.

- 2.14 Be based, at a minimum, on the minimum substantive requirements, criteria and procedures outlined in these guidelines.
3. The principle of transparency should apply to all aspects of an ecolabelling scheme including its organizational structure and financial arrangements.

GENERAL CONSIDERATIONS

4. Ecolabelling schemes should take into account that principles, minimum substantive requirements, criteria and procedures set out in this document will apply equally for developed, transition and developing countries.
5. Bearing in mind that ecolabelling schemes relate to fisheries management, and rights and duties of States⁴, it is recognized that the involvement of States in ecolabelling schemes is desirable and should be encouraged. It is also recognized that States and, as appropriate, regional fisheries management organizations (RFMOs) may develop ecolabelling schemes in a manner consistent with these guidelines. Ecolabelling schemes should give full consideration to the recommendations and advice by States, and, as appropriate, RFMOs.
6. In accordance with Article 5 of the Code of Conduct for Responsible Fisheries, and recognizing that all countries should have the same opportunities, and in view of the special conditions applying to developing countries and countries in transition and their important contribution to international fish trade, it is acknowledged that in order to benefit from applying ecolabelling schemes, States, relevant intergovernmental and non-governmental organizations and financial institutions should provide developing countries and countries in transition with financial and technical assistance to develop and maintain appropriate management arrangements that will allow them to participate in such schemes. Such assistance should also consider direct support towards the often high costs of accreditation and certification. Development agencies and donor institutions are encouraged to support FAO in facilitating financial and technical assistance to developing countries and countries in transition.

TERMS AND DEFINITIONS

7. For the purpose of these International Guidelines, the following terms and definitions apply.

Accreditation

8. Procedure by which a competent authority gives formal recognition that a qualified body or person is competent to carry out specific tasks. (Based on ISO/IEC Guide 2:1996, 12.11)

Accreditation body

9. Body that conducts and administers an accreditation system and grants accreditation. (Based on ISO Guide 2, 17.2)

Accreditation system

10. System that has its own rules of procedure and management for carrying out accreditation.
11. Note: accreditation of certification bodies is normally awarded following successful assessment and is followed by appropriate surveillance. (Based on ISO Guide 2, paragraph 17.1)

⁴ In these Guidelines, the reference to States includes the European Community in matters within its competence.

Arrangement

12. A cooperative mechanism established by two or more parties be they governmental, private or non-governmental entities.

Audit

13. A systematic and functionally independent examination to determine whether activities and related results comply with planned objectives. (Based on Codex Alimentarius, Principles for Food Import and Export Certification and Inspection, CAC/GL 20)

Certification

14. Procedure by which a third party gives written or equivalent assurance that a product, process or service conforms to specified requirements. Certification may be, as appropriate, based on a range of inspection activities which may include continuous inspection in the production chain. (Based on ISO Guide 2, 15.1.2 and Principles for Food Import and Export Certification and Inspection, CAC/GL 20)

Certification body

15. Competent and recognized body that conducts certification. A certification body may oversee certification activities carried out on its behalf by other bodies. (Based on ISO Guide 2, 15.2)

Chain of custody

16. The set of measures which is designed to guarantee that the product put on the market and bearing the ecolabel logo is really a product coming from the certified fishery concerned. These measures should thus cover both the tracking/traceability of the product all along the processing, distribution and marketing chain, as well as the proper tracking of the documentation (and control of the quantity concerned).

Complaint

17. An objection by a person or body to a decision regarding accreditation, de-accreditation, certification or de-certification.

Conformity assessment

18. Any activity concerned with determining directly or indirectly that relevant requirements are fulfilled.
19. Note: typical examples of conformity assessment activities are sampling, testing and inspection; evaluation, verification and assurance of conformity (supplier's declaration, certification); registration, accreditation and approval as well as their combinations. (ISO Guide 2, 12.2)

Decision

20. Any resolution by an accreditation or certifying body or arrangement concerning the rights and obligations of a person or body.

Ecolabelling scheme

21. Ecolabelling schemes entitle a fishery product to bear a distinctive logo or statement which certifies that the fish has been harvested in compliance with conservation and sustainability standards. The logo or statement is intended to make provision for informed decisions of purchasers whose choice can be relied upon to promote and stimulate the sustainable use of fishery resources.

Standard for certification

22. Document approved by a recognized organization or arrangement, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory under international trade rules. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method. (Based on TBT Agreement, Annex 1, paragraph 2) In these guidelines, unless otherwise qualified, the word standard refers to a standard for certification. The standard for certification will include requirements, criteria and performance elements in a hierarchical arrangement. For each requirement, one or more substantive criteria should be defined. For each criterion, one or more performance elements should be provided for use in assessment.

Standard-setting organization or arrangement

23. Organization or arrangement that has recognized activities in standard setting. (Based on ISO Guide 2, paragraph 4.3)

Third party

24. Person or body that is recognized as being independent of the parties involved, as concerns the issue in question. (ISO/IEC Guide 2:1996)

Unit of certification

25. The “unit of certification” is the fishery for which ecolabelling certification is sought, as specified by the stakeholders who are seeking certification. The certification could encompass: the whole fishery, where a fishery refers to the activity of one particular gear-type or method leading to the harvest of one or more species; a sub-component of a fishery, for example a national fleet fishing a shared stock; or several fisheries operating on the same resources. The “stock under consideration” exploited by this fishery (unit of certification) may be one or more biological stocks as specified by the stakeholders for certification. The certification applies only to products derived from the “stock under consideration” (see paragraph 30). In assessing compliance with certification standards, the impacts on the “stock under consideration” of all the fisheries utilizing that “stock under consideration” over its entire area of distribution are to be considered.

MINIMUM SUBSTANTIVE REQUIREMENTS AND CRITERIA FOR ECOLABELS

Introduction

26. The following sets forth the minimum substantive requirements and criteria for assessing whether a fishery can be certified and an ecolabel awarded to a fishery. Ecolabelling schemes may apply additional or more stringent requirements and criteria related to sustainable use of the resources. The requirements and criteria presented below are to be based on and interpreted in accordance with the current suite of agreed international instruments addressing fisheries, in particular the 1982 UN Convention on the Law of the Sea, the 1995 UN Fish Stocks Agreement and the 1995 Code of Conduct for Responsible Fisheries, as well as related documentation including the 2001 Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem.

27. Requirements are specified for each of three areas: the management systems, the fishery and associated “stock under consideration” for which certification is being sought, and consideration of serious impacts of the fishery on the ecosystem. Criteria and related measurable performance indicators and a corresponding monitoring system should be established in order to assess the conformity of the fishery concerned with the requirements and the criteria of the ecolabelling scheme. In developing and applying the criteria and assessing the conformity of the fishery with the standard of certification, the views and opinions of States, RFMOs and FAO should be fully considered.

Management systems

28. Requirement: The fishery is conducted under a management system which is based upon good practice and that ensures the satisfaction of the requirements and criteria described in Paragraph 29. The management system and the fishery operate in compliance with the requirements of local, national and international law and regulations, including the requirements of any regional fisheries management organization that manages the fisheries on the “stock under consideration”.
- 28.1 For the “stock under consideration” there are documented management approaches with a well based expectation that management will be successful taking into account uncertainty and imprecision.
- 28.2 There are objectives, and as necessary, management measures to address pertinent aspects of the ecosystem effects of fishing as per paragraph 31.
29. The following criteria will apply to management systems for any fisheries, but it must be recognized that special consideration needs to be given to small-scale fisheries with respect to the availability of data and with respect to the fact that management systems can differ substantially for different types and scales of fisheries (e.g. small scale through to large scale commercial fisheries).
- 29.1 Adequate data and/or information are collected, maintained and assessed in accordance with applicable international standards and practices for evaluation of the current state and trends of the stocks⁵ (see below: Methodological aspects). This can include relevant traditional, fisher or community knowledge, provided its validity can be objectively verified.
- 29.2 In determining suitable conservation and management measures, the best scientific evidence available is taken into account by the designated authority, as well as consideration of relevant traditional fisher or community knowledge, provided its validity can be objectively verified, in order to evaluate the current state of the “stock under consideration”⁶ in relation to, where appropriate, stock specific target and limit reference points.⁷
- 29.2bis: Taking due account of paragraph 32, for the “stock under consideration” the determination of suitable conservation and management measures should include or take account of:
- Total fishing mortality from all sources is considered in assessing the state of the “stock under consideration”, including discards, unobserved mortality, incidental mortality, unreported catches and catches in other fisheries.

⁵ After Code of Conduct for Responsible Fisheries, Article 7.4.4.

⁶ Code of Conduct for Responsible Fisheries, Articles 6.4 and 7.4.1.

⁷ Code of Conduct for Responsible Fisheries, Article 7.5.3.

- Management targets are consistent with achieving maximum sustainable yield (MSY) (or a suitable proxy) on average, or a lesser fishing mortality if that is optimal in the circumstances of the fishery (e.g. multispecies fisheries) or to avoid severe adverse impacts on dependent predators.
 - The management system should specify limits or directions in key performance indicators (see 30.2), consistent with avoiding recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible, and specify the actions to be taken if the limits are approached or the desired directions are not achieved.
- 29.3 Similarly, data and information, including relevant traditional, fisher or community knowledge, provided its validity can be objectively verified, are used to identify adverse impacts of the fishery on the ecosystem, and timely scientific advice is provided on the likelihood and magnitude of identified impacts (see paragraph 31).
- 29.4 The designated authorities adopt and effectively implement appropriate measures for the conservation and sustainable use of the “stock under consideration” based on the data, information and scientific advice referred to in the preceding bullets⁸. Short-term considerations should not compromise the long-term conservation and sustainable use of fisheries resources.
- 29.5 An effective legal and administrative framework at the local, national or regional level, as appropriate, is established for the fishery⁹ and compliance is ensured through effective mechanisms for monitoring, surveillance, control and enforcement (see paragraph 6).¹⁰
- 29.6 In accordance with the Code of Conduct Article 7.5, the precautionary approach is being implemented to protect the “stock under consideration” and to preserve the aquatic environment. Inter alia this will require that the absence of adequate scientific information should not be used as a reason for postponing or failing to take conservation and management measures.¹¹ Further, relevant uncertainties are being taken into account through a suitable method of risk assessment. Appropriate reference points are determined and remedial actions to be taken if reference points are approached or exceeded are specified.¹²

“Stocks under consideration”

30. Requirement: The “stock under consideration” is not overfished, and is maintained at a level which promotes the objective of optimal utilization and maintains its availability for present and future generations¹³, taking into account that longer term changes in productivity can occur due to natural variability and/or impacts other than fishing. In the event that biomass drops well below such target levels, management measures (Code of Conduct Article 7.6) should allow for restoration within reasonable time frames of the stocks to such levels (see also paragraph 29.2.bis). The following criteria are applicable:

- 30.1 The “stock under consideration” is not overfished if it is above the associated limit reference point (or its proxy).

⁸ Based on Code of Conduct for Responsible Fisheries, Article 7.1.1.

⁹ Code of Conduct for Responsible Fisheries, Article 7.1.1.

¹⁰ Code of Conduct for Responsible Fisheries, Article 7.1.7.

¹¹ Code of Conduct for Responsible Fisheries, Article 7.5.1.

¹² Code of Conduct for Responsible Fisheries, Article 7.5.2.

¹³ Code of Conduct for Responsible Fisheries, Article 7.1.1.

- 30.2 If fishing mortality (or its proxy) is above the associated limit reference point, actions should be taken to decrease the fishing mortality (or its proxy) below that limit reference point.
- 30.3 The structure and composition of the “stock under consideration” which contribute to its resilience are taken into account.
- 30.4 In the absence of specific information on the “stock under consideration”, generic evidence based on similar stocks can be used for fisheries with low risk to that “stock under consideration”. However, the greater the risk the more specific evidence is necessary to ascertain the sustainability of intensive fisheries.

Ecosystem considerations

31. Requirement: Adverse impacts of the fishery on the ecosystem should be appropriately assessed and effectively addressed.¹⁴ Much greater scientific uncertainty is to be expected in assessing possible adverse ecosystem impacts of fisheries than in assessing the state of target stocks. This issue can be addressed by taking a “risk assessment/risk management approach”. For the purpose of development of ecolabelling schemes, the most probable adverse impacts should be considered, taking into account available scientific information, and traditional, fisher or community knowledge provided that its validity can be objectively verified. Those impacts that are likely to have serious consequences should be addressed. This may take the form of an immediate management response or further analysis of the identified risk. In this context, full recognition should be given to the special circumstances and requirements in developing countries and countries in transition, including financial and technical assistance, technology transfer, and training and scientific cooperation. The following criteria are to be interpreted in the context of avoiding high risk of severe adverse impacts:
 - 31.1 Non target catches, including discards, of stocks other than the “stock under consideration” are monitored and should not threaten these non-target stocks with serious risk of extinction; if serious risks of extinction arise, effective remedial action should be taken.
 - 31.2 The role of the “stock under consideration” in the food-web is considered, and if it is a key prey species in the ecosystem, management measures are in place to avoid severe adverse impacts on dependent predators.
 - 31.3 There is knowledge of the essential habitats for the “stock under consideration” and potential fishery impacts on them. Impacts on essential habitats and on habitats that are highly vulnerable to damage by the fishing gear involved are avoided, minimized or mitigated (Code of Conduct 7.2.2). In assessing fishery impacts, the full spatial range of the relevant habitat should be considered, not just that part of the spatial range that is potentially affected by fishing.
 - 31.4 In the absence of specific information on the ecosystem impacts of fishing for the unit of certification, generic evidence based on similar fishery situations can be used for fisheries with low risk of severe adverse impact. However, the greater the risk the more specific evidence is necessary to ascertain the adequacy of mitigation measures.

¹⁴ Code of Conduct for Responsible Fisheries, Article 7.2.

Methodological aspects

Assessing current state and trends in target stocks

32. There are many ways in which state and trends in stocks may be evaluated, that fall short of the highly quantitative and data-demanding approaches to stock assessment that are often used for large scale fisheries in developed countries. Use of less elaborate methods for stock assessment should not preclude fisheries from possible certification for ecolabelling. However it should be noted that, to the extent that the application of such methods results in greater uncertainty about the state of the “stock under consideration”, more precautionary approaches to managing fisheries on such resources will be required which may necessitate lower levels of utilization of the resource. There is a variety of management measures commonly used in small scale or low value fisheries that nonetheless can achieve quite adequate levels of protection for stocks in the face of uncertainty about the state of the resource. A past record of good management performance could be considered as supporting evidence of the adequacy of the management measures and the management system.

PROCEDURAL AND INSTITUTIONAL ASPECTS

Introduction

33. Drawing heavily on available guides, especially those produced by the International Organization for Standardization (ISO), this chapter of the guidelines addresses the three principal procedural and institutional matters that any ecolabelling scheme should encompass: (1) the setting of certification standards, (2) the accreditation of independent certifying bodies, and (3) the certification that a fishery and the product chain of custody are in conformity with the required standard and procedures. The certification standard encapsulates the objectives that are pursued by a scheme. It is usually expressed in specific criteria that a product and/or the production process and methods would have to meet to get certified.
34. Accreditation of a certification body seeks to verify that the body is appropriate and capable for the certifying tasks. It would have to ascertain that the certification body is neutral and independent and has the technical and financial capacity to perform a certification of the conformity of a fishery with the established standard. Similar requirements apply to the accreditation body itself. The accreditation body needs to have the technical and financial capacity to undertake accreditation tasks, and perform these tasks in a neutral, non-discriminatory and independent manner.
35. The above three steps in the setting up of an ecolabelling scheme would normally have to occur sequentially in the same order whereby (2) accreditation and (3) certification would remain regular activities of the scheme once established. The scheme may also, at a regular but longer time interval, review and revise the certification standard in view of new knowledge and experiences.

Structure

36. The procedural guidelines are presented in three parts as follows:
- **Guidelines for the Setting of Standards of Sustainable Fisheries;**
 - **Guidelines for Accreditation;** and
 - **Guidelines for Certification.** Each of these three parts is further subdivided into four sections: i) **Purpose**, ii) **Normative references**, iii) **Functions and structure**; and iv) **Requirements**. The Requirements are the minimum requirements that a body, person or arrangement should meet to be recognized as competent and reliable in its domain. The **Principles** listed earlier in these

guidelines apply equally to procedural and institutional aspects of marine fisheries ecolabelling schemes.

Options for governance structures

37. There are various options for the governance of an ecolabelling scheme. The initiative for a scheme could be taken by a government, an intergovernmental organization, a non-governmental organization, or a private industry association. There are also various options for the geographical range of a scheme. It could be national, regional or international in scope.
38. The owner of a scheme may not necessarily be directly engaged in its operational affairs. These may be handled by an organization or arrangement which has been specifically set up for this purpose. It could be public, non-governmental or private. The owner of the scheme may lay down rules and regulations under which the ecolabelling arrangement or body is required to operate. The body may implement one ecolabelling scheme for one specific sector (e.g. fisheries) or may have responsibilities for various sectors (textiles; paper; etc.)
39. The owner of an ecolabelling scheme should engage a separate independent specialist accreditation body to take on the task of accreditation of certification bodies on its behalf. The accreditation body could be private, public or an autonomous body governed by public service rules.

Guidelines for the Setting of Standards of Sustainable Fisheries

Purpose

40. The setting of standards is among the most critical tasks of any ecolabelling scheme of products from sustainable marine capture fisheries. The standards reflect the objectives for sustainable fisheries that are being pursued through the scheme. Standards comprise quantitative and qualitative indicators of the governance system or management regime of a fishery as well as of its outcome in terms of sustainable fisheries and conservation of marine fishery resources and related ecosystems.
41. Standards should not distort global markets and should not create unnecessary obstacles to international trade.

Normative basis

42. The normative basis of standards of sustainable fisheries is given by international fisheries instruments and applicable national legislation. Relevant international fisheries instruments include, inter alia, the 1982 UN Convention on the Law of the Sea, the 1995 UN Fish Stocks Agreement and the 1995 Code of Conduct for Responsible Fisheries.
43. In procedural terms, the normative basis for standard development includes the following:
 - ISO/IEC Guide 59 Code of good practice for standardization. 1994.
 - WTO TBT, ANNEX 3 Code of Good Practice for the Preparation, Adoption and Application of Standards.
 - FAO. 1998. Report of the Technical Consultation on the Feasibility of Developing Non-Discriminatory Technical Guidelines for Eco-Labeling of Products from Marine Capture Fisheries, Rome, Italy, 21-23 October 1998. FAO Fisheries Report No. 594.
 - ISEAL. P020 Guidance on ISEAL Code of Good Practice for Setting Social and Environmental Standards. Public Draft. July 2003.
 - ISEAL. Code of Good Practice for Voluntary Process and Production Method Standard-setting Procedures. Public Draft. 1 March 2003.

Functions and organizational structure

44. A standard setting organization or arrangement is assigned with the tasks of setting, reviewing, revising, assessing, verifying and approving standards. These tasks can be fulfilled through a specialized standard-setting body or through another suitable arrangement.
45. Where there is no standard-setting body, the organizational structure of a standard-setting arrangement should include, inter alia, a technical committee of independent experts and a consultation forum whose mandates are established.

Requirements

Transparency

46. Transparency in the development of standards is necessary to guarantee and to ensure consistency with relevant international standards and to facilitate access, and participation of all interested parties, especially those of developing countries and countries in transition.
47. Standard-setting organizations or arrangements should carry out their activities in a transparent fashion and following written rules of procedure. Procedural rules should contain a mechanism for the impartial resolution of any substantive or procedural disputes about the handling of standard-setting matters.
48. A standard is under preparation (under review or under revision) from the moment a decision has been taken to develop, review or revise a standard until that standard has been adopted.
49. Once a standard has been adopted, it should be promptly published and should be accessible on the Internet.
50. At least once every six months, the standard-setting organization or arrangement should publish a work programme containing:
 - its name;
 - its address;
 - the list of standards currently under preparation;
 - the list of standards currently under reviewing or revision;
 - the list of standards which were adopted in the preceding period.
51. A notice of existence of the work programme should be published in a national or, as may be, regional or international publication of standardization activities and/or should be accessible on the Internet whenever possible.
52. On the request of any interested party, the standardizing organization or arrangement should promptly provide, or arrange to provide a copy of its standard setting procedures, most recent work programme, draft standard or final standard.
53. Translations into English, French or Spanish of standard setting procedures, most recent work programme, draft standards or final standards should be provided upon request, within the means of the standard-setting body or arrangement.

Participation by interested parties

54. Standard-setting arrangements or organizations should ensure balanced participation by independent technical experts and by representatives of interested parties in the standard development, revision and approval process. Development of standards of sustainable fisheries should, wherever possible, include representatives of fisheries management authorities, the fishing industry, fishworkers organizations, the scientific community, environmental interest groups, fish processors, traders and retailers as well as consumer associations.

55. Interested parties should be associated in the standard-setting tasks through an appropriate consultation forum or be made aware of an appropriate alternative mechanisms by which they can participate. Where more than one forum is designated, coordination requirements applicable to them should be determined.
56. Standardizing arrangements or organizations should have written procedures to guide decision-making.

Notification provisions

57. Before adopting a standard, the standardizing organization or arrangement should allow a period of at least 60 days for the submission of comments on the draft standard by interested parties. No later than the start of the comment period, the standardizing organization or arrangement should publish a notice announcing the period for commenting in a national or, as may be, regional or international publication of standardization activities and/or on the Internet.
58. The standardizing organization or arrangement should take into account, in further processing of the standard, the comments received during the period for commenting. The reply should include an explanation why a deviation from relevant national or international standards is necessary.

Keeping of records

59. Proper records of standards and development activity should be prepared and maintained. The standard setting organization or arrangement should identify a central focal point for standards-related enquiries and for submission of comments. Contact information for this focal point should be made easily available including on the Internet.

Review and revision of standards and of standard setting procedures

60. Standards should be reviewed at regular published intervals and, if appropriate, revised following such reviews. Certified fisheries should be given a period of at least three years to come into compliance with the revised standards.
61. Proposals for revisions can be submitted by any interested party and should be considered by the standard-setting organization or arrangement through a consistent and transparent process.
62. The procedural and methodological approach for setting standards should also be updated in the light of scientific and technical progress and of the experience gained in standard setting of sustainable fisheries.

Validation of standards

63. In developing and revising standards, an appropriate procedure should be put in place to validate the standard vis-à-vis the minimum requirements for sustainable marine fisheries as laid out in these guidelines. Validation is also required to ensure that standards do not encompass criteria or requirements that are of no relevance for sustainable fisheries and could cause unnecessary barriers of trade or mislead the consumer.

Guidelines for Accreditation

Purpose

64. Accreditation provides assurance that certification bodies responsible for conducting conformity assessments with sustainability standards and chain of custody requirements in fisheries are competent to carry out such tasks. By awarding accreditation to a certification body, accreditation bodies provide

assurance that the latter is able to assess and certify that a certain fish or fishery product comes from a fishery that conforms with the established standard of sustainability.

Normative reference

65. ISO Guide 61. General Requirements for assessment and accreditation of certification/registration bodies. 1996.

Functions and structure

66. Accreditation is carried out on the basis of a system that has its own rules and management, **i.e. an accreditation** system. The tasks of granting accreditation following successful assessment should be undertaken by competent accreditation bodies. In order to be recognized as competent and reliable in undertaking the assessment in a nondiscriminatory, impartial and accurate manner, an accreditation body should fulfill, inter alia, the following requirements.

Requirements

Non-discrimination

67. Access to the services of the accreditation body should be open to all certification entities irrespective of their country of residence. Access should not be conditional upon the size of the applicant body or membership in any association or group, nor should accreditation be conditional upon the number of certification bodies already accredited.
68. Full recognition should be given to the special circumstances and requirements of certification bodies in developing countries and countries in transition including financial and technical assistance, technology transfer, and training and scientific cooperation.

Independence, impartiality and transparency

69. The accreditation body should be independent and impartial. In order to be impartial and independent, the accreditation body should:
 - be transparent about its organizational structure and the financial and other kinds of support it receives from public or private entities;
 - be independent from vested interests, together with its senior executive and staff;
 - be free from any commercial, financial and other pressures which might influence the results of the accreditation process;
 - ensure that decision on accreditation is taken by a person(s) who has (ve) not participated in the assessment;
 - not delegate authority for granting, maintaining, extending, reducing, suspending or withdrawing accreditation to an outside person or body.

Human and financial resources

70. The accreditation body should have adequate financial resources and stability for the operation of an accreditation system and should maintain appropriate arrangements to cover liabilities arising from its operations and/or activities.
71. The accreditation body should employ a sufficient number of personnel having the necessary education, training, technical knowledge and experience for performing accreditation functions in fisheries.

72. Information on the relevant qualifications, training and experience of each member of the personnel involved in the accreditation process should be maintained by the accreditation body. Record of training and experience should be kept up to date.
73. When an accreditation body decides to subcontract work related to accreditation to an external body or person, the requirements for such an external body should be no less than for the accreditation body itself. A properly documented contractual or equivalent agreement covering the arrangements including confidentiality and conflict of interests, should be drawn up.

Accountability and reporting

74. The accreditation body should be a legal entity and should have clear and effective procedures for handling applications for accreditation procedures. In particular, the accreditation body should maintain and provide to the applicants and accredited entities:
 - a detailed description of the assessment and accreditation procedure;
 - the documents containing the requirements for accreditation;
 - the documents describing the rights and duties of accredited bodies.
75. A properly documented contractual or equivalent agreement describing the responsibilities of each party should be drafted.
76. The accreditation body should have:
 - defined objectives and commitment to quality;
 - procedures and instructions for quality documented in a quality manual;
 - an established effective and appropriate system for quality.
77. The accreditation body should conduct periodic internal audits covering all procedures in a planned and systematic manner to verify that the accreditation system is implemented and effective.
78. The accreditation body may receive external audits on relevant aspects. The results of the audit should be accessible by the public.
79. Qualified personnel, attached to the accreditation body's team, should be nominated by the accreditation body to conduct the assessment against all applicable accreditation requirements.
80. Personnel nominated for the assessments should provide the accreditation body with a report of its findings as to the conformity of the body assessed to all of the accreditation requirements. The report should provide sufficiently comprehensive information such as:
 - the qualification, experience and authority of the staff encountered;
 - the adequacy of the internal organization and procedures adopted by the certification body to give confidence in its services;
 - the actions taken to correct identified nonconformities including, where applicable, those identified at previous assessments.
81. The accreditation body should have policy and procedures for retaining records of what happened during the assessment visit for a period consistent with its contractual, legal or other obligations. The records should demonstrate that the accreditation procedures have been effectively fulfilled, particularly with respect to application forms, assessment reports and other documents relating to granting, maintaining, extending, reducing, suspending or withdrawing accreditation. The records should be identified, managed and disposed of in such a way as to ensure the integrity of the process and confidentiality of the information.

Resolution of complaints concerning accreditation of certifying bodies¹⁵

82. The accreditation body should have a written policy and procedures for dealing with any complaints in relation to any aspect of the accreditation or de-accreditation of certifying bodies.
83. These procedures should include establishment, on an ad hoc basis as appropriate, of an independent and impartial committee to respond to a complaint. If possible, the committee should attempt to resolve any complaints through discussion or conciliation. If this is not possible, the committee should provide a written ruling to the accreditation body, which should transmit it to the other party or parties involved.
84. The accreditation body should:
 - a. keep a record of all complaints, and remedial actions relative to accreditation;
 - b. take appropriate corrective and preventive action;
 - c. assess the effectiveness of remedial actions;
 - d. safeguard confidentiality of information obtained during the investigation and resolution of complaints.
85. Information on procedures for handling complaints concerning accreditation should be made publicly available.
86. The above does not exclude recourse to other forms of legal and administrative processes as provided for in national legislation or international law.

Confidentiality

87. The accreditation body should have adequate arrangements, consistent with applicable laws, to safeguard confidentiality of the information obtained in the course of its accreditation activities at all levels of its organization, including committees and external bodies acting on its behalf.
88. Where the law requires information to be disclosed to a third party, the body should be informed of the information provided, as permitted by the law. Otherwise information about an applicant certification body should not be disclosed to a third party without a written consent of the body.

Maintenance and extension of accreditation

89. The accreditation body should have arrangements to ensure that an accredited certification body informs it without delay of changes in any aspects of its status or operation.
90. The accreditation body should have procedures to conduct reassessments in the event of changes significantly affecting the capabilities, or scope of accredited activities of the accredited body or the conformance with any other relevant criteria of competence specified by the accreditation body.
91. Accreditation should be re-assessed at sufficiently close intervals to verify that the accredited certification body continues to comply with the accreditation requirements. The periodicity for carrying out reassessments should not exceed five years.

Suspension and withdrawal of accreditation

92. The accreditation body should specify the conditions under which accreditation may be suspended or withdrawn, partially or in total, for all or part of the scope of accreditation.

¹⁵ Procedures by the accreditation body on the resolution of complaints and appeals concerning certification are provided in the following chapter on Guidelines for Certification.

Change in the accreditation requirements

93. The accreditation body should give due notice of any changes it intends to make in its requirements for accreditation.
94. It should take account of views expressed by interested parties before deciding on the precise form and effective date of the changes.
95. Following a decision on, and publication of, the changed requirements, it should verify that each accredited body carries out any necessary adjustments to its procedures within such time as, in the opinion of the accreditation body, is reasonable.
96. Special considerations should be given to accredited bodies in developing countries and countries in transition.

Proprietor or licensee of an accreditation symbol or a logo¹⁶

97. The accreditation body which is proprietor or licensee of a symbol or logo, intended for use under its accreditation programme, should have documented procedures describing its use.
98. The accreditation body should not allow use of its accreditation mark or logo in any way which implies that the accreditation body itself approved a product, service or system certified by a certification body.
99. The accreditation body should take suitable action to deal with incorrect references to the accreditation system or misleading use of accreditation logos found in advertisements, catalogues, etc.

Guidelines for Certification

Purpose

100. Certification is the procedure by which a third party gives written or equivalent assurance that a fishery conforms with the relevant standard and that a proper chain of custody is in place. Certification is an integral and indispensable part of any ecolabelling scheme of products from sustainable marine fisheries. It provides assurance to buyers and consumers that a certain fish or fishery product comes from a fishery that conforms with the established standard for a sustainable fishery. Impartial certification based on an objective assessment of all relevant factors ensures that ecolabels convey truthful information. This is a necessary condition for the ecolabelling scheme to attain its objectives.

Scope

101. There are two types of certification, certification of the fishery itself and certification of the chain of custody between the time the fish is harvested and the time the fish or fishery product is sold to the final consumer. Separate certificates may be issued for the fishery and for the chain of custody.
102. Two types of assessments are required for certification:
 - a. conformity assessment of whether a fishery conforms with the standard and related certification criteria;
 - b. chain of custody assessment of whether adequate measures are in place to identify fish from a certified fishery at subsequent stages of fish processing, distribution and marketing.
103. Fish and fishery products that are labelled to indicate to the consumer their origin from a sustainable fishery require both types of assessments and certificates.

¹⁶ The provisions on the use and control of a certification claim, symbol or logo is addressed in the Guidelines for Certification.

Normative references

104. ISO Guide 62, General Requirements for bodies operating assessment and certification/registration of quality systems. 1996.
105. ISO/IEC Guide 65, General requirements for bodies operating product certification systems. 1996.
106. WTO. Agreement on Technical Barriers to Trade, Article 5.

Functions and structure

107. The tasks of carrying out conformity and chain of custody assessments should be undertaken by recognized and accredited certification bodies. In order to be recognized as competent and reliable in undertaking the assessments in a non-discriminatory, impartial and accurate manner, a certification body has to fulfill, inter alia, the following requirements.

Requirements

Independence and impartiality

108. The certification body should be legally and financially independent from the owner of the ecolabelling scheme.
109. The certification body and its assessment and certifying staff, whether directly employed by the certification body or sub-contracted by it, should have no commercial, financial or any other interest in the fishery or chain of custody to be assessed other than for its certification services.
110. The certification body should ensure that different personnel conduct the certification decision and the certification assessments.
111. The certifying body should not delegate authority for granting, maintaining, extending, reducing, suspending or withdrawing certification to an outside person or body.

Non-discrimination

112. Access to the services of the certification body should be open to all types of fisheries whether managed by a regional, governmental, parastatal or non-governmental fisheries management organizations or arrangement. Access to certification should not be conditional upon the size or scale of the fishery nor should certification be conditional upon the number of fisheries already certified.

Human and financial resources

113. The certification body should have adequate financial resources and stability for the operation of a certification system and should maintain appropriate arrangements to cover liabilities arising from its operations and/or activities.
114. The certification body should employ a sufficient number of personnel having the necessary education, training, technical knowledge and experience for performing conformity and/or chain of custody assessments in fisheries.
115. Information on the relevant qualifications, training and experience of each member of the personnel involved in the certification process should be maintained by the certification body. Record of training and experience should be kept to date.
116. When a certification body decides to sub-contract work related to certification to an external body or person, the requirements for such an external body should be no less than for the certification body itself. A properly documented contractual or equivalent agreement covering the arrangements including confidentiality and conflict of interests, should be drawn up.

Accountability and reporting

117. The certification body should be a legal entity and have clear and effective procedures for handling applications for certification of the fishery and/or the chain of custody. In particular, the certification body should maintain and provide to the applicants and certified entities:
 - a detailed description of the assessment and certification procedure;
 - the documents containing the requirements for certification;
 - the documents describing the rights and duties of certified entities.
118. A properly documented contractual or equivalent agreement describing the rights and duties of each party should be drafted between the certification body and its clients.
119. The certification body should have:
 - defined objectives and commitment to quality;
 - policies and procedures for quality documented in a quality manual;
 - an established effective, appropriate system for quality.
120. The certification body should conduct periodic internal audits covering all procedures in a planned and systematic manner to verify that the certification system is implemented and effective.
121. The certification body may receive external audits on relevant aspects. The results of the audits should be accessible by the public.
122. The certification body should have a policy and procedures for retaining records for a period consistent with its contractual, legal or other obligations. The records should demonstrate that the certification procedures have been effectively fulfilled, particularly with respect to application forms, assessment reports and other documents relating to granting, maintaining, extending, reducing, suspending or withdrawing certification. The records should be identified, managed and disposed of in such a way as to ensure the integrity of the process and confidentiality of the information.
123. The certification body should ensure that, in the event of changes, all affected parties are notified.
124. The certification body should make appropriate documents available on request.

Certification fees

125. The certification body should maintain a written fee structure for applicants and certified fisheries which should be available on request. In establishing the fee structure and in determining the specific fee of a certification assessment, the certification body should take into account, inter alia, the requirements for accurate and truthful assessments, the scale, size and complexity of the fishery or chain of custody, the requirement of non-discrimination of any client, and the special circumstances and requirements of developing countries and countries in transition.

Confidentiality

126. The certification body should have adequate arrangements, consistent with applicable laws, to safeguard confidentiality of the information obtained in the course of its certification at all levels of its organization.
127. Where the law requires information to be disclosed to a third party, the client should be informed of the information provided, as permitted by the law. Otherwise information about a particular product or fishery should not be disclosed to a third party without a written consent of the client.

Maintenance of certification

128. The certification body should carry out periodic surveillance and monitoring at sufficiently close intervals to verify that certified fisheries and/or certified chains of custody continue to comply with the certification requirements.
129. The certification body should require the client to notify it promptly of any intended changes to the management of the fishery, or the chain of custody, or other changes which may affect conformity.
130. The certificate body should have procedures to conduct reassessments in the event of changes significantly affecting the status and management of the certified fishery, or the chain of custody, or if analysis of a complaint or any other information indicates that the certified fishery and/or the chain of custody no longer comply with the required standard and/or related requirements of the certification body.
131. The period of validity of a certificate should not exceed five years in the case of a fishery and three years in the case of the chain of custody. The assessment required for re-certification should give particular attention to changes that have been made in the conduct of the fishery or in the management practices, and on any new conditions that changes in standards might require.

Renewal of certification

132. On the basis of prior regular monitoring and auditing exercises and a full reassessment, the validity of certification can be renewed up to the time limits of five years in the case of a fishery and three years in the case of the chain of custody.

Suspension and withdrawal of certification

133. The certification body should specify the conditions under which certification may be suspended or withdrawn, partially or in total, for all or part of the scope of certification.
134. The certification body should require that a certified fishery and/or chain of custody upon suspension or withdrawal of its certification (however determined), discontinues use of all advertising matter that contains any reference thereto and returns any certification documents as required by the certification body. The certification body should also be responsible for informing the public about the withdrawal or suspension after the appeals process is exhausted.

Maintaining the chain of custody

135. Chain of custody procedures are implemented at the key points of transfer. At each point of transfer, which may vary according to the type of fish or fishery product traded, all certified fish or fishery products must be identified and/or segregated from non-certified fish or fishery products.
136. The certification body should ensure that a recipient of certified fish or fishery products should maintain pertinent chain of custody records, including all records relating to shipment, receipt and invoicing.
137. The certification body should have documented procedures defining auditing methods and periodicity of audits. The periodicity of audits should depend on:
 - the technical processes undertaken at the point of transfer;
 - such risk factors as the value and volume of the certified output.

138. Any breach or apparent breach of the chain of custody identified during an inspection/audit should be explicitly recorded in the inspection/audit report together with:
 - an explanation of the factors that allowed the breach to occur;
 - an explanation of the corrective actions taken or required to ensure that a similar breach does not re-occur.
139. All inspection/audit records should be incorporated into a written inspection/audit report that is available to pertinent parties and filed at the certification body office.
140. The inspection/audit report should contain, as a minimum:
 - the date of the inspection/audit;
 - the name(s) of the person(s) responsible for the report;
 - the names and addresses of the sites inspected/audited;
 - the scope of the inspection/audit;
 - comments on the conformity of the client with the chain of custody requirements.

Use and control of a certification claim, symbol or a logo

141. The certification body, accreditation body or owner of the ecolabelling scheme should have documented procedures describing the requirements, restrictions or limitations on the use of symbols or logos indicating that a fish or fishery product comes from a sustainable fishery. In particular, the ecolabelling scheme is required to ensure that symbols or logos should not relate to claims that are of no relevance for sustainable fisheries and could cause barriers of trade or mislead the consumer.
142. The certification body, accreditation body or owner of the ecolabelling scheme should not issue any license to affix its mark/claim/logo or issue any certificate for any fishery or fishery product unless it is assured that the product bearing it is in fact produced from certified sources.
143. The certification body, accreditation body or owner of the ecolabelling scheme is responsible that no fraudulent or misleading use is made with the use and display of its certification mark and logos.
144. If the certification body, accreditation body or owner of the ecolabelling scheme confers the right to use a symbol or logo to indicate certification, the fishery and any fish or fishery product from such fishery may use the specified symbol or logo only as authorized in writing by it.
145. The certification body, accreditation body or owner of the ecolabelling scheme should take suitable action to deal with incorrect references to the certification system or misleading use of symbols and logos found in advertisements, catalogues, etc.
146. All certificates issued should include:
 - the name and address of the accreditation body or owner of the ecolabelling scheme;
 - the name and address of the certification body;
 - the name and address of the certification holder;
 - the effective date of issue of the certificate;
 - the substance of the certificate;
 - the term for which the certification is valid;
 - signature of the issuing officer.

Resolution of complaints and appeals

147. The accreditation body or owner of the ecolabelling scheme should have a written policy and procedures, applicable to accredited certification bodies, for dealing with any complaints and appeals from involved parties in relation to any aspect of certification or de-certification. Such procedures should be timely, clearly define the scope and nature of appeals that will be considered and should be open only to parties involved in, or consulted, during the assessment. Costs of appeals should be borne by the appellant.
148. These procedures should include an independent and impartial committee to respond to any complaint. If possible, the committee should attempt to resolve any complaint through discussion or conciliation. If this is not possible, the committee should provide a written finding to the certification body, accreditation body or owner of the ecolabelling scheme as appropriate, which should transmit the finding to the party or parties involved.
149. The above does not exclude recourse to other forms of legal and administrative processes as provided for in national legislation or international law.

Keeping of records on complaints and appeals concerning certification

150. The certification body, accreditation body or promoter/owner of the ecolabelling scheme should:
 - keep a record of all complaints and appeals, and remedial actions related to certification;
 - take appropriate corrective and preventive action;
 - assess the effectiveness of remedial actions;
 - safeguard confidentiality of information obtained during the investigation and resolution of complaints and appeals concerning certification.
151. Information on procedures for handling of complaints and appeals concerning certification should be made publicly available.

APPENDIX 2

Draft guidelines for certification in aquaculture

INTRODUCTION

These draft guidelines on aquaculture certification are the result of 6 expert workshops and/or consultative fora organized by FAO in collaboration with the Network of Aquaculture Centres in Asia (NACA) and various host countries, during 2007–2008, respectively in Bangkok (Thailand, 27–30 March 2007), Fortaleza (Brazil, 31 July – 3 August, 2007), Cochin (India, 23 November 2007), London (U.K, 28–29 February 2007), Beijing (China, 6–8 May 2008) and Silver Spring (Washington D.C., USA, 29–30 May 2008). The workshops held in Bangkok, Fortaleza, Cochin and Beijing focused on Asia and Latin America as major aquaculture producing regions of the world; whereas the two workshops held respectively in London and in Silver Spring focused on Europe and North America as major global seafood markets and included many diverse stakeholders from the aquaculture supply chain, in particular representatives of importers, retailers and processors who showed a keen interest in the development of guidelines for aquaculture certification.

At the conclusion of each workshop, the draft guidelines were revised by the FAO Secretariat taking into consideration the relevant views and concerns of the participants, as well as comments received from the public. All draft versions of the guidelines were circulated to over 300 individuals worldwide for comments and suggestions.

Three additional FAO consultative processes at the Government levels were undertaken to finalize these guidelines. They took place during the fourth session of the FAO Committee on Fisheries: Sub-Committee on Aquaculture (COFI:AQ) in Puerto Varas, Chile (6–10 October 2008), the FAO technical consultation (Rome, 15–19 February 2010) and the 5th session of the COFI:AQ (Phuket, Thailand, 27 September – 1 October 2010). The latter session of COFI:AQ adopted the below guidelines on aquaculture certification and requested the FAO Committee on Fisheries (COFI) to adopt them at its 29th session to be held in Rome, Italy, during the period 31 January – 4 February 2011.

In addition to the text of the draft guidelines on aquaculture certification reported below, readers are advised to consult the reports of the above mentioned workshops and consultative fora on the dedicated website (<http://www.fao.org/fishery/about/cofi/aquaculture/en>) to take advantage of the discussions that took place and the background presentations and information that were made available.

BACKGROUND

1. Global production from aquaculture is growing substantially and provides increasingly significant volumes of fish and other aquatic food for human consumption, a trend that is projected to continue. Although aquaculture growth has potential to meet the growing need for aquatic foods and to contribute to food security, poverty reduction and, more broadly, to achieving sustainable development and the Millennium Development Goals, it is increasingly recognised that improved management of the sector is necessary to achieve this potential.

2. Aquaculture is a highly diverse production sector comprising many different systems, sites, facilities, practices, processes and products, conducted under a wide range of political, social, economic and environmental conditions.
3. Efforts to promote aquaculture development should recognize the special concerns and interests of resource-poor small-scale aquaculture farmers, and encourage corporate social responsibility in engaging small-scale farmers and other small-scale stakeholder in market chains. Certification schemes should not create obstacles to trade or exclude small-scale farmer aquaculture products from market chains.
4. Aquaculture production and trade have increased, but concerns have emerged regarding possible negative impacts on the environment, communities and consumers. Solutions to many of these issues have been identified and addressed. The application of certification in aquaculture is now viewed as a potential market-based tool for minimising potential negative impacts and increasing societal and consumer benefits and confidence in the process of aquaculture production and marketing.
5. Although aquatic animal health and food safety issues of aquaculture have been subjected to certification and international compliance for many years, aspects of animal welfare, environmental issues and socio-economic aspects have not been subjected to compliance or certification.

SCOPE

6. These guidelines provide guidance for the development, organization and implementation of credible aquaculture certification schemes.
7. The guidelines consider a range of issues which should be considered relevant for the certification in aquaculture, including: a) animal health and welfare, b) food safety, c) environmental integrity and d) socio-economic aspects associated with aquaculture.
8. Sustainable development of aquaculture depends on three factors, social, economic and environmental sustainability, all of which have to be addressed proportionally.
9. There is an extensive national and international legal framework in place for various aspects of aquaculture and its value chain, covering such issues as aquatic animal disease control, food safety and conservation of biodiversity. Legislation is particularly strong for processing, export and import of aquatic products. Recognized competent authorities are normally empowered to verify compliance with mandatory national and international legislation. Other issues such as environmental sustainability and socio-economic aspects may not be covered in such a binding manner and open the opportunity for voluntary certification as a means to demonstrate that a particular aquaculture system is managed responsibly.
10. Credible aquaculture certification schemes consist of three main components: (i) standards; (ii), accreditation, and (iii) certification. The guidelines therefore cover:
 - standard setting processes required to develop and review certification standards;
 - accreditation systems needed to provide formal recognition to a qualified body to carry out certification;
 - certification bodies required to verify compliance with certification standards.
11. Developing and implementing a certification scheme may be undertaken by any entity qualified to do so in accordance with the requirements of these guidelines. Such an entity can include, *inter alia*, a government, an intergovernmental organization, a non-governmental organization, private sector group (e.g. a

producer or trade association), a civil society arrangements, or consortium comprising some or all of these different stakeholder groups, as direct users of the guidelines. The guidelines provide information on the institutional and organizational arrangements for aquaculture certification, including governance requirements, particularly to ensure that conflicts of interest are avoided.

TERMS AND DEFINITIONS

12. For the purpose of these international guidelines on aquaculture certification, the following terms and definitions apply. These terms and definitions come from or were derived from existing recognized material (e.g. FAO¹, ISO², Codex Alimentarius³, OIE⁴, FAO Ecolabelling Guidelines, FAO Code of Conduct for Responsible Fisheries (the Code) and many others), and stakeholder inputs received during the process of developing the guidelines.

Accreditation

13. Procedure by which a competent authority consistent with applicable law gives formal recognition that a qualified body or person is competent to carry out specific tasks. (Modified from ISO/IEC Guide 2:1996, 12.11)

Accreditation body

14. Body that conducts and administers an accreditation system and grants accreditation. (ISO Guide 2, 17.2)

Accreditation system

15. System that has its own rules of procedure and management for carrying out accreditation. Accreditation of certification bodies is normally awarded following successful assessment and is followed by appropriate surveillance. (ISO Guide 2, para. 17.1)

Aquaculture

16. The farming of aquatic organisms involving intervention in the rearing process to enhance production and the individual or corporate ownership of the stock being cultivated. (Modified from the FAO Glossary of Aquaculture – <http://www.fao.org/fi/glossary/aquaculture/>)

Audit

17. A systematic and functionally independent examination to determine whether activities and related results comply with planned objectives. (Codex Alimentarius, Principles for Food Import and Export Certification and Inspection, CAC/GL 20)

Certification

18. Procedure by which certification body or entity gives written or equivalent assurance that a product, process or service conforms to specified requirements. Certification may be, as appropriate, based on a range of audit activities that may include continuous audit in the production chain. (Modified from ISO Guide 2, 15.1.2; Principles for Food Import and Export Certification and Inspection, CAC/GL 20; Ecolabelling Guidelines)

¹ Food and Agriculture Organization of the United Nations.

² International Standards Organization.

³ Codex Alimentarius Commission.

⁴ World Organisation for Animal Health.

Certification body or entity

19. Competent and recognized body, governmental or non-governmental, that conducts certification and audit activities. A certification body may oversee certification activities carried out on its behalf by other bodies. (Based on ISO Guide 2, 15.2)

Certification scheme

20. The processes, systems, procedures and activities related to standard setting, accreditation and implementation of certification. (Adapted from the Report of the First Expert Workshop on Aquaculture Certification held in Bangkok, Thailand. March 2007)

Chain of custody

21. The set of measures that verify that a certified product originates from a certified aquaculture production chain, and is not mixed with non-certified products. Chain of custody verification measures should cover the tracking/traceability of the product all along the production, processing, distribution and marketing chain, the tracking of documentation, and the quantity concerned. (Form FAO Fisheries Ecolabelling Guidelines)

Conformity assessment

22. Any activity concerned with determining directly or indirectly that relevant requirements are fulfilled. (Modified from ISO Guide 2, 12.2)

Group certification

23. Certification for a group of small-scale aquaculture farmers or aquaculture farmer cooperative who has key characteristics in common in term of nature of production, proximity of farm location, common marketing as a group. The group has an Internal Control System to ensure compliance with the standards by all members of the group.

Small-scale aquaculture

24. Aquaculture farms with small production volume, and/or relatively small surface area, mainly without permanent labour, and typically lacking technical and financial capacity to support individual certification. (Adapted from the Report of the First Expert Workshop on Aquaculture Certification held in Bangkok, Thailand. March 2007)

Standard

25. An approved document that provides for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory under international trade rules. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method. A public sector standard is prepared by the international standardization community, and is always approved by an officially recognised body. A private sector standard is prepared by a private body and is not in all cases approved by an officially recognised body. (Based on TBT Agreement, Annex 1, para. 2)

Standard setting body, organization or entity

26. Organization or entity that has recognized activities in standard setting. (Based on ISO Guide 2, para. 4.3)

Third party

27. Person or body that is recognized as being independent of the parties involved, as concerns the issue in question, and involves no conflict of interest. (ISO/IEC Guide 2:1996; Ecolabelling Guidelines)

Traceability

28. The ability to follow the movement of a product of aquaculture or inputs such as feed and seed, through specified stage(s) of production, processing and distribution. (Adapted from Codex)

Unit of certification

29. The scale or extent of the aquaculture operation(s) assessed and monitored for compliance. The unit of certification could consist of a single farm, production unit or other aquaculture facility. The certification unit could also consist of a group or cluster of farms that should be assessed and monitored collectively.

Veterinary Medicinal Products

30. Any substance or combination of substances presented for treating or preventing disease in animals or which may be administered to animals with a view to making a medical diagnosis or to restoring, correcting or modifying physiological functions in animals. (EU Directive 2001/82/EC)

APPLICATION

31. These guidelines for voluntary certification schemes are to be interpreted and applied in their entirety in a manner consistent with national laws and regulations and, where they exist, international agreements.
32. Entities responsible for new and existing aquaculture certification schemes should undertake to assess, verify and document that these certification schemes have been developed and are being implemented in accordance with the guidelines. If there are deficiencies in the way an existing scheme was developed and/or in how it is being implemented, the entities responsible for the functions (i.e. standard setting, accreditation, or certification) should act accordingly to define and implement a corrective action plan. When this is completed, the entities should verify and document that the scheme is in accordance with the guidelines. There should not be any conflict of interest among the entities involved.
33. If the entities responsible for a private aquaculture certification scheme do not provide credible assurance that the scheme has been developed and is being implemented in accordance with the guidelines, stakeholder groups (especially those being certified under the scheme) may use these guidelines to have the scheme evaluated by a body with appropriate expertise or undertake such evaluation themselves. See chapter on Institutional and Procedural Requirements for details.
34. The evaluation would use these guidelines to assess whether a certification scheme is developed and implemented in accordance with the guidelines regarding, *inter alia*:
 - whether the principles have been adhered to;
 - whether the special considerations have been addressed;
 - whether the objectives of the scheme and issue areas have been addressed in accordance with the appropriate minimum substantive requirements; and
 - whether the standard setting, accreditation and/or certification have been developed and implemented in accordance with the institutional and procedural requirements.

PRINCIPLES

35. Aquaculture certification schemes:
 - a. should be based on international standards or guidelines, where applicable, and must recognise the sovereign rights of States and comply with relevant local, national and international laws and regulations. They must be consistent with relevant international agreements, conventions, standards, codes of practice and guidelines.
 - b. should recognise that any person or entity undertaking aquaculture activities is obliged to comply with all national laws and regulations.
 - c. should be developed based on the best scientific evidence available, also taking into account traditional knowledge, provided that its validity can be objectively verified.
 - d. should be developed and implemented in a transparent manner and should ensure that there is no conflict of interest among the entities that are responsible for standard setting, accreditation, and certification. These entities should facilitate mutual recognition, strive to achieve harmonization and recognise equivalence, based on the requirements and criteria outlined in these guidelines.
 - e. should be open to scrutiny by consumers, civil society, and their respective organisations and other interested parties, while respecting legitimate concerns to preserve confidentiality.
 - f. should be credible and robust, be fully effective in achieving their designated objectives.
 - g. should promote responsible aquaculture during production as outlined in the FAO Code of Conduct for Responsible Fisheries, in particular the Article 9, Aquaculture Development.
 - h. should include adequate procedures for maintaining chain of custody and traceability of certified aquaculture products and processes.
 - i. should establish clear accountability for all involved parties, including the owners of certification schemes, accreditation bodies and the certification bodies, in conformity with international requirements, as necessary.
 - j. should not discriminate against any group of farmers practising responsible aquaculture based on scale, intensity of production, or technology; promote cooperation among certification bodies, farmers and traders; incorporate reliable, independent auditing and verification procedures; and should be cost-effective to ensure inclusive participation of responsible farmers.
 - k. should strive to encourage responsible trade, consistent with the FAO Technical Guidelines on Responsible Fish Trade, and should provide the opportunity for aquaculture products to enter international markets without obstacles to trade.
 - l. should ensure special considerations are provided to address the interests of resource-poor small-scale farmers, especially the financial costs and benefits of participation, without compromising food safety.
36. These aquaculture certification guidelines should recognize the special needs of farmers and governments in developing countries. These guidelines should also recognize the special role of FAO in assisting developing countries in devising an implementation framework which is both attainable and measurable. Similarly, FAO should facilitate the assessment of the capacity of farmers and governments to meet the proposed requirements of aquaculture certification schemes, and to develop realistic expectations with regard to the farmers and governments meeting these requirements.

MINIMUM SUBSTANTIVE CRITERIA

37. Minimum substantive criteria for developing aquaculture certification standards are provided in this section for a) animal health and welfare, b) food safety, c) environmental integrity and d) socio-economic aspects. The extent to which a certification scheme seeks to address the issues depends on the objectives of the scheme, which should be explicitly and transparently stated by the scheme. Development of certification schemes should consider the importance of being able to measure performance of aquaculture systems and practices, and the ability to assess conformity with certification standards.

ANIMAL HEALTH AND WELFARE⁵

38. Aquaculture activities should be conducted in a manner that assures the health and welfare of farmed aquatic animals, by optimizing health through minimizing stress, reducing aquatic animal disease risks and maintaining a healthy culture environment at all phases of the production cycle. Guidelines and standards set by the OIE should be the specific normative basis.

Minimum substantive criteria for addressing aquatic animal health and welfare in aquaculture certification schemes

39. Aquaculture operations should implement aquatic animal health management programmes set up in compliance with relevant national legislation and regulations, taking into account the FAO Technical Guidelines on Health Management for Responsible Movement of Live Aquatic Animals and relevant OIE Standards.
40. Movement of aquatic animals, animal genetic material and animal products should take place in accordance with the relevant provisions in the OIE Aquatic Animal Health Code to prevent introduction or transfer of diseases and infectious agents pathogenic to aquatic animals while avoiding unwarranted sanitary measures.
41. A culture environment should be maintained at all phases of the production cycle adapted to the species raised, to benefit aquatic animal health and welfare, and reduce the risks of introduction and spread of aquatic animal diseases. In particular by
- Allowing for quarantining of stock where appropriate;
 - Routine monitoring of stock and environmental conditions for early detection of aquatic animal health problems; and
 - Implementation of management practices that reduce the likelihood of disease transmission within and between aquaculture facilities and natural aquatic fauna, and reduce stress on animals for the purpose of optimizing health.
42. Veterinary medicines should be used in responsible manner and in accordance with applicable national legislation or relevant international agreements that ensure effectiveness, safety of public and animal health and protection of the environment.
43. Use of species in polyculture or integrated multitrophic aquaculture should be carefully considered in order to reduce potential disease transmission between cultured species.
44. Aquaculture animals should be kept under farming conditions suitable for the species concerned, in particular taking into account water temperature and quality.

⁵ For the purpose of these guidelines, reference to animal welfare applies only insofar as it affects animal health consistent with current and future OIE.

45. Workers should be trained on good aquatic animal health and welfare management practices to ensure they are aware of their roles and responsibilities in maintaining aquatic animal health and welfare in aquaculture.

FOOD SAFETY

46. Aquaculture activities should be conducted in a manner that ensures food safety by implementing appropriate national or international standards and regulations including those defined by FAO/WHO *Codex Alimentarius*. Although *Codex Alimentarius* covers both safety and quality issues concerning aquatic products, for the purpose of these guidelines, quality aspects are not currently addressed in detail.

Minimum substantive criteria for addressing food safety in aquaculture certification schemes

47. Aquaculture facilities should be located in areas where the risk of contamination is minimized and where sources of pollution can be controlled or mitigated.
48. Where feed is used, aquaculture operations should include procedures for avoiding feed contamination in compliance with national regulations or as determined by internationally agreed standards. Aquaculture operations should use feeds and feed ingredients which do not contain unsafe levels of pesticides, biological, chemical and physical contaminants and or other adulterated substances. Feed which is manufactured or prepared on the farm should contain only substances permitted by the national competent authorities.
49. All veterinary drugs and chemicals for use in aquaculture shall comply with national regulations, as well as international guidelines. Wherever applicable, veterinary drugs and chemicals should be registered with the competent national authority. Veterinary drugs should be scheduled (classified). Control of diseases with veterinary drugs and antimicrobials should be carried out only on the basis of an accurate diagnosis and knowledge that the drug is effective for control or treatment of a specific disease. In some classifications, veterinary drugs may only be prescribed and distributed by personnel authorized under national regulations. All veterinary drugs and chemicals or medicated feeds should be used according to the instructions of the manufacturer or other competent authority, with particular attention to withdrawal periods. Banned non-registered and/or non permitted antimicrobial agents, veterinary drugs and/or chemicals must not be used in aquaculture production, transportation or product processing. Prophylactic use of veterinary medicinal products, particularly antimicrobial agents⁶, should not take place.
50. Water used for aquaculture should be of a quality suitable for the production of food which is safe for human consumption. Waste water should not be used in aquaculture. If wastewater is used, the WHO guidelines for the safe use of wastewater and excreta in aquaculture should be followed.
51. The source of broodstock and seed for culture (larvae, post larvae, fry and fingerling, etc.) should be such to reduce the risk of carryover of potential human health hazards (e.g. antibiotics, parasites, etc.) into the growing stocks.
52. Traceability and record-keeping of farming activities and inputs which impact food safety should be ensured by documenting, *inter alia*:
- the source of inputs such as feed, seed, veterinary drugs and antibacterials, additives, chemicals; and
 - type, concentration, dosage, method of administration and withdrawal times of chemicals, veterinary drugs and antibacterials and the rationale for their use.

⁶ Antimicrobial agents do not include vaccines.

53. Aquaculture facilities and operations should maintain good culture and hygienic conditions, including:
 - Good hygiene practices in the farm surroundings should be applied aiming at minimizing contamination of growing water, particularly from waste materials or faecal matter from animals or humans;
 - Good Aquaculture Practices should be applied during culture to ensure good hygienic culture conditions and safety and quality of aquaculture produce;
 - Farms should institute a pest control programme, so that rodents, birds and other wild and domesticated animals are controlled, especially around feed storage areas;
 - Farm grounds should be well maintained to reduce or eliminate food and feed safety hazards; and
 - Appropriate techniques for harvesting, storing and transportation of aquaculture products should be applied to minimize contamination and physical damage.
54. Identification, classification, integrated management and monitoring programmes should be implemented in bivalve molluscs growing areas to prevent microbiological, chemical and reduce biotoxin contamination. Relaying and depuration of bivalve molluscs to remove microbial contamination should be carried in accordance with the requirements of Codex.
55. Workers should be trained in good hygienic practices to ensure they are aware of their roles and responsibilities for protecting aquaculture products from contamination and deterioration.

ENVIRONMENTAL INTEGRITY

56. Aquaculture should be planned and practiced in an environmentally responsible manner, in accordance with appropriate local, national and international laws and regulations.
57. Aquaculture certification schemes should encourage restoration of habitats and sites damaged by previous uses in aquaculture.
58. Aquaculture can impact on the environment and aquaculture certification schemes should ensure these impacts are identified and adverse impacts are managed or mitigated to an acceptable level in accordance with local and national laws. Whenever possible, native species should be used for culture and measures should be taken to minimise unintentional release or escape of cultured species into natural environments.
59. Management practices that address environmental impacts of aquaculture differ substantially for different types of scale of aquaculture and for different aquaculture farming systems. Certification schemes should not be overly prescriptive, but set measurable benchmarks that encourage improvement and innovation in environmental performance of aquaculture.
60. Certification schemes may consider application of the “precautionary approach” in accordance with the relevant provisions of the Code of Conduct for Responsible Fisheries.
61. In undertaking risk analysis, risks should be addressed through a suitable scientific method of assessing the likelihood of events and the magnitude of impacts, and take into account relevant uncertainties. Appropriate reference points should be determined and remedial actions taken if reference points are approached or exceeded.
62. Certification schemes should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution,

with due regard to the public interest and without distorting international trade and investment⁷.

Minimum substantive criteria for addressing environmental integrity in aquaculture certification schemes

63. Environmental impact assessments should be conducted, according to national legislation, prior to approval of establishment of aquaculture operations.
64. Regular monitoring of on-farm and off-farm environmental quality should be carried out, combined with good record keeping and use of appropriate methodologies.
65. Evaluation and mitigation of the adverse impacts on surrounding natural ecosystems, including fauna, flora and habitats should be carried out.
66. Measures should be adopted to promote efficient water management and use as well as proper management of effluents to reduce impacts on surrounding land and water resources should be adopted.
67. Where possible, hatchery produced seed should be used for culture. When wild seeds are used, they should be collected using responsible practices.
68. Exotic species are to be used only when they pose an acceptable level of risk to the natural environment, biodiversity and ecosystem health.
69. With reference to paragraph 9.3.1 of the Code of Conduct for Responsible Fisheries, where genetic material of an aquatic organism has been altered in a way that does not occur naturally, science-based risk assessment should be used to address possible risks on a case-by-case basis. Induction of polyploidy is not included.
70. Infrastructure construction and waste disposal should be conducted responsibly.
71. Feeds, feed additives, chemicals, veterinary drugs including antimicrobials, manure and fertilizer should be used responsibly to minimize their adverse impacts on the environment and to promote economic viability.

SOCIO-ECONOMIC ASPECTS

72. Aquaculture should be conducted in a socially responsible manner, within national rules and regulations, having regard to the ILO-convention on labour rights, not jeopardizing the livelihood of aquaculture workers, and local communities. Aquaculture contributes to rural development, enhances benefits and equity in local communities, alleviates poverty and promotes food security. As a result, socio-economic issues should be considered at all stages of aquaculture planning, development and operation.
73. The importance of corporate social responsibility from aquaculture to local communities should be recognized.

Minimum substantive criteria for addressing socio-economic aspects in aquaculture certification schemes

74. Workers should be treated responsibly and in accordance with national labour rules and regulations and, where appropriate, relevant ILO conventions.
75. Workers should be paid wages and provided benefits and working conditions according to national laws and regulations.
76. Child labour should not be used in a manner inconsistent with ILO conventions and international standards.

⁷ Based on the principle 16 of the Rio Declaration on Environment and Development, June 1992.

INSTITUTIONAL AND PROCEDURAL REQUIREMENTS

77. The institutional and procedural requirements for establishing and implementing credible aquaculture certification schemes are presented here in four parts: 1) Governance, 2) Standard setting, 3) Accreditation and 4) Certification.
78. The sections on Standards setting, Accreditation, and Certification are each subdivided into four sections: i) Purpose, ii) Normative references, iii) Functions and structure and iv) Requirements. The requirements are considered the minimum requirements that a body or entity should meet to be recognized as credible and reliable in executing its duties and responsibilities. The principles provided in this document apply equally to procedural and institutional aspects of certification schemes for aquaculture.
79. The guidance presented here draws on other internationally accepted guidance, especially those produced by the International Organization for Standardization (ISO) and the International Labour Organization (ILO) , and the Codex Alimentarius Commission (CAC). Any certification scheme implemented pursuant to these guidelines must conform with a country's WTO commitments, particularly those under the WTO Agreement on Technical Barriers to Trade and the Agreement on the Application of Sanitary and Phyto-Sanitary Measures.

GOVERNANCE

80. The procedures used and institutions involved in establishing and implementing a certification scheme should be transparent, credible and robust with good governance.
81. There are various options for the geographical range of a scheme. It could be national, regional or international in scope.
82. It is essential that the owner of a private or non-governmental certification scheme is not directly engaged in its operational affairs, i.e. undertaking accreditation or certification, to avoid conflicts of interest. The owner or developer of a private or non-governmental certification scheme must have a formal arrangement with a separate independent specialized accreditation body or entity to take on the task of accreditation of certification bodies on its behalf. The accreditation body or entity could be private, public or an autonomous body governed by national rules and regulations.
83. The owner or developer of a certification scheme should have clear written procedures to guide the decision-making process.
84. Certification must be handled by an organization (certification body or entity) that has been specifically set up for this purpose. It could be government, public, non-governmental or private. The certification scheme should lay down rules and regulations under which the certification body or entity is required to operate. The certification body or entity may be involved in certification for one certification scheme for one specific sector (e.g. aquaculture) or may be involved with a number of sectors or schemes.

STANDARD SETTING

Purpose

85. Standards provide the necessary requirements, the quantitative and qualitative criteria and the indicators for certification of aquaculture. Standards should reflect the objectives, results and outcomes that are being pursued through the certification scheme to address animal health and welfare, food safety, environmental integrity and/or socio-economic aspects in aquaculture.

Normative basis

86. The normative basis for development of standards includes the following existing documented procedures:
- *WTO Agreement on technical barriers to trade*
 - *WTO Agreement on the application of sanitary and phytosanitary measures*
 - *Codex guidelines on food import and export inspection and certification systems*
 - *ISO/IEC Guide 59. Code of good practice for standardization. 1994*
 - *ISO/IEC 22003:2007 Food safety management systems: Requirements for bodies providing audit and certification of food safety management systems*
 - *ISEAL. ISEAL Code of Good Practice for Setting Social and Environmental Standards. 2006*
 - *OIE Aquatic Animal Health Code*
 - *International Council for the Exploration of the Sea (ICES) Code of Practice on the Introductions and Transfers of Marine Organisms*
 - *Code of Practice on the Introductions and Transfers of Marine Organisms*
 - *ISO/IEC 22000:2005 Food safety management systems- Requirements for any organization in the food chain*
 - *ISO/TS 2004:2005 Food safety management systems – Guidance on the application of ISO 22000:2005*
 - *ISO 22005:2007 Traceability in the feed and food chain – General principles and basic requirements for system design and implementation*
 - *ISO/IEC 16665 Water quality – Guidelines for quantitative sampling and sample processing of marine soft-bottom macrofauna*
 - *ISO 23893-1:2007 Water quality – Biochemical and physiological measurements on fish – Part 1: Sampling of fish, handling and preservation of samples*
 - *ISO/IEC 17021:2006 Conformity assessment – Requirements for bodies providing audit and certification of management systems*
 - *ISO/IEC 17065*
 - *ISO/IEC 22003:2007 Food safety management systems: Requirements for bodies providing audit and certification of food safety management systems*
 - *ISO/IEC 17021. Management Systems certification*
 - *ISO/IEC 22003. Food safety management systems*
 - *ISO/IEC 17025. Laboratory testing*
 - *ISO/IEC 22005. Chain of Custody*

Functions and organizational structure

87. Standard setting encompasses the tasks of developing, monitoring, assessing, reviewing, and revising standards. These tasks can be fulfilled through a specialized standard setting body or entity, or through another suitable entity and be either a government or non government entity. The standard setting body or entity is also responsible for ensuring appropriate communications and outreach regarding the standard and the standard setting process, and ensuring that the standard and associated documents are available.
88. The organizational structure of a standard setting body or entity should include, *inter alia*, a technical committee of independent experts and a consultation forum with relevant stakeholder representatives whose mandates are clearly established.
89. A standard setting body or entity must be a legal entity, with sufficient resources to support its standard setting function. The process should include adequate stakeholder representation. Governance, administration and other support staff should be free of conflicts of interest.

Requirements

Transparency

90. Transparency in the setting of standards is essential. Transparency helps facilitate consistency with relevant national and international standards and facilitates access to information and records pertaining to certification and participation of all interested parties, including those of developing countries and countries in transition, particularly small-scale stakeholders.
91. The standard setting body or entity should carry out activities in a transparent fashion, following written rules of procedure. Procedural rules should contain a mechanism for the impartial resolution of any substantive or procedural disputes about the handling of standard setting matters.
92. On a regular basis as appropriate, the standard setting body or entity should publicize its work programme as widely as possible.
93. On the request of any interested party, the standards setting body or entity should provide, or arrange to provide, within reasonable time, a copy of its standard setting procedures, most recent work programme, draft standards or final standards.
94. Based on the needs of users, a standards setting body or entity should translate the standard setting procedures, most recent work programme, draft standards or final standards into appropriate languages.

Participation by interested parties

95. The standards setting body or entity should strive to achieve balanced participation by independent technical experts and by representatives of interested parties in the standards development, revision and approval process. Interested parties can include, *inter alia*, governments, non-governmental organizations, private sector groups, civil society arrangements, representatives of the aquaculture industry (input suppliers, producers, processors, traders and retailers), the scientific community, community groups and various consortia, as indirect users of the guidelines.
96. Interested parties should be associated in the standard setting process through an appropriate consultation forum or be made aware of appropriate alternative mechanisms by which they can participate. Where more than one forum is designated, appropriate coordination and communication requirements should be determined and provided.

Content and comparable systems

97. The standards setting process should seek to:
 - include international reference standards in animal health and welfare, food safety, environmental integrity and socio-economic aspects;
 - identify and review comparable systems;
 - identify research needs and knowledge gaps;
 - include requirements of relevant international agreements; and
 - encourage mutual recognition among certification schemes.

Notification provisions

98. Before adopting a standard(s), the standards setting body or entity should allow a period of an appropriate duration for the submission of comments on the draft standards by interested parties. No later than the start of the comment period, the standard setting body or entity should publish a notice announcing the period for commenting in a national or, as appropriate, regional or international publication of standardization activities and/or on the Internet.

99. In further processing of the standards, the standards setting body or entity should take into account the comments received during the period for commenting.

Keeping of records

100. Proper records of standards and development activity should be prepared and maintained. The standards setting organization or entity should identify a central focal point for standards-related enquiries and for submission of comments. Contact information for this focal point should be made easily available including on the Internet.

Review and revision of standards and of standards setting procedures

101. Standards should be reviewed at regular published intervals in consultation with appropriate stakeholders and, if appropriate, revised following such reviews. Certified aquaculture operations should be given an appropriate period to come into compliance with the revised standards.
102. Proposals for revisions can be submitted by any interested party and should be considered by the standard setting body or entity through a consistent and transparent process.
103. The procedural and methodological approach for setting standards should also be updated in the light of scientific and technical progress and of the experience gained in the application of the standard in aquaculture.

Validation of standards

104. In developing and revising standards, an appropriate procedure should be put in place to corroborate the standard vis-à-vis the minimum requirements for aquaculture as laid out in these guidelines. Validation is also required to ensure that standards:
- are effective in meeting the certification goals, meaningful, objective and auditable;
 - do not contain criteria or requirements that could cause unnecessary barriers to trade or mislead the aquaculture community; and
 - take into consideration practicality and cost of standards development and maintenance.

ACCREDITATION

Purpose

105. Accreditation provides assurance that certification bodies responsible for conducting conformity assessments according to standards for aquaculture in relation to animal health and welfare, food safety, environmental integrity and socio-economic aspects are competent to carry out such tasks. Accreditation provides assurance that the certification body or entity is able to assess and certify that a specific aquaculture product, method or process comes from a certified aquaculture operation and conforms to the standards.

Normative reference

- ISO/IEC 17011. *Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies.*

Functions and structure

106. Accreditation is an independent assessment of the competence of the certification body or entity. The task of granting accreditation following successful assessment should be undertaken by competent accreditation bodies. Accreditation is

carried out on the basis of a system that has its own rules and management, i.e. an accreditation system.

107. An accreditation body or entity must be a legal entity, with sufficient resources to support its functions in undertaking accreditation. The governance structure should include appropriate stakeholder representation. Governance, administration and other support staff should be free of conflicts of interest. In order to be recognized as competent and reliable in undertaking the assessment of certification bodies or entities in a non-discriminatory, impartial and accurate manner, an accreditation body or entity should fulfill, *inter alia*, the following requirements.

Requirements

Non-discrimination

108. Access to the services of the accreditation body or entity should be open to all certification entities irrespective of their location. Access should not be conditional upon the size of the applicant body or membership in any association or group, nor should accreditation be conditional upon the number of certification bodies already accredited.
109. Full recognition should be given to the special circumstances and requirements of certification bodies in developing countries and countries in transition including financial and technical assistance, technology transfer, and training and scientific cooperation, without compromising the integrity of the accreditation and certification process.

Independence, impartiality and transparency

110. The accreditation body or entity should be independent and impartial. In order to be impartial and independent, the accreditation body should:
- be transparent about its organizational structure and the financial and other kinds of support it receives from public or private entities;
 - be independent from vested interests, together with its senior executive and staff;
 - be free from any commercial, financial and other pressures that might influence the results of the accreditation process;
 - ensure that decision on accreditation is taken by a person(s) who has(ve) not participated in certification (conformity assessment); and
 - not delegate authority for granting, maintaining, extending, reducing, suspending or withdrawing accreditation to an outside person or body.

Human and financial resources

111. The accreditation body or entity should have adequate financial resources and stability for the operation of an accreditation system and should maintain appropriate arrangements to cover liabilities arising from its operations and/or activities.
112. The accreditation body or entity should employ a sufficient number of personnel having the necessary training, technical knowledge and experience for performing accreditation functions in aquaculture.
113. Information on the relevant qualifications, training and experience of each member of the personnel involved in the accreditation process should be maintained by the accreditation body or entity. Record of training and experience should be kept up to date.
114. When an accreditation body or entity decides to subcontract work related to accreditation other than work exempted in paragraph 91 to an external body or

person, the requirements for such an external body should be no less than for the accreditation body or entity itself. A properly documented contractual or equivalent agreement covering the arrangements including confidentiality and conflict of interests, should be drawn up.

Accountability and reporting

115. The accreditation body or entity should be a legal entity and should have clear and effective procedures for handling applications for accreditation procedures. In particular, the accreditation body or entity should maintain and provide to the applicants and accredited entities:
 - a detailed description of the assessment and accreditation procedure;
 - the documents containing the requirements for accreditation; and
 - the documents describing the rights and duties of accredited bodies.
116. A properly documented contractual or equivalent agreement describing the responsibilities of each party should be drafted.
117. The accreditation body or entity should have:
 - defined objectives and commitment to quality;
 - procedures and instructions for quality documented in a quality manual; and
 - an established effective and appropriate system for quality.
118. The accreditation body or entity should conduct periodic internal audits covering all procedures in a planned and systematic manner to verify that the accreditation system is implemented and effective.
119. The accreditation body or entity may receive external audits on relevant aspects. The results of the audit should be accessible by the public.
120. Qualified personnel, attached to the accreditation body or entity, should be nominated by the accreditation body or entity to conduct the assessment against all applicable accreditation requirements.
121. Personnel nominated for the assessments should provide the accreditation body or entity with a report of its findings as to the conformity of the body assessed to all of the accreditation requirements. The report should provide sufficiently comprehensive information such as:
 - the qualification, experience and authority of the staff encountered;
 - the adequacy of the internal organization and procedures adopted by the certification body or entity to give confidence in its services; and
 - the actions taken to correct identified nonconformities including, where applicable, those identified at previous assessments.
122. The accreditation body or entity should have policy and procedures for retaining records of what happened during the assessment visit for a period consistent with its contractual, legal or other obligations. The records should demonstrate that the accreditation procedures have been effectively fulfilled. The records should be identified, managed and disposed of in such a way as to ensure the integrity of the process and confidentiality of the information.

Resolution of complaints concerning accreditation of certifying bodies

123. The accreditation body or entity should have a written policy and procedures for dealing with any complaints in relation to any aspect of the accreditation or de-accreditation of certifying bodies.
124. These procedures should include establishment, on an *ad hoc* basis as appropriate, of an independent and impartial committee to respond to a complaint. The committee should seek to resolve any complaints through discussion or conciliation. If this is not possible, the committee should provide a written ruling to the accreditation body or entity, which should transmit it to the other party or parties involved.

125. The accreditation body or entity should:
 - keep a record of all complaints, and remedial actions relative to accreditation;
 - take appropriate corrective and preventive actions;
 - assess the effectiveness of remedial actions; and
 - safeguard confidentiality of information obtained during the investigation and resolution of complaints.
126. Information on procedures for handling complaints concerning accreditation should be made publicly available.
127. The above does not exclude recourse to other forms of legal and administrative processes as provided for in national legislation or international law.

Confidentiality

128. The accreditation body or entity should have adequate arrangements, consistent with applicable laws, to safeguard confidentiality of the information obtained in the course of its accreditation activities at all levels of its organization, including committees and external bodies acting on its behalf.
129. Where the law requires information to be disclosed to a third party, the body should be informed of the information provided, as permitted by the law. Otherwise information about an applicant certification body or entity should not be disclosed to a third party without a written consent of the body.

Maintenance and extension of accreditation

130. The accreditation body or entity should have arrangements to define the period of accreditation of a certifying body or entity, with clear monitoring procedures.
131. The accreditation body or entity should have arrangements to ensure that an accredited certification body or entity informs it without delay of changes in any aspects of its status or operation.
132. The accreditation body or entity should have procedures to conduct reassessments in the event of changes significantly affecting the capabilities or scope of activities of the accredited body or entity or the conformance with any other relevant criteria of competence specified by the accreditation body or entity.
133. Accreditation should be re-assessed at sufficiently close intervals or as necessary to verify that the accredited certification body or entity continues to comply with the accreditation requirements. The period for carrying out reassessments should not exceed five years.

Suspension and withdrawal of accreditation

134. The accreditation body or entity should specify the conditions under which accreditation may be suspended or withdrawn, partially or in total, for all or part of the scope of accreditation.

Change in the accreditation requirements

135. The accreditation body or entity should give due notice of any changes it intends to make in its requirements for accreditation to all stakeholders involved.
136. It should take account of views expressed by interested parties before deciding on the precise form and effective date of the changes.
137. Following a decision on and publication of the changes, it should verify that each accredited body or entity carries out any necessary adjustments to its procedures within such time as, in the opinion of the accreditation body or entity, is reasonable.
138. Special considerations should be given to accredited bodies in developing countries and countries in transition, without compromising the integrity of the certification process.

Proprietor or licensee of an accreditation symbol, label or a logo

139. The provisions on the use and control of a certification claim, symbol, label or logo are addressed in the following section on certification.
140. The accreditation body or entity that is proprietor or licensee of a symbol or logo, intended for use under its accreditation programme, should have documented procedures describing its use.
141. The accreditation body or entity should not allow use of its accreditation mark or logo in any way that implies that the accreditation body or entity itself approved a product, service or system certified by a certification body or entity.
142. The accreditation body or entity should take suitable action to deal with incorrect references to the accreditation system or misleading use of accreditation logos found in advertisements, catalogues, etc.

CERTIFICATION

Purpose

143. Certification is the procedure by which a body or entity gives written or equivalent assurance that the aquaculture operation or activity under consideration conforms to the relevant aquaculture certification standards. Impartial certification based on an objective assessment of relevant factors provides assurance to buyers and consumers that a certified aquaculture product comes from an aquaculture operation that conforms to the certification standards.

Scope

144. Certification could include an aquaculture activity e.g. an aquaculture operation of the chain of custody of a product. Separate certificates may be issued for the aquaculture activity and the chain of custody of a product.
145. Two types of assessments are required for certification:
 - Conformity assessment: Whether an aquaculture activity conforms to the standards and related certification criteria.
 - Chain of custody assessment: Whether adequate measures are in place to identify and differentiate products from a certified aquaculture operation including production and subsequent stages of processing, distribution and marketing (traceability).
146. Aquaculture products that are labelled to indicate to the buyer and consumer of their origin from a certified aquaculture operation and chain of custody require both types of assessments and certificates.

Normative references

- ISO Guide 62, *General Requirements for bodies operating assessment and certification/registration of quality systems*. 1996
- ISO/IEC Guide 65, *General requirements for bodies operating product certification systems*. 1996
- WTO. *Agreement on Technical Barriers to Trade*
- ISO/IEC 17021. *Management Systems certification*
- ISO/IEC 22003. *Food safety management systems*
- ISO/IEC 17025. *Laboratory testing*
- ISO/IEC 22005. *Chain of Custody*
- OIE Aquatic Animal Health Code/Guidelines
- TBT Articles 5–6. *Conformity Assessment*

Functions and structure

147. The tasks of carrying out conformity and chain of custody assessments should be undertaken by accredited certification bodies. In order to be recognized as competent and reliable in undertaking the assessments in a non-discriminatory, impartial and accurate manner, a certification body or entity should fulfill the following requirements.

Requirements

Independence and impartiality

148. The certification body or entity should be legally and financially independent from the owner of the certification scheme and should not have any conflict of interest.
149. The certification body or entity and its assessment and certifying staff, whether directly employed by the certification body or entity or sub-contracted by it, should have no commercial, financial or any other interest in the aquaculture operation or chain of custody to be assessed other than for its certification services.
150. The certification body or entity should ensure that the personnel who conduct assessment in view of certification are different from the personnel which grant the certificate.
151. The certifying body or entity should not delegate authority for granting, maintaining, extending, reducing, suspending or withdrawing certification to an outside person or body.

Non-discrimination

152. Access to the services of the certification body or entity should be open to all types of aquaculture operations.
153. Access to the certification body or entity should not be conditional upon the size or scale of the aquaculture operations nor should certification be conditional upon the number of aquaculture operations already certified.

Human and financial resources

154. The certification body or entity should have adequate financial resources and stability for its conduct and should maintain appropriate arrangements to cover liabilities arising from its operations and/or activities.
155. The certification body or entity should employ a sufficient number of personnel having the necessary qualifications, training, technical knowledge, education and experience for performing conformity and/or chain of custody assessments in aquaculture.
156. Information on the relevant qualifications, training and experience of each member of the personnel involved in the certification process should be maintained by the certification body or entity. Record of training and experience should be kept up to date.
157. When a certification body or entity decides to sub-contract work related to certification, to an outside body or person other than work exempted in paragraph 132, the requirements for such an external body should be no less than for the certification body or entity itself. A properly documented contractual or equivalent agreement, covering the arrangements including confidentiality and conflict of interests, should be drawn up. A sub-contractor should be periodically audited and evaluated.

Accountability and reporting

158. The certification body or entity should be a legal entity and have clear and effective procedures for handling applications for certification of aquaculture operations and/or chains of custody for aquaculture products. In particular, the certification body or entity should maintain and provide to the applicants and certified entities:
 - a detailed description of the assessment and certification procedure;
 - the documents containing the requirements for certification; and
 - the documents describing the rights and duties of certified entities.
159. A properly documented contractual or equivalent agreement describing the rights and duties of each party should be drafted between the certification body or entity and its clients.
160. The certification body or entity should conduct periodic internal audits covering all procedures in a planned and systematic manner to verify that the certification system is implemented and effective.
161. The certification body or entity may receive external audits on relevant aspects. The results of the audits should be accessible by the public.
162. The certification body or entity should have a policy and procedures for retaining records for a period consistent with its contractual, legal or other obligations. The records should demonstrate that the certification procedures have been effectively fulfilled, particularly with respect to application forms, assessment reports and other documents relating to granting, maintaining, extending, reducing, suspending or withdrawing certification. The records should be identified, managed and disposed of in such a way as to ensure the integrity of the process and confidentiality of the information. The certification body or entity should ensure that any changes to the agreed procedures are notified to all affected parties.
163. The certification body or entity should make appropriate, non-confidential documents available on request.

Certification fees

164. If the certification body or entity charges fees, it should maintain a written fee structure for applicants and certified aquaculture operations that should be available on request. In establishing the fee structure and in determining the specific fee of certification, the certification body or entity should take into account, *inter alia*, the requirements for accurate and truthful assessments, the scale, size and complexity of the aquaculture operation or chain of custody, the requirement of non-discrimination of any client, and the particular circumstances and requirements of small-scale farmers, developing countries and countries in transition.

Confidentiality

165. The certification body or entity should have adequate arrangements, consistent with applicable laws, to safeguard confidentiality of the information obtained in the course of its certification at all levels of its organization.
166. Where the law requires information to be disclosed to a third party, the client should be informed of the information provided, as permitted by the law. Otherwise information about a particular product or aquaculture operation should not be disclosed to a third party without a written consent of the client.

Maintenance of certification

167. The certification body or entity should carry out periodic surveillance and monitoring at appropriate intervals to verify that certified aquaculture operations and/or certified chains of custody continue to comply with the certification requirements.
168. The certification body or entity should require the client to notify it promptly of any intended changes to the management of the aquaculture, or the chain of custody, or other changes that may affect conformity to certification standards.
169. The certification body or entity should have procedures to conduct reassessments in the event of changes significantly affecting the status and management of the certified aquaculture operation, or the chain of custody, or if analysis of a complaint or any other information indicates that the certified aquaculture operation and/or the chain of custody no longer comply with the required standard and/or related requirements of the certification body or entity.
170. The period of validity of a certificate should not exceed five years. The assessment required for re-certification should give particular attention to changes made in the conduct of the aquaculture operation or in the management practices.

Renewal of certification

171. On the basis of proper monitoring and auditing, the validity of certification should be renewed for an agreed period, not to exceed five years, or more frequently if warranted by changes in the operation under certification.

Suspension and withdrawal of certification

172. The certification body or entity should specify the conditions under which certification may be suspended or withdrawn, partially or in total, for all or part of the scope of certification.
173. The certification body or entity should require that a certified aquaculture operation and/or chain of custody upon suspension or withdrawal of its certification (however determined), discontinues use of all advertising matter that contains any reference thereto and returns any certification documents as required by the certification body or entity. The certification body or entity should also be responsible for informing the public about the withdrawal or suspension after the appeals process is exhausted.

Maintaining the chain of custody

174. Chain of custody procedures are implemented at the key points of transfer. At each point of transfer, which may vary according to the type of aquaculture product traded, all certified aquaculture products must be identified and differentiated from non-certified aquaculture products.
175. The certification body or entity should ensure that a recipient of certified aquaculture products should maintain pertinent chain of custody records, including all records relating to shipment, receipt and invoicing.
176. The certification body or entity should have documented procedures defining auditing methods and periodicity of audits.
177. Any breach or apparent breach of the chain of custody identified during an inspection/audit should be explicitly recorded in the inspection/audit report together with:
 - an explanation of the factors that allowed the breach to occur; and
 - an explanation of the corrective actions taken or required to deal with the product affected by the breach and to ensure that a similar breach does not occur again.

178. All inspection/audit records should be incorporated into a written inspection/audit report that is available to pertinent parties and filed at the office of the certification body or entity.
179. The inspection/audit report should contain, as a minimum:
 - the date of the inspection/audit;
 - the name(s) of the person(s) responsible for the report;
 - the names and addresses of the sites inspected/audited;
 - the scope of the inspection/audit; and
 - comments on the conformity of the client with the chain of custody requirements.

Use and control of a certification claim, symbol, label or a logo

180. The owner of the certification scheme should have documented procedures describing the requirements, restrictions or limitations on the use of symbols, labels or logos indicating that an aquaculture product comes from a certified aquaculture operation. In particular, the certification scheme is required to ensure that symbols, labels or logos should not relate to claims that are of no relevance for certified aquaculture operations or products and could cause barriers of trade or mislead the consumer.
181. The owner of the certification scheme should not issue any license to affix its mark/claim/label/logo or issue any certificate for any aquaculture operations or products unless it is assured that the product bearing it is in fact produced from certified sources.
182. The certification body or entity, accreditation body or entity or owner of the certification scheme is responsible that no fraudulent or misleading use is made with the use and display of its certification mark, labels or logos.
183. If the certification body or entity, accreditation body or entity or owner of the certification scheme confers the right to use a symbol, label or logo to indicate certification, the aquaculture operation and any aquaculture product from it may use the specified symbol, label or logo only as authorized in writing by it.
184. The certification body or entity, accreditation body or entity or owner of the certification scheme should take suitable action to deal with incorrect references to the certification system or misleading use of symbols, labels and logos found in advertisements and catalogues.
185. All certificates issued should include:
 - the name and address of the accreditation body or entity or owner of the certification scheme;
 - the name and address of the certification body or entity;
 - the name and address of the certification holder;
 - the effective date of issue of the certificate;
 - the substance of the certificate;
 - the term for which the certification is valid; and
 - the signature and the stamp of the issuing officer.

Resolution of complaints and appeals

Policy and procedures

186. The accreditation body or entity or owner of the certification scheme should have written policy and procedures, applicable to accredited certification bodies, for dealing with any complaints and appeals from involved parties in relation to any aspect of the certification or de-certification. Such procedures should be timely, clearly define the scope and nature of appeals that will be considered and

- should be open only to parties involved in, or consulted during the assessment. Costs of appeals should be borne by the appellant.
187. These procedures should include an independent and impartial committee to respond to any complaint. If possible, the committee should attempt to resolve any complaint through discussion or conciliation. If this is not possible, the committee should provide a written finding to the certification body or entity, accreditation body or entity or owner of the certification scheme as appropriate, which should transmit the finding to the party or parties involved.
 188. The above does not exclude recourse to other forms of legal and administrative processes as provided for in national and regional legislation or international law.

Keeping of records on complaints and appeals concerning certification

189. The certification body or entity, accreditation body or entity or promoter/owner of the certification scheme should:
 - keep a record of all complaints and appeals, and remedial actions related to certification;
 - take appropriate corrective and preventive action;
 - assess the effectiveness of remedial actions; and
 - safeguard confidentiality of information obtained during the investigation and resolution of complaints and appeals concerning certification.
190. Information on procedures for handling of complaints and appeals concerning certification should be made publicly available.

SPECIAL CONSIDERATIONS FOR IMPLEMENTATION

191. National and relevant international organizations, whether governmental or non-governmental, the aquaculture industry and financial institutions should recognize the special circumstances and requirements of aquaculture producers and other stakeholders in developing countries, especially those in least-developed countries and small island developing states, to support the effective and progressive implementation of these guidelines. States, relevant intergovernmental and non-governmental organizations, buyers and traders, and financial institutions should work to address these implementation needs, especially in the areas of financial and technical assistance, technology transfer, capacity building and training. Such assistance should also consider direct support towards the possible high costs of accreditation and certification.
192. Assistance is needed for building the capacity and enhancing the ability of stakeholders to participate in developing and complying with aquaculture certification schemes consistent with these guidelines. This includes ensuring that stakeholders have access to, and understanding of, these guidelines, as well as provisions of relevant international conventions and applicable standards that are essential for responsible aquaculture. Appropriate and up-to-date technologies may be required to comply with certification standards. Full benefit from such technologies would require extension, training, skill development and other local capacity building programmes for farmers and local communities and other stakeholders. Governmental and other institutions should support cooperation, especially at regional and sub-regional levels, in capacity building for developing and complying with aquaculture certification systems most suitable to their regions, and in the elaboration of mechanisms and protocols for the exchange of knowledge, experience and technical assistance in support of these objectives.
193. Different aquaculture certification schemes may be capable of meeting the same objective and to that extent may be equivalent. Memoranda of understanding, mutual recognition agreements, and unilateral recognition may be developed

for mutual recognition of aquaculture certification schemes, all of which should include appropriate controls and verification of the certification systems involved. Tools and technical assistance may be required to ensure fairness, transparency and uniformity in developing agreements and monitoring that facilitates the development and implementation of aquaculture certification schemes consistent with the certification, accreditation and standards development procedures provided in these guidelines.

194. Notwithstanding the other provisions of this chapter, third-party certification schemes implemented in application of these guidelines should not replace related certification schemes or official certificates issued by States. FAO will facilitate and monitor implementation of these guidelines on certification in aquaculture and promote exchange of knowledge and experience. Development agencies and donor institutions are encouraged to support FAO in facilitating financial and technical assistance to developing countries and countries in transition.

APPENDIX 3

Definitions relevant to private standards and certification

INTRODUCTION

Standards, and related certification, are developed by a variety of public and private organizations, target a variety of objectives and cover a variety of industrial activities. Consequently, the terminology is varied and rich and can lead to confusion.

Throughout this technical paper, many key words related to private standards and certification have been used and key definitions have been provided directly in the text. Additional definitions are provided hereafter to facilitate their understanding in the context of fisheries and aquaculture and to link to the international instruments from which they have been extracted.

Accreditation*

- Procedure by which a competent authority gives formal recognition that a qualified body or person is competent to carry out specific tasks. (ISO/IEC Guide 2, 12.11)
- Third party attestation related to a conformity assessment body conveying formal demonstration of its competence to carry out specific conformity assessment tasks. (ISO/ IEC 17000:2004)
- The procedure by which an authoritative body gives formal recognition of the competence of a certification body to provide certification services, against an international standard. (Global Food Safety Initiative Guidance Document 5th Edition September 2007. <http://www.mygfsi.com/>)
- The formal recognition that an organization is competent to perform specific processes, activities, or tasks (which are detailed in a scope of accreditation) in a reliable credible and accurate manner. It follows that:
 - Accreditation must be objective, transparent and effective.
 - An Accreditation Body (AB) must use highly professional competent assessors and technical experts in all relevant fields.
 - All AB employees (and subcontractors) must be reliable, ethical and competent in both accreditation processes and the relevant technical fields. (International Accreditation Forum IAF Guidance Document Issue 4. IAR GD 2: 2005)
- Procedure by which the evaluation, certification and inspection bodies have been assessed against internationally recognized standards to demonstrate their competence, impartiality and performance capability to carry out specific tasks. (United Kingdom Accreditation Service, UKAS. http://www.ukas.com/about/accreditation/What_is_Accreditation/What_is_Accreditation.asp)

Accreditation body*

- Body that conducts and administers an accreditation system and grants accreditation. (ISO Guide 2, 17.2)
- Authoritative body that performs accreditation. (ISO/IEC 17000:2004, 2.6)
- Agency having jurisdiction to formally recognize the competence of a certification body to provide certification services. (Global Food Safety Initiative Guidance Document 5th Edition September 2007. <http://www.mygfsi.com/>)

Accreditation system*

System that has its own rules of procedure and management for carrying out accreditation. Accreditation of certification bodies is normally awarded following successful assessment and is followed by appropriate surveillance (ISO Guide 2, 17.1)

Assessment

- Process undertaken by an accreditation body to assess the competence of conformity assessment body based on particular standard/s and/or other normative documents for a defined scope of accreditation. (ISO/IEC 17011: 2004, 3.7)
- All activities related to the certification/registration of an organization to determine whether the organization meets all the requirements of the relevant clauses of the specified standard necessary for granting certification/registration, and whether they are effectively implemented, including documentation review, audit, preparation and consideration of the audit report and other relevant activities necessary to provide sufficient information to allow a decision to be made as to whether certification/registration shall be granted. (In this Guidance the term “organization” is identical to the term “supplier” used in ISO/IEC Guide 62). (International Accreditation Forum IAF Guidance Document Issue 4. IAR GD 2: 2005)

Audit*

- Systematic, independent, documented process for obtaining records, statements of facts or other relevant information and assessing them objectively to determine the extent to which the specified requirements are fulfilled (ISO/IEC 17000: 2004, 4.4)
- A systematic and functionally independent examination to determine whether activities and related results comply with planned objectives (*Codex Alimentarius*, Principles for Food Import and Export Certification and Inspection, CAC/GL 20).
- Systematic and functionally independent examination to determine whether activities and related results comply with a conforming scheme, whereby all the elements of this scheme should be covered by reviewing the suppliers’ manual and related procedures, together with an evaluation of the production facilities. (Global Food Safety Initiative Guidance Document 5th Edition September 2007. <http://www.mygfsi.com/>)

Auditor

Person qualified to carry out audits for or on behalf of a certification body. (Global Food Safety Initiative Guidance Document 5th Edition September 2007. <http://www.mygfsi.com/>)

Benchmark

Procedure by which a food safety-related scheme is compared to a specific Guidance Document. (Global Food Safety Initiative Guidance Document 5th Edition September 2007. <http://www.mygfsi.com/>)

Central government body

Central government, its ministries and departments or any body subject to the control of the central government in respect of the activity in question. (TBT Agreement)

Certification*

- Procedure by which an official certification body or officially recognized certification body gives written or equivalent assurance that a product, process or service conforms to specified requirements. Certification may be, as appropriate, based on a range of audit activities that may include continuous audit in the production chain. (Modified from ISO Guide 2, 15.1.2; Principles for Food Import and Export Certification and Inspection, CAC/GL 20; Ecolabelling Guidelines)
- Competent and recognized body that conducts certification. A certification body may oversee certification activities carried out on its behalf by other bodies. (ISO Guide 2, 15.2)
- Third-party attestation (i.e., issue of a statement) that specified requirements related to products, processes, systems or persons have been fulfilled. (ISO/IEC 17000, 2005, Definitions 5.2 and 5.5)
- Procedure by which accredited certification bodies, based on an audit, provide written or equivalent assurance that food safety management systems and their implementation conform to requirements. (Global Food Safety Initiative Guidance Document 5th Edition September 2007. <http://www.mygfsi.com/>)
- It is the procedure by which official certification bodies and officially recognized bodies provide written or equivalent assurance that foods or food control systems conform to requirements. Certification of food may be, as appropriate, based on a range of inspection activities which may include continuous on-line inspection, auditing of quality assurance systems, and examination of finished products. (Codex Guidelines for the Design, Operation, Assessment and Accreditation of Food Import and Export Inspection and Certification Systems (CAC/GL 26 – 1997)).

Certification body or entity*

- Competent and recognized body that conducts certification and audit activities. A certification body may oversee certification activities carried out on its behalf by other bodies. (ISO Guide 2, 15.2)
- Provider of certification services, accredited to do so by an accreditation body (Global Food Safety Initiative Guidance Document 5th Edition September 2007. <http://www.mygfsi.com/>)

Certification scheme

- Certification system related to specified products to which the same specified requirements, specific rules and procedures apply (ISO/IEC 17000).
- Scheme consisting of a certification standard and certification system as related to specified processes to which the same particular scheme applies. The certification scheme should contain at least the following items: a standard, a clearly defined scope, a certification system, including:
 - requirements for the qualifications of auditors,
 - a statement of approximate duration and frequency of visits,
 - the minimum content of the audit report. (Global Food Safety Initiative Guidance Document 5th Edition September 2007. <http://www.mygfsi.com/>)

Certification system

- A system that has its own rules of procedure and management for carrying out certification. (Global Food Safety Initiative Guidance Document 5th Edition September 2007. <http://www.mygfsi.com/>)

- Conformity assessment system that includes selection, determination, review, and finally certification as the attestation activity. (International Accreditation Forum IAF Guidance Document on General Requirements for Bodies operating Product Certification systems Issue 2. IAR GD 5: 2006)

Chain of custody*

- Documentation, and the quantity concerned (From the FAO Ecolabelling Guidelines).
- The set of measures which is designed to guarantee that the product put on the market and bearing the ecolabel logo is really a product coming from the certified fishery concerned. These measures should thus cover both the tracking/traceability of the product all along the processing, distribution and marketing chain, as well as the proper tracking of the documentation (and control of the quantity concerned) (FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries. <http://www.fao.org/docrep/008/a0116t/a0116t01.htm#bm1.5>)

Conformity assessment*

- Any activity concerned with determining directly or indirectly that relevant requirements are fulfilled.
- *Note:* typical examples of conformity assessment activities are sampling, testing and inspection; evaluation, verification and assurance of conformity (supplier's declaration, certification); registration, accreditation and approval as well as their combinations. (ISO Guide 2, 12.2)
- Demonstration that specified requirements relating to a product, process, system, person or body are fulfilled (ISO/IEC 17000, 2004, Definition 2.1)
- Conformity assessment is an activity which involves technical procedures such as testing verification, inspection and certification which confirm that products fulfil the requirements laid down in regulations and standards (Technical Information to Technical Barriers to Trade http://www.wto.org/english/tratop_E/tbt_e/tbt_info_e.htm)

Equivalence

- Members shall accept the sanitary or phytosanitary measures of other Members as equivalent, even if these measures differ from their own or from those used by other Members trading in the same product, if the exporting Member objectively demonstrates to the importing Member that its measures achieve the importing Member's appropriate level of sanitary or phytosanitary protection. For this purpose, reasonable access shall be given, upon request, to the importing Member for inspection, testing and other relevant procedures. Members shall, upon request, enter into consultations with the aim of achieving bilateral and multilateral agreements on recognition of the equivalence of specified sanitary or phytosanitary measures. (WTO Agreement on the Application of Sanitary and Phytosanitary Measures – Legal Text http://www.wto.org/english/docs_e/legal_e/15sps_01_e.htm#ArticleIV)
- is the capability of different inspection and certification systems to meet the same objectives. (Codex Guidelines for the Design, Operation, Assessment and Accreditation of Food Import and Export Inspection and Certification Systems. (CAC/GL 26 – 1997))

Local government body

Government other than a central government (e.g. states, provinces, Länder, cantons, municipalities, etc.), its ministries or departments or any body subject to the control of such a government in respect of the activity in question (TBT Agreement).

Non-conformity

- Deviation of product or process from specified requirements, or the absence of, or failure to implement and maintain, one or more required management system elements, or a situation which would, on the basis of available objective evidence, raise significant doubt as to the conformity of what the supplier is supplying. (Global Food Safety Initiative Guidance Document 5th Edition September 2007. <http://www.mygfsi.com>)
- The absence of, or the failure to implement and maintain, one or more quality management system requirements, or a situation which would, on the basis of available objective evidence, raise significant doubt as to the quality of what the organization is supplying. (International Accreditation Forum. IAF Guidance Document Issue 4. IAR GD 2: 2005)
- Deviation from specified requirements related to the product or to certification requirements defined by the certification body.

Non-governmental body

Body other than a central government body or a local government body, including a nongovernmental body which has legal power to enforce a technical regulation.

Product certification

Verification that a certain product has passed performance and/or quality assurance tests or qualification requirements stipulated in standards or regulations or that it complies with a set of criteria governing quality and/or minimum performance requirements.

Standard

- Document approved by a recognized organization or entity, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory under international trade rules. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method. (Technical Barriers to Trade agreement, Annex 1, 2)
- A normative document, established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context. (Global Food Safety Initiative Guidance Document 5th Edition September 2007. <http://www.mygfsi.com/>)

Standard setting body, organization or entity

Organization or entity that has recognized activities in standard setting. (ISO Guide 2, 4.3)

Surveillance

- Systematic iteration of conformity assessment activities as a basis for maintaining the validity of the statement of conformity (ISO/IEC 17000:200, 6.1)
- Follow-up audit to verify the validity of an issued certificate. (Global Food Safety Initiative Guidance Document 5th Edition September 2007. <http://www.mygfsi.com/>)

Technical regulation

Document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology,

symbols, packaging, marking or labelling requirements as they apply to a product, process or production method. (TBT Agreement)

Third party*

- Person or body that is recognized as being independent of the parties involved, as concerns the issue in question, and involves no conflict of interest. (ISO/IEC Guide 2)
- A person or body that is independent of the organization or person that provides the object of conformity assessment. (ISO/IEC 17000, 2004, Definition 2.4)

Third party certification

An assessment carried out to ensure compliance with a publicly available standards or technical specifications. The assessment is carried out by an independent, third party organization that is qualified and licensed to issue certification when the assessment is successfully completed. This means that rather than an organization or company claiming to comply with industry standards, they have taken their commitment to quality further and invited in an external third party to verify that their product or service does indeed comply with the industry standards. (BSI British Standard. <http://www.bsigroup.com/en/ProductServices/Fire/Fire-alarm-installations/About-the-scheme/Third-party-certification/>)

Traceability

- The ability to trace the history, application or location of an entity by means of recorded identifications. (ISO 8402:1994 Quality management and quality assurance – Vocabulary)
- The ability to trace the history, application or location of that which is under consideration. (ISO 9000:2000 Quality Management Systems. Fundamentals and Vocabulary).
(For both these definitions, there is an additional clause which states that when relating to products, traceability specifically entails ‘the origin of materials and parts, the processing history, and the distribution and location of the product after delivery’).
- Ability to follow the movement of feed or food through specified stage/s of production, processing and distribution. (ISO 22005 Traceability in the feed and food chain – General principles and basic requirements for system design and implementation, First edition 2007)
- Property of a measurement result whereby the result can be related to a reference through documented unbroken chain of calibrations, each contributing to the measurement uncertainty. (ISO/IEC Guide 99:2007, 2.41)
- The ability to trace and follow a food, feed, food-producing animal or substance intended to be, or expected to be incorporated into a food or feed, through all stages of production, processing and distribution. (European Community Regulation 178/2002 ‘General principles and requirements of food law’ of 28 January 2002, and in force from 1 January 2005)
- The ability to follow the movement of a food through specified stage(s) of production, processing and distribution. (Codex Procedural Manual, Eighteenth edition, 2008)

Validation

Obtaining evidence that the elements of the HACCP plan are effective. (Codex Alimentarius Commission Code of Practice for Fishery and Fishery Products, First Edition, 2009. <http://www.codexalimentarius.net/web/publications.jsp?lang=en>)

Verification

The application of methods, procedures, tests and other evaluations, in addition to monitoring to determine compliance with the standards or plan. (Code of Practice for Fishery and Fishery Products, First Edition, 2009. <http://www.codexalimentarius.net/web/publications.jsp?lang=en>).

Risk assessment

The evaluation of the likelihood of entry, establishment or spread of a pest or disease within the territory of an importing Member according to the sanitary or phytosanitary measures which might be applied, and of the associated potential biological and economic consequences; or the evaluation of the potential for adverse effects on human or animal health arising from the presence of additives, contaminants, toxins or disease-causing organisms in food, beverages or feedstuffs.

Appropriate level of sanitary or phytosanitary protection

The level of protection deemed appropriate by the Member establishing a sanitary or phytosanitary measure to protect human, animal or plant life or health within its territory.

* As given in the FAO Ecolabelling Guidelines – FAO. Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries. Rome, FAO. 2005. 90p.

Private standards and related certification schemes are becoming significant features of international fish trade and marketing. They have emerged in areas where there is a perception that public regulatory frameworks are not achieving the desired outcomes, such as sustainability and responsible fisheries management, or to ensure food safety, quality and environmental sustainability in the growing aquaculture industry. Unfortunately, the proliferation of private standards is causing confusion for stakeholders: fishers and fish farmers trying to decide which certification scheme will bring the most market returns, buyers trying to decide which standards have most credence in the market and will offer returns to reputation and risk management, and governments trying to decide where private standards fit into their food safety and resource management strategies. This report analyses the two main types of private standards, namely ecolabels and food safety and quality standards, their impact on fish trade and their implications for a range of stakeholders. It addresses issues that are driving the development of private standards, their policy and governance implications, the assessment of their credence, the costs implications, traceability, etc., and the challenges and opportunities for developing countries.

