Let's get certified; Exploring the certification of farmed seafood

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At its San Diego meeting in March 2010, the World Aquaculture Society devoted a full session to the current state of developments in the certification of farmed seafood products. In this article we present perspectives derived from that meeting and summarize the issues that face today's producers wishing to ensure a certified future for their products in tomorrow's marketplace. We offer tips on the questions to ask your colleagues, your advisors, the customers to whom you want to sell your product and the certification systems and companies who might be on your radar.

What is Certification?

The presence of an endorsement or ecolabel on a seafood product suggests that the product was produced in a responsible way. While certification systems differ in many ways, each includes the following four common elements that work together to ensure that labelled products were produced responsibly and that the label's claims are true and meaningful:

- *Scope*: Scoping documents establish the goals to which the certification system aspires so stakeholders and designers develop a shared understanding of the relevant social and environmental impacts that certification will seek to address.
- *Governance structure*: Certification systems give decision-making powers to a variety of bodies, ranging from boards of directors to dispute resolution panels.
- *Standards*: The heart of any certification system, standards provide the specific criteria that producers must meet to become certified.
- *Implementation*: Certification bodies apply the standards by evaluating producers for compliance.

Thus, certification is the last stage in a complex process and assures retailers and consumers that the producer is complying with the system's rules. The certification results from an inspection of the product, and the processes used to create the product, by an independent auditor whose job it is to apply the ecolabel's standards. Without this third-party certification, buyers would be unable to determine if particular products merit the certification system's endorsement or ecolabel.

Certification can also be carried out for purposes other than ecolabeling. For example, an industry group or cooperative may want to be sure that its products or processes meet a standard for quality or management established by the International Organization for Standardization (ISO) or another standard-setting body. This type of certification can be used as a form of guarantee that all products comply with the standard that buyers or governments require as part of their purchasing contracts.

The boom in seafood ecolabels and certification systems that are available today has been driven by the requirements of major traders and buyers, responding to demand from consumers in the marketplace, for reassurance that seafood products demonstrably meet the basic requirements of environmental sustainability and food safety. The rapid growth in interest in environmental sustainability has resulted in

Sea cages near Geraldton, Western Australia (image courtesy of Greg Jenkins, Challenger TAFE, Fremantle, Western Australia.)

Yellowtail kingfish juveniles in a sea cage at Jurien Bay, Western Australia (image courtesy of Greg Jenkins, Challenger TAFE, Fremantle, Western Australia.)

Barramundi growout facilities in Australia's remote and pristine West Kimberley (image: Trevor Ward

hundreds of ecolabels and certification systems available across the world for seafood products.

For many producers, consumers and buyers, it is hard to know which of the many ecolabels and certification processes is best. In other areas, a few certification systems have taken precedence. For example, in the capture sector, the Marine Stewardship Council (MSC) ecolabel has become the go-to standard for consumers looking for sustainable products. There are as yet no comparable 'omnibus' labels or certification systems in aquaculture; instead, a variety of labels are competing for attention and market share. As a result, each producer has to carefully evaluate each potential label and certification system for its applicability within their own marketplace and production circumstances.

Upsides and Downsides

Consumers are becoming increasingly aware that aquaculture offers the promise of reducing pressure on depleted wild fish stocks, providing a good source of income in developing economies, and serving as an important protein source in undernourished regions. However, there is also a growing awareness that some current aquaculture production practices may cause serious environmental and social impacts, such as:

- Use of fishmeal and fish oil from overfished wild stocks.
- Creation of protein deficits in the developing world due to exporting fish for meal and oil.
- Production of waste from fecal matter, excess food and contamination of local waters.
- Escape of non-native species and domestic breeds that interfere with native species.
- Transmission of diseases and use of prophylactic antibiotics and parasiticides.
- Animal welfare concerns due to overcrowding and growth in suboptimal conditions.
- Reduction of freshwater resources, including salinization of aquifers.
- Destruction of coastal habitats, such as mangroves, and alienation of other uses and users.
- Interference with historical use of land and water by local communities.
- Lack of consideration for worker's or women's rights.

Credible ecolabel standards generally require producers to avoid or minimize most or all of these impacts. Certification of labeled products in turn provides reassurance in the marketplace that such matters are genuinely being dealt with in respect of the labeled products.

Where buyers, governments and consumers are sensitive to such issues and prepared to purchase labeled products in preference to unlabeled products, producers can secure important benefits from the investment into certification for their products. These benefits may include increased access to or retention of markets, price increments, increased production efficiencies, reputational benefits arising from increased environmental and social performance, and increased standing among government decision makers that can lead to other forms of direct and indirect support, such as access to specialized skills, provision of infrastructure or streamlined import inspection. Credible certification systems also uniformly provide for traceability of products in order to ensure that certified products are not at risk of substitution or dilution with products sourced elsewhere that were not produced in accordance with the rules of the ecolabel program. For example, the MSC program uses a Chain of Custody standard to ensure that labeled products are not co-mingled with products that do not meet its fishery sustainability standard. In the aquaculture arena, traceability offers additional benefits by connecting consumers with producers and assuring consumers that labeled seafood is free of contaminants, a particular concern to regulators and consumers in some markets and for certain products.

On the other hand, there are costs involved in certification and some of those costs fall on the producer. Many of the costs may not be immediately apparent and may arise before inspections occur – such as organizing meet-

ings within the group of producers to be certified, meetings and liaison with stakeholders and governments, and development of suitable information and data to submit to the certifier. Other intangibles include the of exposing business data to external experts who may not agree with all the activities and who may impose unwelcome burdens in the form of corrective actions, the risk of backlash if certification is not quickly secured after any disclosure that it is being sought, being forced to accept business models from overseas or outside the production sector to become certified and dealing with complaints, media and appeals.

The direct cost of certification and of complying with annual audit requirements may consume a lot of resources and may vary substantially depending on the certification system and producer. In aquaculture, different species, locations and production processes yield different environmental and social impacts. For example, tuna production requires much more fishmeal and fish oil than does tilapia production, and facilities that treat and recirculate wastewater release less waste into the environment than ocean net pens.

Certification systems address these differences in different ways – some certify all sorts of farms and species as long as they comply with "best management practices," while others have adopted environmental and social standards that differ according to the species and production methods used. These substantive differences mean that the cost of certification may differ substantially among certification systems. Producers may be able to minimize costs and uncertainty by selecting an ecolabel whose standards are appropriate to the species and production system used and by seeking multiple certifications from a single auditor during a single farm visit.

Determining whether or not to become certified requires evaluation of potential benefits and costs, and is an inexact science. Some of the costs and some benefits, such as market access, may be known up front, but often the most important aspects of the decision process are intangibles. Current and future demand for products certified to a specific standard is among the most important of these intangibles. Not all endorsements or labels are equally regarded in the marketplace, and reactions to different standards may make a substantial difference in the benefits of certification. Thus, when choosing among certification systems, it is vital to understand why and how they differ.

Not All Standards Are Created Equal

The plethora of aquaculture certification systems uses a range of different approaches to connect producers and consumers of sustainable seafood. It should be no surprise that an ecolabel designed and promoted by a conservation NGO approaches the problem differently from a business-to-business endorsement created by an industry group. The origin, technical requirements and outreach of each certification system affect the market pperceptions about the credibility and value of its label.

Despite their differences, every certification system worth

An innovative aquaculture practice that internalizes a number of environmental issues: integrated multi-trophic aquaculture (IMTA) in the Bay of Fundy, Canada. This system combines fed species (salmon, left) with extractive species that recapture excess inorganic and organic nutrients for growth of additional crops (seaweeds, right background, and mussels, right foreground). (Photo courtesy of Thierry Chopin, University of New Brunswick, Canada).

Gulf of Carpentaria shrimp farms, Australia. (Photo courtesy of Nigel Preston, CSIRO Marine and Atmospheric Research, Australia)

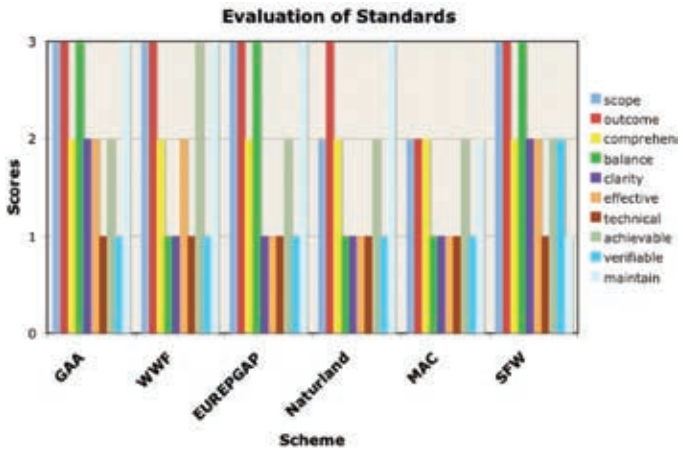

Fig. 1. Evaluation of the standards of each of 6 well-known certification schemes against 10 criteria that represent the key attributes of a well-formed aquaculture product certification scheme. The criteria are described in Table 1, and are drawn from the paper Ecolabeling in Aquaculture presented at AQUACULTURE 2010, WAS San Diego. Schemes assessed: GAA Global Aquaculture Alliance, WWF World Wildlife Fund Aquaculture Dialogues, EUREPGAP, Naturland Association for Organic Agriculture, MAC Marine Aquarium Council, SFW Seafood Watch Monterey Bay Aquarium.

its salt is designed around common principles, including allowing participation by all interested parties, making decisions in a transparent way, being accountable for decisions, and effectively producing the results advertised. A recent study considered how systems apply these principles to their internal processes, including scoping, governance, standard-setting and implementation.

In summary, credible systems set forth what is and is not covered, provide clarity on how they make decisions and on how strict their standards should be, and ensure that certification is carried out by an unbiased third party whose decisions can be appealed. These protections allow producers, retailers, consumers and other stakeholders to evaluate the benefits of purchasing or producing certified products. The market is unlikely to place a high value on certification systems that do not meet these minimums.

The minimum requirements leave ample room for substantive differences among certification systems. In practice, different certification systems seek to achieve very different levels of social and environmental performance. Some use standards that are easy to attain, while others set high levels of performance that are more difficult to achieve. For example, some programs may not certify seafood products produced in cages or net pens that rely on fishmeal sourced from wild-caught fish, whereas another program may permit the use of fishmeal as the only practical and cost-effective solution to provide essential dietary amino acids. This is a question of benchmarks – the first program has set a high performance bar with respect to fish culture, whereas the second program has set a more practically achievable performance bar. The placement of the bar is a critical aspect of certification system design – a high bar means that few products will be certified, and a low bar means that many can become certified.

The benchmarks selected may affect the cost of certification. In general, certification programs that set low performance benchmarks can certify many products, allowing them to spread the cost needed to support the system across many users. On the other hand, systems with high sustainability benchmarks may have a longer certification process and may certify fewer products, increasing the costs of certification. The actual costs will vary, however, as it may be possible to combine multiple certifications into a single auditor visit, and some systems may subsidize certification costs to encourage participation. Regardless, the costs of certification should equate to the system's traction with consumers and market leverage. Maintaining this balance in program design is essential if an ecolabel or certification program is to persist in the marketplace.

Many certification systems fall short with respect to their institutional design, consideration of impacts and cost structure. A recent evaluation of 10 key attributes of standards (Table 1) that are in use by six popular ecolabels found that most are weak and some provide for very poor representation of the important attributes. Even on effectiveness, which is a criterion designed to evaluate whether the standard would directly result in better environmental outcomes, some highly publicized ecolabeling programs rated as poor and none rated as excellent (Figure 1). This result suggests that the endorsements offered by many systems are not meaningful, and they may not provide good value to producers or consumers.

The proliferation of ecolabels and certification systems with flaws in their design and execution not only is bad for seafood business, but also ultimately creates a mistrust of labelling and certification systems in consumers and thereby undermines the concept that incentives in the marketplace can create change. Consumers usually lack the information to evaluate label claims at the point of sale and thus can be misled about the sustainability of products certified to labels that aren't credible. Fortunately, retailers are more sophisticated and increasingly act as watchdogs, recognizing some certification systems but not others in order to ensure that ecolabels are coherent and consistent in the way in which they design and apply performance criteria. Those labels preferred or required by retailers and other suppliers are likely to prosper in the future.

Choosing From the Various Options

Given the hundreds of possible certification and ecolabel systems that are now available to aquaculture producers, what are the key matters to address in choosing one (or more) to investigate? To help make these decisions, we have boiled down the foregoing discussion into a series of questions that can be posed to certification/ecolabel programs, in order to compare their attractiveness to particular producers.

Table 1. Criteria and performance indicators to evaluate the stringency of the sustainability standard applied by an aquaculture eco-labeling or endorsement scheme.

Standard Criterion	Performance Indicator	Intent
1. Scope and focus of the standard	The standard covers all the relevant impacts and issues, and requires evidence of performance that reflects the importance of the issues	Ensures that the standard covers all relevant aspects of the ecological issues of sustainability that are related to the product claim or inference of the certification and the eco-label, and that the standard does not emphasize marginal or biased issues to unduly constrain/promote award of the ecolabel or endorsement
2. Outcomes and processes	The standard covers both the processes and outcomes of the management systems for aquaculture facilities, including the type	Ensures that the standard covers both the process of management and the outcomes demonstrably achieved through such management processes and level of ongoing activity
3. Comprehensive and achievable verification	The standard is comprehensive and written so that a robust verification of compliance is feasible and achievable	Ensures that the standard covers all relevant aspects of venture performance and is sufficiently detailed that the verification procedure can determine if there is compliance, given the usual amount and quality of information available to a certifier
4. Balance	The weighting of specific indicators in the final certification decision is balanced within the standard and in the decision process leading to award of certification, consistent with the scope scope and claims of the ecolabel or endorsement	Ensures that explicit and implicit weighting of indicators and decision structures is consistent with the claims and inferences of the standard and the ecolabel or endorsement
5. Explicit and Precise	The standard is explicit, expressed in simple and clear terms, and with precise statements about expected levels of achievement set as performance indicators that include quantitative reference benchmarks	Ensures that the standard is clear and accessible to all parties
6. Universal, normative, effective	The reference benchmarks are set at specific levels that are effective in mitigating ecological impacts and protecting against issues of concern, are normative across large scale regions of the world, and apply equally to all facility and product classes	Ensures that the benchmarks against which a facility is assessed are universal and protective, are not flexible, substantively customized or optionally applied; and are drawn from community consultative processes moderated by technical assessment of the likelihood of achieving environmental benefits and resolving impacts
7. Technically Effective	Levels of achievement required from a facility/product are expressed in specific and quantative technical terms that take account of natural dynamics, uncertainty of measurement programs in space and time, use clear trigger points set against reference benchmarks, and are explicitly cautious about uncertainties in measurement systems	Ensures that verification of achievement of the standard can be carried out in an objective manner, removing many of the technical uncertainties about how to decide if there is or is not compliance with the standard where situations may be close to quantitative thresholds established by the standard, what level of evidence is required in order to inform such decisions, and guidelines for how to interpret uncertainity
8. Achievable	The reference benchmarks need to be set at or near the best performance that is expected from the class of products or facilities to be included within the standard; where this does not meet protective benchmarks set in #6 above, the capacity for interim certification is explicit, and and meets the requirements of #9 below	Provides for specific recognition that a facility/product does not fully meet the standard desired by the ecolabel through conditional certification, and to provide for a specific pathway of improvement. The reference benchmarks may be localized to countries or regions, but not to the extent that they match the spatial scales of the operatons being certified
9. Verifiable, practical	The verification of compliance with the standard is an expert and independent 3rd party system, and it involves monitoring systems and benchmarks designed and implemented with respect to the critical technical parameters, the feasibility of measurement, capacity to detect meaningful change, and relates to quantitative triggers for management responses at appropriate scales of space and time	Ensures that the verification system is based on a quantitative system of monitoring, including a graded set of predefined triggers and matching responses. This is also to provide for an objective basis to the decisions about compliance with the standard, and should be based on a set of Standard Operating Procedures for verification of each performance indicator.
10. Maintenance of the standard	There is a specified and accessible system for updating the standard and maintaining its currency and relevance to the issues that are within the identified scope of the ecolabel or endorsement	Ensures that the standard continues to be relevant to current issues in sustainability and in the technology improvements in facility operations and monitoring systems

1. Does the standard cover all the important areas of consumer concerns in my marketplace, and are the details readily available to the public?
2. Does the standard permit regional and local differences in consumer concerns and expectations to be reflected in the certification process and in the standard of performance expected?
3. Are the benchmarks used strong enough to satisfy major stakeholders, such as conservation groups, and will they then defer/defray any opposition or issues of concern?
4. Is there a history of controversy and technical dispute that might subsequently downgrade the value of the certification/ecolabel in the eyes of consumers or stakeholders?
5. Will a particular certification be required by my retailers or other sellers?
6. What is the evidence that there has been market differentiation and benefits secured by other products that have been certified/labelled, and can this be technically supported?
7. What is the average cost of securing a successful certification outcome for a business about my size, and what costs are associated with audit procedures?
8. Is there an ongoing program of advertising or other dedicated marketing support so the certification/ecolabel appeals to consumers, or does this have to be borne by the producer?
9. Will the certification be recognized by the government authorities who have a regulatory role in management of aquaculture, and will it then defer/defray any other regulatory requirements?
10. How much data and information will be required, and in what timeframe, in order for the assessment to be made?
11. Who chooses the assessors/certifiers, and how can I be sure that they have appropriate technical qualifications, their history is acceptable and will be accepted by my clients and my marketplace?

Notes

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Further Reading and Sources

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