

HAS INTERNATIONAL AQUACULTURE CERTIFICATION RESULTED IN BETTER ENVIRONMENTAL AND SOCIAL OUTCOMES OF THE INDUSTRY?

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Farmed Atlantic salmon leads the way with sustainability certification.



Abalone seed attached to substrate in a land-based system.

INTRODUCTION

At least three billion people on the planet depend on seafood for a significant portion of the protein in their diets. Although significant quantities of seafood are still fished from the oceans, the demand for fish is increasing each year and the oceans are unlikely to be able to cope with future demands. An alternative source of seafood will be required. To accommodate the growing demand for more seafood, the world must increasingly turn to aquaculture as an alternative.

Current estimates by the FAO (State of World Fisheries and Aquaculture 2018) suggest that aquaculture now supplies more than half of all seafood produced for human consumption and this is expected to reach 109 million t by 2030. Over the past 20 years or so, aquaculture – in the sea and in fresh water – has been the fastest-growing food production system on the planet and includes production of a wide range of species, from tilapia and trout in freshwater to salmon and oysters in seawater.

Despite its importance as an alternative to wild fish, poorly managed aquaculture can create its own set of new problems. Ecological damage, water pollution, antibiotic overuse, threats to biosecurity, and excessive use of fresh water and energy, could all result from poor aquaculture practices. To produce more seafood



Intensive production of macroalgae.

without increasing harm to the environment or to future human populations, it will be necessary to find new and innovative ways to operate farms and to find ways to recognize and reward farms that do the right thing. The theme of this article will be to question whether internationally-recognized certification schemes could help to achieve this.

THE RISE OF SUSTAINABILITY CERTIFICATION

There are many different types of sustainability standards around the world, with a range of different standards being developed as a response to perceived environmental and social problems that result from aquaculture. Sustainability certification is a market-based system and credible aquaculture certification schemes normally consist of three main components: standards, accreditation and certification.

Although the unit of certification varies among standards, most include the following steps:

- 1) Standards for farm-level ecological and social interactions are designed and set by a standard-holding body,
- 2) Independent auditors are appointed to check that farms comply with the set standards,
- 3) Entities that are judged to comply with the standards are

permitted to use labels and logos owned by the standard-holding body, and

4) Some type of “chain of custody” system is instituted to ensure that certified products from the farm can be identified by end-user customers.

One problem, however, is that nowadays there are so many different standards that could be applied to aquaculture operations, many farmers, members of the seafood supply chain, NGOs and consumers find the entire sustainability landscape very confusing. This has led to confusion among producers, retailers and consumers over how to recognize a credible seafood certification scheme or how to purchase seafood that has been responsibly sourced. The Aquaculture Stewardship Council (ASC), Best Aquaculture Practices (BAP), and GlobalGAP are just a few examples of the numerous certification schemes that producers might consider. In addition, many jurisdictions and national regulators impose their own aquaculture regulations.

THE CREDIBILITY OF CERTIFICATION SCHEMES

Given the range of certification alternatives, it is important to determine what constitutes a credible seafood certification system. Guidelines developed by the FAO acknowledge that sustainable development of aquaculture depends on three factors – social, economic and environmental sustainability – all of which have to be addressed proportionally. In addition, to ensure credibility, FAO Technical Guidelines on Aquaculture Certification cover:

- The standard setting processes required to develop and review certification standards,
- The accreditation systems needed to provide formal recognition to a qualified body to carry out certification assessments, and
- The qualifications and practices of the certification bodies required to verify compliance with certification standards.

The guidelines provide information on the institutional and organizational arrangements for aquaculture certification and include governance requirements that are designed to ensure that conflicts of interest do not occur.

One of the most important indicators of a credible certification scheme is compliance with international requirements set down by the ISEAL Alliance (2014). ISEAL is a global association for credible sustainability standards. Members of ISEAL are sustainability standards-holders that meet Codes of Good Practice and promote measurable change through open, rigorous and accessible certification systems. Members are supported by

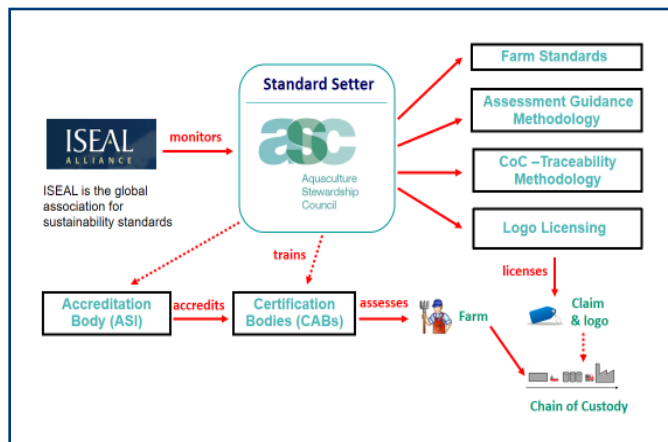


FIGURE 1. The process of accreditation and certification used by the Aquaculture Stewardship Council.

TO PRODUCE MORE SEAFOOD WITHOUT INCREASING HARM TO THE ENVIRONMENT OR TO FUTURE HUMAN POPULATIONS, IT WILL BE NECESSARY TO FIND NEW AND INNOVATIVE WAYS TO OPERATE FARMS AND TO FIND WAYS TO RECOGNIZE AND REWARD FARMS THAT DO THE RIGHT THING. THE THEME OF THIS ARTICLE WILL BE TO QUESTION WHETHER INTERNATIONALLY-RECOGNIZED CERTIFICATION SCHEMES COULD HELP TO ACHIEVE THIS.

CABs. ASI is completely independent of all standard-holders and as such helps to ensure the third-party nature of certification processes. As an example of how the accreditation and certification process works in practice, the scheme used by the ASC is illustrated in Figure 1.

In addition to setting standards, the standard-holder also selects a Chain of Custody (CoC) system for ensuring that products certified on the farm are the same products that eventually get to the end-users. In the case of the ASC, the CoC methodology used is an established process that is administered through the Marine Stewardship Council.

An important aspect of the certification process is the use of specific logos that a producer, processor or marketer can use to demonstrate to end-users that their products have been through the certification process. The logo is often displayed on the final product packaging that a customer would see on a supermarket product, for example. The license to use the logo is normally held by the standard-holding body and in most cases that body will charge for its use.

The cost for a farm to go through the certification process varies according to the type of standard required but usually the main cost is the hire of an accredited company (CAB) to undertake the farm-based certification survey. Audit fees depend on the size and complexity of the farm and on its location and the associated travel implications for auditors. In many cases, more than one auditor may be required to perform the on-site audit. To determine actual costs, farms need to contact appropriate accredited auditors.

So, given the fact that certification implies additional costs, why would a farm want to become certified? Other than in a few very specific cases, the hope that certified products may command higher market prices generally has not been borne out by recent

international accreditation bodies that are required to meet accepted international best practice.

To ensure objectivity and avoid conflicts of interest, the process of farm assessment should be carried out through a third-party process. Third-party programs offer the highest level of assurance and mean that the outcome is unbiased. Farm assessments to determine compliance with standards are normally carried out by CABs (Conformity Assessment Bodies). Another indicator of the credibility of a scheme is the way in which approved CABs are accredited and monitored. The more credible schemes usually use ASI (Assurance Services International, formerly Accreditation Services International) as a quality assurance process for approved

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experience. More important, however, is access to markets that may otherwise be denied. Many supermarkets and restaurants nowadays are publicizing their sustainability claims and these are often based on products being sourced from certified suppliers. For example, Sainsbury's, a large supermarket company in the UK, has stated that by 2020 all fish that they sell will be independently certified as sustainable. Many other supermarkets are likely to follow suit.

Another important reason that aquaculture operations may seek certification is called the "social license to operate." New farms generally need to convince local communities and regulatory authorities that they will be using best practices in their operations and becoming environmentally and socially certified often helps in this process.

Now that several of these certification schemes have been operating for a number of years, it is pertinent to ask whether they have generated any demonstrable improvements in environmental or social outcomes at the farm level. In an attempt to address this question, ISEAL commissioned a report in 2018 that aimed to understand the effectiveness of sustainability standards and certification tools in driving the adoption of more sustainable practices in certified entities. The study was carried out by the University of Oxford and the consultancy company 3keel (ISEAL Alliance 2018a). One hundred and sixteen studies that reported relevant outcomes from entities certified with a sustainability standard were filtered from an original body of over 13,000 studies from the peer-reviewed and gray literature and the evidence for practice adoption was assessed in six thematic areas that covered environmental, social and economic practices.

The report concluded that there was a strong suggestion that the technical support that the certification process brought to farmers may have been critical in supporting them to adopt more sustainable practices. It also suggested that certification often results in improved democratic organization and decision-making on farms and/or greater engagement with local communities. There was some evidence that certification and standards can contribute to the adoption of improved practices, which is typically expressed as a difference in practices between certified and non-certified entities. It must be stated, however, that most research was on the coffee and forestry industries and it is not known, therefore, how relevant the findings would be for other sectors such as aquaculture.

The Systemic Impacts of Voluntary Sustainability Standards (VSS) were reported in an ISEAL White Paper (ISEAL Alliance 2018b). Working together with the World Wildlife Fund (WWF), the report stated that the WWF supports voluntary sustainability standards as part of its effort to reduce the negative impacts of commodity production and conserve the world's biological diversity. It suggested that the ISEAL Alliance strengthens VSS in bringing about measurable change through credible standards systems and that there is increasing evidence of the certification impacts of VSS in the sectors they have been designed for. At the value-chain level,

there are clear contributions of VSS to reduced operational costs and improved reputation. At the operational (i.e. producer) level, positive impacts include increased product quality, improved labor conditions and reduced water contamination. It also stated, however, that, although VSS are known to have a positive impact in areas where certified entities operate, evidence of systemic impacts of VSS on the environment is less convincing.

Perhaps an alternative approach might be to ask farmers whether they have noticed any positive outcomes of certification. After ASC certification of his farm, the following is a quote from Nguyen Khanh Ngoc, Quality Assurance Manager, Thuan An Farm in Vietnam: "We have better disease control, better control of risks related to environmental pollution, escapes and safety in the workplace, and more effective communication with the local community."

International aquaculture certification is a complex and potentially confusing process. If the overall objective, however, is to demonstrate that products have been produced, processed and marketed in a responsible manner, then the most important thing is to check the credibility of the scheme being used. Although there is some evidence that certification schemes have produced some positive environmental and social outcomes, the evidence for this is still sparse. Perhaps this is where the schemes themselves need to accumulate more evidence to show the world that they can contribute to the future sustainability of seafood.

Notes

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THERE WAS A STRONG SUGGESTION THAT THE TECHNICAL SUPPORT THAT THE CERTIFICATION PROCESS BROUGHT TO FARMERS MAY HAVE BEEN CRITICAL IN SUPPORTING THEM TO ADOPT MORE SUSTAINABLE PRACTICES. IT ALSO SUGGESTED THAT CERTIFICATION OFTEN RESULTS IN IMPROVED DEMOCRATIC ORGANIZATION AND DECISION-MAKING ON FARMS AND/OR GREATER ENGAGEMENT WITH LOCAL COMMUNITIES.