

The Partnership Assurance Model: Accelerating Sustainable Aquaculture Improvement and Sourcing





Purpose

This White Paper outlines the need for innovation in current sustainability assurance and improvement approaches in the aquaculture sector. The Partnership Assurance Model can create transformational change for the large segment of small-scale aquaculture producers. It includes current examples of the Partnership Assurance Model in action, and identifies opportunities for companies and organizations to test, improve, and scale the partnership approach.

Remarks and Acknowledgements

This paper is the product of a collaborative process between Monterey Bay Aquarium, Resonance, SGS, Seagreen Research, Tucker Consulting Services, IDH, the Sustainable Trade Initiative, The Asian Seafood Improvement Collaborative (ASIC), and Thai Union North America.

The paper’s intended audience includes businesses, non-profits, donors, and certification bodies involved in the aquaculture sector. It makes the case for supporting the development and expansion of Partnership Assurance Models. It is not intended to be an exhaustive review and analysis and we welcome discussion and feedback. Links to useful references and resources are footnoted throughout the document.

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Contributors

Timothy Moore and Andria Denome (Resonance), Lisa Tucker (Tucker Consulting Services, LLC); Wendy Norden, Taylor Voorhees, Morgan Smith, Josh Madeira, and Shawn Cronin (Monterey Bay Aquarium); Cormac O’Sullivan (SGS), Peter Bridson (Seagreen Research); Flavio Corsin (IDH, the Sustainable Trade Initiative); Corey Peet (The Asia Seafood Improvement Collaborative), and Roxanne Nanninga (Thai Union North America).





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Glossary & Synonyms

Area/Region

A sub-national, realistic geographic area/region that involves aquaculture production with common ecological, economic, and socio-cultural attributes, which can be delineated for assurance, improvement, and verification.

Area-based Improvement

An approach that involves working with appropriate stakeholders—both local and national governments and/or the buyers—in an integrated manner beyond the farm scale to support sustainable aquaculture production, ecosystem conservation, and rural livelihoods across an entire production area.

Audit

A step in the assessment process. A systematic, documented process for obtaining records, statements of fact or other relevant information and assessing them objectively to determine the extent to which specified requirements are fulfilled (adapted from ISO 17000).

Assessment

The combined processes of audit, review, and decision on conformance with the requirements of a sustainability standard.

Assurance

The level of confidence in achieving a sustainability goal and/or standard.

Certification

The issuance of a third-party statement for which specified requirements related to products, processes, or systems have been fulfilled, and/or the fulfilment of specified conformance requirements have been demonstrated. Synonyms include third-party accredited certification, certification scheme, and ecolabel (adapted from ISO 17000).

Claim

A message used to set apart and promote a product, process, business, or service with reference to one or more of the pillars of sustainability: social, economic and/or environmental (ISEAL Sustainability Claims Good Practice Guide).

Oversight Mechanism

An assessment of the assurance provider's demonstration of competence and independence.

Partnership Assurance Model

A collaborative model for aquaculture improvement and assurance that involves global sustainability goals and standards adapted to local context, area-based improvement and verification approaches, and committed national and/or international buyers supporting improvement.

Supply Chain

A network between a company and its suppliers to produce and distribute a specific product to the final customer.

Stakeholders

Group of public and private organizations—local, national, and international—along the value chain for an aquaculture segment and/or sector operating, sourcing or managing a certain production area/region.

Sustainability Standard

Set of sustainability goals to be achieved. For our purposes, the goals are sustainability improvements for aquaculture; they are defined by the stakeholders involved in the Partnership Assurance Model.

Value Chain

Encompasses the full range of activities and services required to bring an aquaculture product from its conception to sale in its final markets. Includes input suppliers, producers, processors, and buyers, as well as the support services and enabling environments that form a dynamic market system.

Verification

Methods and confirmation, through the provision of objective evidence and oversight, of meeting specified sustainability goals and/or standards (adapted from ISO 9000).

Executive Summary

We face the critical challenge of feeding a global population projected to reach 9 billion people by 2050.¹ Over the past decade, aquaculture production has grown exponentially to meet the growing demand for seafood, representing 53% of all fish consumed, and 9% of the world's animal protein consumption while providing direct employment for over 19 million people.² Aquaculture will continue to be one of the fastest growing food sectors, and is projected to supply over 60 percent of fish destined for human consumption by 2030.³

At the same time, the rapid growth of aquaculture has caused various degrees of impact to coastal habitats and biodiversity, and the sector continues to face multiple sustainability challenges related to disease, water quality and high inputs from capture fisheries. To address limited governance and management of the sector, non-government organizations (NGOs), businesses, and other stakeholders have developed various sustainability standards, certification schemes and ratings programs over the past few decades to improve sustainability of production, and providing assurance to customers and buyers on the sustainability of the product.

However, third-party aquaculture certification schemes make up only 6% of the global aquaculture supply (as of 2015), and are primarily

concentrated in a limited number of species and countries. Aquaculture production varies greatly between geographies, scales, species, and production systems. Many of the third-party certification schemes are often better suited to large-scale, consolidated industry rather than small-scale farmers who make up the bulk of global




production. Barriers to the wider use of current assurance systems include limited local acceptance, cost, the requirement for a high degree of organization, and a focus on farm-level sustainability.

Assurance models need to evolve to reflect the variation in the aquaculture sector to meet the growing demand for seafood, while continuing to provide livelihoods for millions. Companies, non-government organizations (NGOs), and other stakeholders in the aquaculture sector need to

1. World Bank. (2013). Fish to 2030: Prospects for fisheries and aquaculture.

2. FAO. (2018). The State of World Fisheries and Aquaculture – Meeting the sustainable development goals.” Rome: Food and Agriculture Organization of the United Nations (2018).

3. World Bank. (2013). Fish to 2030: Prospects for fisheries and aquaculture.



support the development of additional assurance models that adjust to local contexts, effectively involve multi-stakeholders, extend beyond the farm by farm approach, and meet buyer and customer assurance requirements.

This white paper presents an emerging assurance model that our organizations believe can provide a scalable and inclusive model for sustainable aquaculture improvement.

The Partnership Assurance Model brings together local and national governments, farmers in a specific production region, and committed end buyers (national and international) to co-design, implement, and verify environmental improvements throughout the production process. This approach seeks to make best use of the strengths and roles of each of the partners involved, making sustainability the responsibility of all stakeholders; this includes farmers, processors, and buyers in addition to other stakeholders such as NGOs, government, input providers, banks/financial institutions, and technology companies.

Four key elements of the Partnership Assurance Model:

1. Committed multi-stakeholder involvement.

The model will engage key stakeholders in the region and the value chain, including producers (smallholder, as well as the medium- and large-scale producers), processors, buyers, input providers, technology companies, NGOs and other local, implementing partners. Partnerships

with committed national and global buyers will be an essential component in driving improvements and developing a credible verification process. National and local governments will be key stakeholders, but the timing of their involvement and role will be determined during each initiative. The partners need to agree on priority sustainability objectives, develop a timeline towards meeting these objectives, adapt standards to the area and local context, and implement a verification system.

2. Global sustainability standards applied

locally. The model builds on common issue areas in aquaculture that are identified in existing global standards. These concepts are applied in the development of sustainability standards that reflect the input of local stakeholders; they are applied at the area scale in order to accurately reflect the realities of production in a region, while also considering the goals important to stakeholders outside the region, including buyers. This strategy provides market incentives, establishes robust sustainability goals, and ensures that local-level needs are recognized.

3. Credible and fit-for-purpose verification.

This model can be both efficient, in terms of cost and scale of improvements, and legitimate, in terms of acceptance from both local stakeholders and end buyers. It facilitates sustainability improvements at a broad geographic scale, while employing tailored verification to provide efficient and legitimate assurance that is appropriate for



the area and meeting the requirements of global buyers.

4. Supported area-based improvement.

The model engages all involved parties to contribute work and/or financial support in order to achieve project goals. This approach facilitates communication between supply chain participants and stakeholders, and provides support for improvement and verification in a way that shares input, values, and costs between parties. Area-based improvements are inclusive of farms at all scales, which allows for a more comprehensive improvement strategy.

Our organizations have begun to explore and test this new assurance model:

- *The Asian Seafood Improvement Collaborative (ASIC)*⁴ has developed a shrimp improvement model for Southeast Asia in consultation with a wide range of stakeholders, using national Good Aquaculture Practices (GAP) and including important requirements of the Monterey Bay Aquarium Seafood Watch® program sustainability standards. ASIC is building partnerships with buyers, the seafood industry, and farmers in Asia and other organizations engaged in seafood improvement including Seafood Watch and SGS. Seafood Watch and SGS have developed an online improvement verification platform that incorporates the ASIC shrimp improvement program and uses an area-based sampling strategy, which is currently being applied in Vietnam.

- *IDH, the Sustainable Trade Initiative*, has led the development of a concept called Verified Sourcing Area (VSA)⁵ to accelerate the production and market uptake of sustainable commodities. It works by helping companies verify the sustainability of an entire area, so it may no longer be necessary to verify each producer, mill, or commodity individually. Through a compact, public and private stakeholders agree on priority sustainability topics and targets, the roadmap towards these targets, and the monitoring system that will measure them.

Our organizations have collaborated to develop this white paper to encourage discussion of the potential role of new partnership models to aquaculture sustainability assurance. We welcome discussion and collaboration to test, improve, and scale this approach to transform different aquaculture sectors, achieve meaningful sustainability impacts, and support companies to fulfill their sustainable seafood sourcing commitments.



4. For more information: <http://www.asicollaborative.org/shrimp-improvement-project-protocol>

5. IDH. (2018). Verified sourcing areas (VSAs): An IDH developed concept. IDH, The Sustainable Trade Initiative.

6. FAO and World Bank. (2011). The global program on fisheries: Strategic vision for fisheries and aquaculture.



Introduction

Seafood plays a critical role in global food security, providing nutrition for more than one billion people and livelihoods for approximately 57 million; aquaculture has a critical role to play as the world's fastest-growing food production system.⁶ Despite its successful growth, the aquaculture sector has experienced boom and bust cycles and has had negative environmental impacts, including habitat loss in critical ecosystems, water pollution, the introduction of invasive species, and the spread of disease.⁷ As seafood is the most traded food commodity in the world, customers and buyers in key markets like the US and the EU play a key role in supporting the sustainability of the global aquaculture sector.

Today, major seafood buyers, including institutional food services, restaurant chains, and retailers have an awareness that customers demand sustainably sourced seafood. Recent studies indicate that seafood consumers in North America, Europe, and Asia are increasingly concerned about the environmental impact of seafood production.⁸ Consumer awareness of sustainable seafood in the US has increased significantly over the last twenty years, and 70% of consumers want to hear more from companies about the sustainability of their products.⁹

An increasing number of companies that source seafood have developed, or are developing, seafood sustainability commitments. Although commitments to sustainable sourcing

are important, there are a limited number of approaches that provide assurance of sustainable production. Third-party certification and ratings programs play an important role in aquaculture sustainability; however, the limitations of these models mean additional approaches to assurance are needed to meet a broader set of needs and contexts. The following sections of this paper highlight the limitations of current global assurance models, our vision for the new Partnership Assurance Model, and two examples where this approach is being tested.

Current Sustainability Assurance Models

To address issues of uncertain sustainability management and gaps in aquaculture sector governance, various sustainability standards, codes of good practice, third-party certification schemes, and seafood ratings programs have been developed over the past 20 years. These sustainability assurance systems provide an important mechanism to deliver sustained management and assessment of key environmental impacts of aquaculture production and for buyers to meet commitments to source sustainable seafood. Assurance provides a level of confidence that compliance with (or progress toward) a sustainability standard is demonstrated. This is done by obtaining sufficient and appropriate evidence to express the level of confidence on the performance and the credibility of reporting and verification.¹⁰

7. Bone, J., et al. (2018). Best practices for aquaculture management. Guidance for implementing the ecosystem approach in Indonesia and beyond. Conservation International, Sustainable Fisheries Partnership, University of California Santa Barbara.

8. Marine Stewardship Council and Globescan. (2018). Understanding and activating seafood as consumers – Asia-Pacific. Marine Stewardship Council and Globescan. (2018). Understanding and activating seafood as consumers – Europe.

9. Marine Stewardship Council and Globescan. (2018). Understanding and activating seafood as consumers – North America.

10. ISO. (2018). ISO 19011 – Guidelines for auditing management systems.



There are a variety of sustainability assurance models in the aquaculture sector, and they generally include the following core elements:

- **Sustainability goals and standards:** To meet global sustainability goals, a standard provides rules, guidelines and/or characteristics for products, processes, and/or production methods that address environmental practices and outcomes. An assessment of compliance with a given standard can be done to provide buyers with assurance related to their sustainability claims.
- **Verification:** A systematic, independent, and documented process for obtaining and evaluating objective evidence to determine the extent to which specified sustainability standards are met.¹¹ Verification methods can include pre-assessments, full audits, surveillance audits, on-site audits, document reviews, external group or multi-site audits, unannounced audits, remote audits, etc.¹² Different levels of verification can be achieved through different levels of assessment independence (first, second, and third-party) combined with different scales and scopes (company, site/farm, area, or market segment).
- **Oversight mechanism:** Independent oversight of implementation of the assurance model, including the verification processes, to ensure impartiality and competence of the assurance provider.¹³

Currently, the most common sustainability assurance models in the aquaculture sector are third-party certification schemes and seafood ratings programs.¹⁴

Third-Party Certification Schemes

Certification is a type of third-party testament that specified requirements related to products, processes, systems, or persons have been fulfilled. The process typically begins with a client (company, farm, or group of farms) voluntarily seeking certification of performance to a set of sustainability standards. After initial certification, interim audits such as self-assessments, surveillance audits, validation audits, and unscheduled visits are used to maintain assurance.

Third-party certification schemes often incorporate accreditation as an oversight mechanism, using a separate third-party to assess their verification system's ability to carry out conformity assessment tasks. These independent third-party accreditation bodies are in turn audited to ensure consistency within certification schemes.

In the aquaculture sector the major third-party accredited certifications include Aquaculture Stewardship Council (ASC), Global Aquaculture Alliance Best Aquaculture Practices (BAP), and Global Good Agricultural Practices (GlobalG.A.P.).

Globally, third-party aquaculture certification-schemes make up only 6% of the global aquaculture supply...

11. Ibid.

12. ISEAL. (2018). ISEAL code of good practice for assuring compliance with social and environmental standards.

13. Ibid.

14. Potts, J., et al. (2016). State of sustainability initiatives review: Standards and the blue economy. Winnipeg: International Institute for Sustainable Development (IISD); Dataessentials. (2017). Foodbytes Seafood Keynote Report



Group Certification.

Some third-party certification schemes provide an opportunity for group certification, where a company or group of producers are organized into farmer organizations or cooperatives. Group certification is based on an internal control system or quality management system, where all sites undergo internal audits. The credibility of internal control systems can then be verified or certified by an independent third party. The certification process has evolved to where a sample of all producer sites are visited by the third-party certifying body for verification. Sample selection varies between certifications based on different risk assessments and selection methodologies. GlobalG.A.P. and BAP offer group certification approaches, and ASC recently launched its producer group certification requirements that will be effective in October 2019.¹⁵ In addition, BAP offers an area-based certification focused on biosecurity, and the ASC offers a multi-site certification system as well.

Seafood Ratings Programs

Seafood ratings programs provide non-voluntary assessments of seafood available in key markets, and publicly share information on the performance of these fisheries and aquaculture operations. Ratings can describe performance at varying geographic scales, from a single farm site or operation to a global industry. Often, aquaculture assessments will describe performance at a regional or national scale. This information can be used to identify opportunities for producers to



pursue improvement and certifications, as well as help businesses evaluate sourcing options.

The process for developing a rating includes drafting the assessment through the collection of data and information, internal review for consistency in application of the standards, external peer review for accuracy, and semi-public presentation and defense of the outcome. Verification strategies vary between ratings programs; however, all include a level of verification for consistency in the application of their individual standards, as well as a level of verification that information included in assessments is robust and accurate. Major seafood ratings systems include the Monterey Bay Aquarium Seafood Watch program, Marine Conservation Society, World Wildlife Fund country guides and others in the Global Seafood Ratings Alliance.¹⁶

Challenges with Current Assurance Models

Globally, third-party aquaculture certification schemes make up only 6% of the global aquaculture supply (as of 2015), primarily concentrated in a limited number of species and

15. See more: <https://www.asc-aqua.org/what-we-do/programme-improvements/group-certification/>

16. See more: <https://www.seafoodwatch.org/>; <https://www.mcsuk.org/responsible-seafood/about-our-ratings/>; http://wwf.panda.org/get_involved/live_green/out_shopping/seafood_guides/; <https://globalseafoodratings.org/>



countries. Barriers to the wider use of third-party certification schemes include limited local acceptance, the requirement for a high degree of organization, focus on farm-level sustainability, cost, and complexity. Seafood rating programs can be limited in their granularity, since assessments are often conducted at the country level, and verification systems are not standardized from one ratings program to another.

Legitimacy

As globally focused organizations, third-party certification schemes and seafood ratings programs often struggle to represent the diversity of stakeholders in the development and implementation of the sustainability standards and assurance systems. Given the global scope of their standards, certification schemes and ratings programs do not generally engage directly with local governments

and small-scale farmers in the development of their programs; this has resulted in limited buy-in or participation in many aquaculture segments and production regions. Though these schemes and

programs have started to engage governments and small-scale farmers, they can find it difficult to build support from stakeholders that were not involved in their standard development, since these standards and systems may not be well suited to local context and small-scale farmers.

Scale and Scope

As a global industry, aquaculture practices vary greatly between geographic locations, scales, species, and production systems. Many of the third-party certification schemes are well suited to large-scale industry rather than small-scale farmers who make up the bulk of global production. They provide a high level of verification so that practices at the farm level are compliant with a given standard, and that the verification system itself is applied consistently. This level of oversight can be cost-prohibitive to small-scale farmers.

As highlighted, these schemes have recently developed group certification models to allow for the entry of more small-scale farms, but implementation remains limited due to the complexity of these standards and limited incentives for small-farmers.¹⁷ Ratings programs often focus on the national/country level producing results in an aggregated and generalized description that may not capture the nuances within a given industry.

Cost

Third-party accredited certification includes an expensive auditing process, because the standards in these schemes require a high level of qualification for auditors, and typically require all sites to

Certification schemes and ratings programs with global standards can make it difficult to build support from stakeholders...since these standards and systems may not be well suited to local context and small-scale farmers.

17. Potts, J, et al. (2016). State of sustainability initiatives review: Standards and the blue economy. Winnipeg: International Institute for Sustainable Development.



be individually inspected and issued certificates. The high auditing costs to achieve certification can be prohibitive for small-scale farmers. Given this, many small farms cannot pursue sustainability improvement or verification, and their products sell to markets where sustainability assurance is in less demand. Ratings programs are often free of cost to the industry being assessed; however, conducting assessments at a scale smaller than a national- or country-scale can be time and cost prohibitive to an organization that wants to provide coverage of a large portion of the seafood market.

There is no universal standard for sustainability assurance, and certification schemes compete with one another for market share, making it difficult for any single certification to have significant coverage of any aquaculture sector at this time. Often, there is duplication of efforts by producers who need to get multiple certifications and comply with various standards to satisfy the requirements of different markets and buyers. Finding the resources to comply with multiple standards and certifications is a barrier for many aquaculture producers, particularly smallholders.

Third-party certification and ratings programs play an important role in aquaculture sustain-

ability; however, the limitations of these models mean that additional approaches to assurance are needed to steer the industry toward sustainability.

Partnership Assurance Model: Key Elements

The design of a new assurance model must reflect the variation within the global aquaculture sector and be applicable to the specific characteristics of a targeted industry segment and/or geography in order to increase the accessibility and affordability of assurance. In order to be both legitimate and efficient, the Partnership Assurance Model complements and builds on the experience and credibility of established sustainability assurance and rural development approaches, along with lessons learned from new, area-based management approaches. The aquaculture industry can also learn from emerging landscape, area, and partnership sustainability assurance initiatives in other agriculture and forestry sectors.¹⁸

The Partnership Assurance Model builds on established global sustainability standards adapted to local contexts and moves beyond an individual farm site to a broader area to provide the flexibility and collective action needed in the highly segmented aquaculture sector. This ensures a more holistic look at ecosystems, and the governance and socioeconomic structures within them. Finally, the Partnership Assurance Model will not use a certificate to market a sustainability claim to customers. It includes credible and fit-for-purpose verification processes that meet stakeholder requirements, and those of both local and national/



18. Mallet, P., et al. (2019). "Credible Assurance at a Landscape Scale – Discussion Paper." ISEAL Alliance and WWF.

international buyers.

The Partnership Assurance Model includes four key elements:

1. Committed multi-stakeholder involvement
2. Global sustainability goals localized to an area
3. Credible and fit-for-purpose verification
4. Supported area-based improvement

We believe that developing and implementing assurance models that incorporate these four

elements will foster new solutions to region- and smallholder-specific barriers to acquiring third-party and site-specific certification, resulting in less granular ratings programs.

Committed Multi-Stakeholder Involvement

The Partnership Assurance Model will incorporate multiple stakeholders involved in the aquaculture value chain¹⁹ —including suppliers, producers, processors, NGOs, buyers, local and regional/

Partnership Assurance Model



Global Sustainability Goals Localized to an Area

- Building on established global standards
- Adapted to an area scale



Credible and Fit-For-Purpose Verification

- Modular verification processes
- Oversight of verification processes
- Use of technology



Committed Multi-Stakeholder Involvement

- Producers and local industry
- National and global buyers
- National and local governments
- NGOs and service providers



Supported Area-Based Improvement

- Shared responsibility of improvement
- Opportunity for ecosystem or community-level improvement



national government, as well as the support services that form a dynamic market system—to support sustainability improvement and verification for the entire production area. Multi-stakeholder engagement processes are not unique, but the Partnership Assurance Model is different: it provides a system for local stakeholders to define their goals, and set standards and guidance to reach those goals with the support of global buyers and other key stakeholders. The partners involved will share the costs and investments to implement improvement and verification, to make the model financially self-sustaining, and not overly rely on external donor or foundation funding.

Roles and Responsibilities

Engagement by the different stakeholders will vary by the aquaculture industry and region, but we provide an overview below of the potential roles in the Partnership Assurance Model.

Producers, processors, and input suppliers

Aquaculture producer, processors, and input suppliers (e.g., feed and seed) are involved throughout the Partnership Assurance Model process to ensure that sustainability goals and standards are appropriate and applicable at an area scale in a specific local context. In this model, producers benefit from a more direct connection with processors and national and global buyers, and their support for any improvements that may need to be made. They identify issue areas, draft standards, develop and implement improvement strategies, and provide initial data for the verification process.



National and global buyers Global and national buyers are essential to the Partnership Assurance Model by supporting improvements and committing to purchase from a producing region that meets the requirements of the sustainable goal/standard. In order to ensure that the assurance requirements of a buyer are met, they are engaged in the co-design of verification processes with the producing area stakeholders. The commitments of buyers provide producers with incentive to improve. These commitments provide stable market access for producers as they make investments and adjustments to their production to improve environmental performance.

National and local governments Governments play a critical role in the development, implementation, and enforcement of specific sustainability measures at an area level, such as water pollution and disease management. Governments can provide technical support for improvement through extension services, and they can lower risks perceived by financial institutions that provide

19. Value chains encompass the full range of activities and services required to bring a product or service from its conception to sale in its final markets—whether local, national, regional, or global.



capital to producers and industry to make required improvements. The Partnership Assurance Model includes governments as key stakeholders, but the timing of their involvement, and also the specific role, will be determined by the local industry and producers in a specific area.

NGOs, service providers, and investors Global NGOs can provide guidance in the process of document development, connect different actors in the value chain, and support improvement. Local NGOs or service providers are instrumental for developing and implementing improvement projects on the ground, and they can provide important local data and information on the improvements against the established sustainability goals and standards. The Partnership Assurance Model will also seek to engage investors to provide capital to scale improvements, who will be more likely to invest in a lower-risk production system.

Global Sustainability Goals Localized to an Area

International aquaculture sustainability standards offer a useful reference, and the Partnership Assurance Model incorporates many sustainability issues as a basis for the development of locally applicable goals and standards.


The majority of globally accepted standards and codes of good practice are applied primarily at the farm scale, and the Partnership Assurance approach applies the same concepts at a realistic area scale. Given the diverse nature of the global aquaculture industry, and the varying ecological, social, and economic systems within which it operates, there is no single definition of an

aquaculture area or region that can be applied consistently at this point.

Realistic Aquaculture Area is defined by the partners based on a combination of factors:

- Potential for meaningful environmental sustainability improvement
- Governance structures such as legal jurisdictions
- Producer and industry partnerships and groupings
- Percentage of overall production sourced by the processors and buyers involved
- Risk profile based on the probability and severity of environmental impacts and other risks
- Scale at which verification and traceability are feasible

These factors will have different levels of influence on defining a realistic region based on a project or initiative. However, the stakeholders (producers, government, industry) in an area must have the willingness to develop processes for data collection for the purpose of verification, if one is not currently in place. These are the minimum requirements for implementation of an approach that involves working with appropriate stakeholders in an integrated manner beyond the farm-scale and individual supply chain to support sustainable aquaculture production, ecosystem conservation, and rural livelihoods across an entire production area.



The Partnership Assurance Model is different: it provides a system for local stakeholders to define their goals, and set standards and guidance to reach those goals with the support of global buyers and other key stakeholders.

Credible and Fit for Purpose Verification

A verification system for an aquaculture production area must allow for flexibility in design based on the needs of all stakeholders. Verification of an area—versus farm-by-farm—can decrease cost-prohibitive barriers and provide a platform to reach out to producers who are currently not participating in the market for sustainability improvement. The approach will also provide information and perspectives specific to the area and will enhance the accuracy of the improvements and transparency within the value chain, which is likely to increase the confidence of end buyers. The Partnership Assurance Model incorporates international best practices on building an assurance model that is fit for purpose, and develops verification processes commensurate with the scope, risks inherent in the sector, buyer requirements, and end uses, including the types of claims made by stakeholders involved.²⁰

Modular Verification Processes

There will always be differing requirements by buyers for the type of assurance they prefer, and

it is likely that a market of buyers will continue to require third-party certified products. However, the market for assurance approaches that can cater to all levels of small-scale production and achieve wide-scale environmental improvement will be much larger. The area-based verification approach facilitates sustainability improvements at an area scale, while offering a tailored verification approach to provide efficient and legitimate assurance that is appropriate for the area and meets the requirements of buyers and markets. The partners involved will develop a credible verification system that is appropriate to the improvement area and best meets their needs.

Oversight of Verification Processes

The Partnership Assurance Model incorporates an oversight mechanism of the verification approach as an essential element to ensure the quality, independence, and legitimacy of the methodology and organizations completing the verification. We envision an increase in area-based verification processes that document levels of compliance and progress relative to commitments, and also provide the necessary level of assurance for both internal management and external stakeholders. The partnership assurance model will include:

- External review of verification methodologies, assessments, and results;
- Increased levels of information transparency (e.g., disclosure of verification results);
- Establishment of an external stakeholder oversight committee.²¹

20. ISEAL. (2018, January). ISEAL code of good practice for assuring compliance with social and environmental standards.

21. AFI. (2018). Operational guidance on monitoring and verification: Draft for workshopping. Accountability Framework Initiative.



Use of Technology

The use of appropriate technology and data management will be important to support the implementation of new verification systems at scale, while also increasing levels of assurance, reducing costs, and potentially providing incentives and value to multiple actors in the supply chain. For example, Seafood Watch, SGS, and ASIC are testing a new online/offline verification platform to verify compliance of a group of shrimp farms, feed mills, and hatcheries to ASIC standards that have achieved benchmarking equivalency to Seafood Watch Good Alternative and Best Choice ratings (Seafood Watch Yellow and Green, respectively). For a process that requires easy capture of data in the area, the verification tool results in less costs for industry and makes inspections more accessible to small-scale farmers. Technologies compatible with area-based improvement and verification, such as remote sensing, associated data-set building, and other technologies to verify area impact, could be deployed in a more economical way.

Supported Area-Based Improvement

Historically, the cost of improvement and verification has been borne by an individual stakeholder. The partnership assurance model shares the responsibility of funding improvement efforts among stakeholders in order to make improvements more cost effective and have greater buy-in from all parties involved. The model will incorporate incentive structures and funding to support improved performance at the farm and area scale, provided by buyers, government, and other actors such as investors

and financial institutions.

An area scale for verification and improvement presents an opportunity for identifying cumulative impacts of multiple farms on the greater ecosystem and community. The stakeholder group formed in this new Partnership Assurance Model will offer opportunities for all parts of the value chain to engage directly, and to provide support for improvement work. The partnership approach will also look more holistically at improving the value chain by incorporating new technologies, extension service models, and financing to support farmers and other actors to dramatically increase efficiency while moving to more sustainable production.

The Partnership Assurance Model complements and builds on the experience and credibility of established sustainability assurance and rural development approaches, along with lessons learned from new, area-based management approaches.

Partnership Assurance Model: In Action

ASIC, IDH, Monterey Bay Aquarium, Resonance, SGS, Seagreen Research, TCS and Thai Union are collaborating to develop and test these new Partnership Assurance approaches with two innovative, but early-stage programs: ASIC and VSA approach. Our organizations have come together to share networks, insights, resources, and ownership to address the needs of aquaculture producers of all scales initially in the Southeast Asia region.



The Asian Seafood Improvement Collaborative

The Asian Seafood Improvement Collaborative (ASIC) is a Singapore-based group working to foster regional collaboration (with regional stakeholders from Indonesia, Thailand, Philippines, Cambodia, Myanmar, and Vietnam) among private sector seafood stakeholders to find creative solutions for the sustainability challenges facing their industry. ASIC conversations began in 2013 and have resulted in the development of two tools, including improvement protocols for both shrimp aquaculture (ASIC shrimp) and fisheries (ASIC fish). The core idea of ASIC is to create a platform for engagement that supports stakeholders to build their own tools for improvement that are in line with or coupled to credible, market-based recognition programs like the Seafood Watch program.



ASIC's Core Elements include:

- **Built in Asia by Asian stakeholders**, ASIC represents one of the first efforts to create an organization to give producers a voice in the sustainable seafood movement. ASIC believes this approach will create greater adoption and


promotion within stakeholders' respective communities and lead to better integration of sustainable practices in the region.

- **Seeks to incentivize producers** to perform better and rewards them for doing so. By using a tiered system, any farm that is verified as compliant with the ASIC Shrimp Standard can claim the associated Seafood Watch recommendations. ASIC Yellow is aligned with the Good Alternative recommendation and ASIC Green is aligned with the Best Choice recommendation in order to recognize producers performing at varying levels of sustainability;
- **Forges partnerships between buyers and supply chain actors** in ways that foster understanding, equity, and proper incentives to drive improvement in the supply chain along with celebrating the stories that go along with the improvements;
- **Creates the conditions that allow for technology entrepreneurs** to access Asian seafood producers, allowing the integration of technology into the industry that could dramatically increase efficiency and sustainability compliance;
- **Incorporates social and community standards** into the improvement approach and explores strategies to develop and implement new social verification mechanisms.

Verified Sourcing Areas

Verified Sourcing Areas (VSAs) is a concept initiated by IDH to satisfy the growing demand for sustainably produced commodities, which is now limited by scale and cost.²² The objective is to

22. More information: <https://www.idhsustainabletrade.com/verified-sourcing-areas/>



Verification of an area—versus farm-by-farm—can decrease cost-prohibitive barriers and provide a platform to reach out to producers who are currently not participating in the market for sustainability improvement.

create a situation in which it is no longer necessary to verify the sustainability of each producer, as long as progress is made on key sustainability themes in a specific sourcing area. A VSA Global Steering Committee,

consisting of various experts from public, private, and civil society sectors, drives the development of the concept.

The VSA concept stands on 3 pillars:

1. Establishment of a public-private agreement (the compact),
2. Transparent supply chain, and
3. Commitment of end buyers.

The compact is a sustainability improvement deal made between private and public stakeholders at the regional level. Within the broader VSA concept, compacts are expected to provide transparency on key sustainability issues such as deforestation, labor issues, and land tenure/ rights. In aquaculture, such agreements are now being developed in Vietnam, Indonesia, and other countries, and they often include a combination of environmental protection (e.g., pollution reduction) and the need to sustain livelihood (e.g., by

controlling diseases). A VSA Compact Transparency Tool is currently being designed by IDH to allow an area to verify and communicate progress to end buyers and consumers.

Challenges

The Partnership Assurance Model is at an early stage of development and application, and our organizations recognize there are a variety of challenges:

- **Identifying indicators and metrics at an area scale.** Translating existing sustainability goals, metrics, and standards from the farm to an area scale can be challenging. There is evolving work on developing best practices in the ecosystem approach to aquaculture management,²³ which the partnership model will build on; however, developing measurable indicators at an area scale is a work in progress. It is the hope of this group of authors that this paper can foster constructive discussion on this topic.
- **Uneven improvements within an area.** Buyers source from individual processors and suppliers, versus an entire area, and there could be varying levels of performance by producers and suppliers operating in a defined area. There is a possibility that producers and processors that are not improving at the same rate as others in an area could reap the benefits of overall progress made in an area towards reaching sustainability goals. The Partnership Assurance Model needs to establish credible verification approaches for buyers and processors sourcing from producers operating in an area and

23. Bone, J., et al. (2018). Best practices for aquaculture management. Guidance for implementing the ecosystem approach in Indonesia and beyond. Conservation International.



establish actions for non-performance by actors involved in the partnership.

- **Claims by non-participants.** There is also a possibility that buyers not involved in the partnership may source from the area and make the claim of supporting improvement while not contributing to the improvement. The Partnership Assurance Model must establish claims requirements and consider actions for attribution of investment in improvements. It must differentiate between the types of claims that partnership members can make, versus buyers who support the concept and purchase product from an area but are not in a partnership.
- **Traceability.** The Partnership Assurance Model focuses on area-based improvements and verification, so the level of traceability should be at minimum to the area, but the rigor of traceability systems in different programs will need to balance cost, the claim, and the level of verification. Buyers and processors may need to trace a product back to specific producers to meet food safety and other market requirements, and to make a sustainable sourcing claim if it is required by a buyer.

Conclusion

With customer demand for sustainability and transparency on the rise, now is a critical time to explore and support new assurance and improvement approaches. The Partnership Assurance Model has the potential to create transformational change for the large segment of small-scale aquaculture producers who are struggling to participate in, or are excluded from, sustainability improvements

and global markets.



Potential roles for companies and organizations

We have identified some actions that companies, NGOs, and governments can do to support the development and application of the Partnership Assurance Models:

- Contribute to the definition of aquaculture production area sustainability standards and adapt verification approaches to support assurance, data gathering, and management at this scale;
- Provide on-the-ground expertise for implementation of improvements;
- Provide sustainability goals for small-scale aquaculture producers to meet over time, and help to identify the incentive structures for improvement;
- Facilitate localized multi-stakeholder partnership approaches to aquaculture improvement and verification, build on experiences with current assurance and improvement models;
- Test new assurance models that shift the focus from farm-by-farm improvement and



verification, to area-based data collection and management, farm-level sampling, and participatory monitoring;

- Ensure the rigor and credibility of area-based approaches by advising on appropriate verification frameworks and traceability solutions;
- Capture and share learning about how farm-by-farm and area approaches can best complement each other to shift entire aquaculture regions to more sustainable production.

Our organizations recognize that Partnership Assurance Models are emerging, and we welcome discussion and collaboration to test, improve, and scale this approach to transform different aquaculture sectors, achieve meaningful sustainability impacts, and support companies to fulfil their sustainability commitments.

Please contact Tim Moore, Resonance (aqua_whitepaper@resonanceglobal.com) with comments, questions, and collaboration inquiries on this paper.





About the Partners

IDH, THE SUSTAINABLE TRADE INITIATIVE

IDH convenes companies, CSOs, governments, and others in public-private partnerships. Together we drive the joint design, co-funding and prototyping of new economically viable approaches to realize green and inclusive growth at scale in commodity sectors and sourcing areas. IDH has developed the VSA concept in field pilots and through conversations with local and global stakeholders, producers, traders, and end-buyers. For more information, visit <https://www.idhsustainabletrade.com>

MONTEREY BAY AQUARIUM

With a mission to inspire conservation of the ocean, the Monterey Bay Aquarium is the most admired aquarium in the United States, a leader in science education and a voice for ocean conservation through comprehensive programs in marine science and public policy. The Aquarium's Seafood Watch® program is part of a comprehensive initiative to improve the sustainability of global fisheries and aquaculture through scientific research, policy leadership, industry partnerships, and business and consumer engagement. More information is available at montereybayaquarium.org and seafoodwatch.org

RESONANCE

Resonance is a consulting firm delivering market-based solutions to solve the world's toughest challenges. The company has built over 300 partnerships and delivered solutions that enable businesses to achieve their growth objectives, NGOs to fulfill their missions, and development agencies to reach billions of individuals born into poverty. For more information, visit www.resonanceglobal.com

SGS

SGS is the world's leading inspection, verification, testing, and certification company. They are recognized as the global benchmark for quality and integrity. For more information, visit www.sgs.com

SEAGREEN RESEARCH

Seagreen Research delivers a variety of services in the field of sustainable aquaculture with a focus on understanding, assessing, quantifying and improving aquaculture's environmental impacts, defining "sustainable" aquaculture within broader food systems, and supporting the growth and market access of better producers.



TUCKER CONSULTING SERVICES, LLC

Tucker Consulting Services offers expertise in the field of sustainable aquaculture. Services include project management; standards and framework development; assessment, analysis, review, and reporting of scientific data and information; development of innovative assurance and verification systems; compliance support; and United States aquaculture policy.

THAI UNION AND CHICKEN OF THE SEA

Thai Union Group PCL is the world's seafood leader bringing high quality, healthy, tasty, and innovative seafood products to customers across the world for more than 40 years. In 2018, Thai Union was rated No. 1 in the Food Products Industry in the Dow Jones Sustainability Index, led by top scores for its SeaChange® sustainability strategy. Chicken of the Sea, the US subsidiary of Thai Union Group PCL, is headquartered in El Segundo, California.

THE ASIAN SEAFOOD IMPROVEMENT COLLABORATIVE

The Asian Seafood Improvement Collaborative is an innovative, stakeholder-driven platform to advance sustainable fisheries and aquaculture in Southeast Asia. For more information, visit www.asicollaborative.org



Bibliography

AFI. (2018). Operational guidance on monitoring and verification: Draft for workshopping. Accountability Framework Initiative. Retrieved from <https://accountability-framework.org/wp-content/uploads/2018/12/Op-Guidance-on-Monitoring-and-Verification-DRAFT-2018-12.pdf>

Asian Seafood Improvement Collaborative. (Accessed April 12, 2019). Retrieved from www.asicollaborative.org.

Bone, J., Clavelle, T., Ferreira, J. G., Grant, J., Ladner, I., Immink, A., . . . Taylor, N. G. H. (2018). Best practices for aquaculture management: Guidance for implementing the ecosystem approach in Indonesia and beyond. Conservation International, Sustainable Fisheries Partnerships, and University of California Santa Barbara. Retrieved from http://sp13.conservation.org/global/indonesia/media/Documents/Best_Practices_for_Aquaculture_Management.pdf

Conservation Alliance for Seafood Solutions. (2017). A common vision for sustainable seafood. Retrieved from <https://solutionsforseafood.org/resources/common-vision/>

Datassentials. (2017). Foodbytes Seafood Keynote Report.

FAO. (2018). The state of world fisheries and aquaculture – Meeting the sustainable development goals. Rome: Food and Agriculture Organization of the United Nations. Retrieved from <http://www.fao.org/3/i9540en/i9540en.pdf>

FAO and World Bank. (2011). The global program on fisheries: Strategic vision for fisheries and aquaculture. Retrieved from <http://documents.worldbank.org/curated/en/890791468315322576/pdf/695440WP0Sept00604020120Box369278B.pdf>

GFSI. (2014). GFSI global markets programme: Roadmap to safer food and market access. Accessed December 14, 2018. Retrieved from https://www.mygfsi.com/files/Information_Kit/GlobalMarketsProgramme_onepager.pdf

IDH. (2018). Verified sourcing areas (VSAs): An IDH developed concept. IDH, The Sustainable Trade Initiative. Retrieved from <https://www.idhsustainabletrade.com/verified-sourcing-areas/>

ISEAL. (2018). ISEAL codes of good practice. ISEAL Alliance. Retrieved from <https://www.isealliance.org>

ISO. (2018). ISO 19011, Guidelines for auditing management systems. Retrieved from <https://www.iso.org/standard/70017.html>

ISO. (2015). ISO/IEC 17021-1 – Conformity assessment: Requirements for bodies providing audit and certification of management systems – Part 1: Requirements. Retrieved from <https://www.iso.org/standard/61651.html>



- Kobayashi, M., Msangi, S., Batka, M., Vannuccini, S., Dey, M. M., Anderson, J. L. (2015). Fish to 2030: The role and opportunity for aquaculture. *Aquaculture Economics and Management*, 19, no. 3.
- Mallet, P., D'Hollander, D. (ISEAL); Oswald, K., Fishman, A., Gamble, L. (WWF). (2019). Credible assurance at a landscape scale – Discussion Paper 2019. ISEAL Alliance and WWF. Retrieved from https://www.isealalliance.org/sites/default/files/resource/2019-03/Credible-Landscape-Assurance-Discussion-Paper_WWF_ISEAL_03_2019.pdf
- Marine Stewardship Council and Globescan. (2018, October). Understanding and activating seafood consumers – Asia-Pacific. Retrieved from https://www.msc.org/docs/default-source/default-document-library/for-business/msc-globescan-understanding-consumers-webinar-deck---asia-pacific.pdf?sfvrsn=1abf2180_4
- Marine Stewardship Council and Globescan. (2018, October). Understanding and activating seafood consumers – Europe. Retrieved from https://www.msc.org/docs/default-source/default-document-library/for-business/msc-globescan-understanding-consumers-webinar-deck---europe.pdf?sfvrsn=55bdd33f_4
- Marine Stewardship Council and Globescan. (2018, October). Understanding and activating seafood consumers – North America. Retrieved from https://www.msc.org/docs/default-source/default-document-library/for-business/msc-globescan-understanding-consumers-webinar-deck---north-america.pdf?sfvrsn=5983a2de_6
- Molenaar, J.W., Gorter, J., Heilbron, L., Simons, L., Vorley, B., Blackmore, E., Dallinger, J. (2015). “Sustainable sector transformation: How to drive sustainability performance in smallholder-dominated agricultural sectors?” (White Paper 1). Commissioned by IFC. Aidenvironment, NewForesight, and IIED.
- Roheim, C. A., Bush, S. R., Asche, F., Sanchirico, J. N., and Uchida, H. (2018, August). Evolution and future of the sustainable seafood market. *Nature Sustainability* 1, 392–398.
- Potts, J., Wilkings, J., Lynch, M., McFatridge, M. (2016). State of sustainability initiatives review: Standards and the blue economy. Winnipeg: International Institute for Sustainable Development (IISD).
- ISO. (2015). ISO/IEC 17021-1 – Conformity assessment: Requirements for bodies providing audit and certification of management systems - Part 1: Requirements. Retrieved from <https://www.iso.org/standard/61651.html>
- World Bank. (2013). Fish to 2030: Prospects for fisheries and aquaculture. Washington, DC: World Bank.
- UN. (2015). UNGP Reporting Framework: Assurance of human rights performance and reporting. Mazars and Shift.

