

A Joint M&E Framework

Aquaculture Stewardship Council and Sustainable Fisheries Partnership



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Background

Aquaculture improvement projects have the ability to play a key role in encouraging environmental and social improvements at scales beyond the farm level. The ASC have developed an **Improver Programme** (IP) comprised of a set of procedures and tools to ensure that ASC standards or best practice improvements are consistently and effectively implemented by the producers. The IP model encourages uptake by groups of farmers and provides processes for group engagement in the improvement project. ASC and SFP are collaborating to integrate their assessment and monitoring frameworks to measure the progress of the ASC IP from initial gap analysis through to the desired end goals of farms and their subsequent impact at scale.

The framework builds upon the aligned data mapping exercise conducted by the ISEAL Innovations Fund project, **Integration of Seafood Certification and Jurisdictional Assurance Models** supported by Swiss State Secretariat for Economic Affairs (SECO).

The framework considers data collected across the ASC's certification and improver programmes, SFP's FishSource programme and Monterey Bay Aquarium's Seafood Watch Programme to (1) map improvements and existing ratings at various scales (farm, province/state and country respectively), (2) integrate data from aquaculture improvement projects (AIPs), and (3) align these with the UN Sustainable Development Goals to measure improvements and collective impacts at scale.

Desired outcome: Verified improvement progress across AIPs in a common jurisdiction demonstrate improved performance in select environmental indicators at the provincial level (as demonstrated against FishSource scores) and the national level (as demonstrated across SFW scores).

Process, information, and indicators

ASC

Farms in ASC's IP are measured against the requirements of the ASC Shrimp Standard. However, at the onset of an AIP, a farm is not yet performing at these requirements. Therefore, ASC have developed a phased approach to improve performance to a level where the producer is certifiable by the end of the AIP. Indicators are grouped into these phases (Table 1) based on whether improvements can be made to meet the requirements and the difficulty in achieving this. For example, indicators requiring that farms do not destroy mangroves must be met in order to be eligible to conduct an AIP, as this is a requirement for ASC; mandatory indicators are largely social indicators that must be met early in the programme; optional indicators are those less impactful environmental and social indicators that may not be necessary for farms that elect a better practices pathway over an ASC certification end goal.

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Data from the verifications of improvements against these phases provide a stepwise tracking of progress made on the water/at the site. When farms achieve ASC certification, we can link these improvements to the continued high level of performance.

Table 1. ASC IP Phases and proportion of indicators to be achieved by category

Phase 1	100% essential; 10% mandatory; XX optional
Phase 2	100% essential; 40% mandatory; XX optional
Phase 3	100% essential; 70% mandatory; XX optional
Phase 4 (completion)	100% essential; 100% mandatory; 100% optional

SFP

SFP’s **FishSource aquaculture profiles** (FS Aqua) provide provincial/state-level assessments on the management of aquaculture in place to reduce its environmental impact. These reports evaluate a set of five common topics (e.g., the regulatory framework, the organisation of the industry, water quality and disease management, and marine feed ingredient use) that can be aligned to demonstrate environmental performance at a scale beyond the farm. Whenever there is an overlap in geography between AIPs and FS Aqua profiles, there is an opportunity to assess whether AIPs are impacting these scores. As the overlap increases, so does the likelihood that any changes in one or more scores may be due / or attributed to an AIP.

Additionally, the **AIP Directory**, maintained by SFP, provides a transparent tracking of AIP progress against defined stages. These stages (Table 2) differ from ASC IP phases, in that they consider the capacity needs and relationships critical to implementing and supporting a project, and not just a focus on the ‘on the ground’ performance. Given that AIP stage 5 captures AIP related improvements on the water, we apply the ASC IP phases to add detail to those improvements.

Table 2. The five stages to an aquaculture improvement project.

Stage 0 – AIP Identification	The supply chain recognizes the need to make improvements to aquaculture production within a specific area.
Stage 1 – AIP Development	An AIP scoping document that identifies potential improvement recommendations and participants is produced.
Stage 2 – AIP Launch	An AIP workplan with agreed improvement recommendations, participants, and activities is published.
Stage 3 – AIP Implementation	AIP participants conduct activities under the workplan and report on progress.
Stage 4 – Improvements in Aquaculture Management	AIP activities result in verifiable improvements to aquaculture management or policy.
Stage 5 – Improvements on the Water	Management or policy improvements result in verifiable changes on the water.

SFW

Monterey Bay Aquarium's [Seafood Watch](#) provides country level aquaculture assessments against environmental criteria, similar to SFP's regional assessments but focus on impact as opposed to the management of impact. These reports evaluate a set of common environmental impacts topics (e.g., feed use, water quality, effluent, disease management etc.,) that can also be aligned to demonstrate the performance at scales beyond the farm (in this case the national-level). These country level assessments add an additional scale at which we can introduce environmental indicators for tracking improvements.

UN Sustainable Development Goals

UN member states adopted the 2030 Agenda for Sustainable Development. The blueprint is made from [17 Sustainable Development Goals \(SDGs\)](#). Under each SDG are a number of targets to achieve by 2030 – these provide a measure of what progress industry and governments are making, allowing the public to make informed choices in their purchasing or voting. The SDGs are one of the best indicators of how society is doing to achieve a sustainable future.

The framework recognises which SDGs the ecological and social indicators align with to use these improvement data as a measure of collective contribution to meeting SDG targets. In development of this framework, we identify the relevant SDGs and continue to develop how the framework will incorporate measures to monitor progress.

M&E Framework

The draft framework provides a roadmap for how we will monitor and evaluate impacts; it is a living document that will adjust as work evolves. The ASC IP is in its pilot phases, and as such, revisions are expected. Data across these key information assets are mapped through the attributes of farms in the ASC IP, and the certified farms, country and regional assessments. The following framework provides our defined indicators across various scales to demonstrate improvements.

Building from FS Aqua profiles and incorporating verified performance from AIPs, the framework identifies common impact areas across various geographic scales. This relies on the sharing of data and common goals for environmental improvements. We theorize that the implementation of numerous AIPs in a shared region will drive scaled improvements, as evidenced through regional and country assessments.

Figure 1. Diagram depicting key relationships and variables for indicators and data sources.

Legend:

Programme	Scope
FishSource	Province/State
ASC IP	Farm
AIP directory (AIPs)	Sub-province/state
SFW (ratings)	Country
SDGs	NA

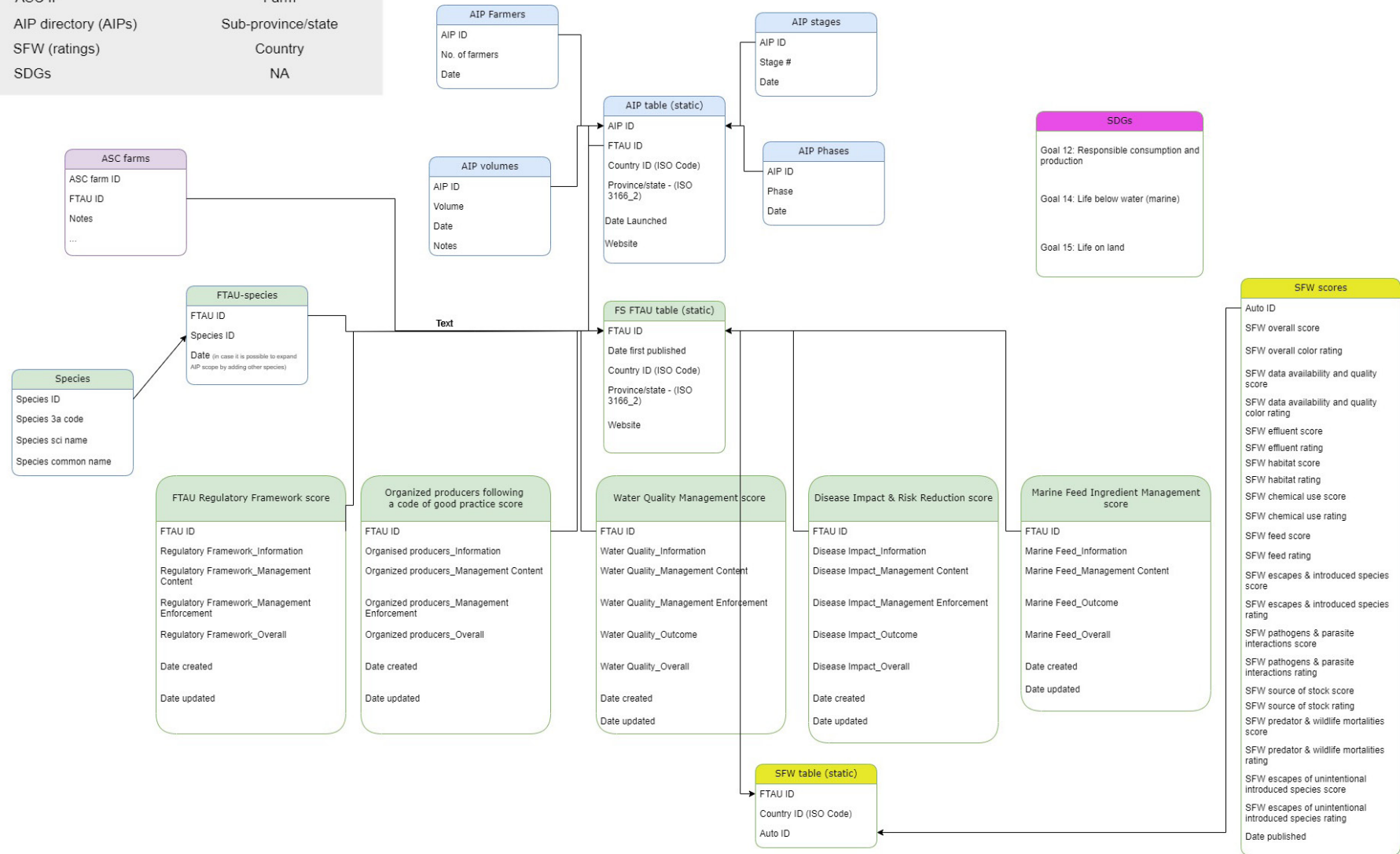


Table 3. Proposed monitoring and evaluation framework.

Suggested Indicator & Information sources

Impact Area	Indicator Scale				
	Farm	Aquaculture Improvement Project	Province/state	Country	Global (Aligned SDG)
Growth of Improvement Programs	Numbers & volumes of farms/ AIP	Numbers & volumes of AIPs/ region/country	Fish Source Regulatory Framework Score	SFW Rating	"Goal 14: Life below water (marine). 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution"
	ASC + AIP Directory	ASC + AIP Directory	FishSource	MBA SFW	TBD
Increased uptake of certification	Numbers of farms & volumes committed to AIP2ASC and AIP2BP	Numbers & volumes AIP2ASC and AIP2BP, by production system, single and group	Numbers & volumes AIP2ASC and AIP2BP, by region	Numbers & volumes AIP2ASC and AIP2BP, by country	"Goal 14: Life below water (marine). 14.7: By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism"
	Numbers & volumes of certified farms from AIPs		Numbers & volumes of certified farms per region from AIPs	Numbers & volumes of certified farms per country from AIPs	
	ASC	ASC	ASC + AIP Directory + Aquaculture Management Areas	ASC + AIP Directory	TBD
Progress in AIPs	Entry performance against baseline at individual farms	Entry performance against baseline per AIPs grouped by AIP2ASC, AIP2BP	"Fish Source Organized Producers Following Code of Good Practice Score"	Country level Criterion 1 (Data)	
	Farm indicator progress across ASC IP Phases within AIP Stage 4	AIP indicator progress across ASC IP Phases within AIP Stage 5	"Fish Source Organized Producers Following Code of Good Practice Score"	Country level Criterion 1 (Data)	
	ASC gap analysis, Progress reported every 6 months	ASC	SFP FS	MBA SFW	

Indicator Scale					
Impact Area	Farm	Aquaculture Improvement Project	Province/state	Country	Global (Aligned SDG)
→ Water Quality & Effluent	Baseline + 6month updates: water quality scores for farms committed to AIP2ASC and AIP2BP	Baseline + 6month updates: water quality scores AIP2ASC and AIP2BP by region, production system, single and group	Provincial / Regional Water Quality Management score + Change in one or more (or in the average) of the FS scores		"Goal 14: Life below water (marine). 14.7: By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism"
	Baseline + 6month updates: effluent scores for farms committed to AIP2ASC and AIP2BP	Baseline + 6month updates: effluent scores AIP2ASC and AIP2BP by region, production system, single and group	Provincial / Regional effluent scores + Change in one or more (or in the average) of the FS scores	Country level Criterion 2 (Effluent)	"Goal 15: Life on land. 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally"
	ASC	ASC	SFP FS	MBA SFW	TBD
→ Habitat	Baseline + 6month updates: habitat scores for farms committed to AIP2ASC and AIP2BP	Baseline + 6month updates: habitat scores AIP2ASC and AIP2BP by region, production system, single and group	Regional Habitat Protection and Regeneration scores (in development) + Change in one or more (or in the average) of the FS scores	Country level Criterion 3 (Habitat)	"Goal 15: Life on land. 15.9: By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts"
	ASC	ASC	SFP FS	MBA SFW	TBD
→ Chemical Use	Baseline + 6month updates: chemical use scores for farms committed to AIP2ASC and AIP2BP	Baseline + 6month updates: chemical use scores AIP2ASC and AIP2BP by region, production system, single and group	Provincial / Regional Disease Impact and Reduction scores (as proxy)	Country level Criterion 4 (Chemical Use)	"Goal 15: Life on land. 15.9: By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts"
	ASC	ASC	SFP FS	MBA SFW	TBD
→ Marine Feed Ingredient	Baseline + 6month updates: feed scores for farms committed to AIP2ASC and AIP2BP	Baseline + 6month updates: feed scores AIP2ASC and AIP2BP by region, production system, single and group	Provincial / Regional Marine Feed Ingredient Management score + Change in one or more (or in the average) of the FS scores	Country level Criterion 5 (Feed)	"Goal 14: Life below water (marine). 14.7: By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism"
	ASC	ASC	SFP FS	MBA SFW	TBD
→ Escapes	Baseline + 6month updates: escapes scores for farms committed to AIP2ASC and AIP2BP	Baseline + 6month updates: escapes scores AIP2ASC and AIP2BP by region, production system, single and group		Country level Criterion 6 (Escapes) & Country level Criterion 10X (Introduction of Secondary Species)	
	ASC	ASC		MBA SFW	

Indicator Scale					
Impact Area	Farm	Aquaculture Improvement Project	Province/state	Country	Global (Aligned SDG)
→Disease Impact & Risk Reduction	Baseline + 6month updates: disease management scores for farms committed to AIP2ASC and AIP2BP	Baseline + 6month updates: disease management scores AIP2ASC and AIP2BP by region, production system, single and group	Provincial / Regional Disease Impact and Risk Reduction score + Change in one or more (or in the average) of the FS scores	Country level Criterion 7 (Disease, pathogen and parasite interaction)	"Goal 14: Life below water (marine). 14.7: By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism"
	ASC	ASC	SFP FS	MBA SFW	
→Broodstock source	Baseline + 6month updates: broodstock scores for farms committed to AIP2ASC and AIP2BP	Baseline + 6month updates: broodstock scores AIP2ASC and AIP2BP by region, production system, single and group		Country level Criterion 8X (Sources of stocks)	"Goal 14: Life below water (marine). 14.7: By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism"
	ASC	ASC		MBA SFW	TBD
→Wildlife Mortalities	Baseline + 6month updates: wildlife mortality scores for farms committed to AIP2ASC and AIP2BP	Baseline wildlife mortality scores AIP2ASC and AIP2BP by region, production system, single and group		Country level Criterion 9X (Wildlife Mortalities)	"Goal 15: Life on land. 15.9: By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts"
	ASC	ASC		MBA SFW	TBD
Improvements at Scale	Sub-indicators from ASC's IP to input farm level improvements	AIP Stage (2,3,4,5) - progress indicator	FishSource Status scores across indicators	MBA SFW Assessment scores	"Goal 12: Responsible consumption and production. 12.2: By 2030, achieve the sustainable management and efficient use of natural resources"
	measuring performance and progress of aquaculture producers in a transparent and credible way.	Number of stage indicators (meaning the number of S 2 to S5 indicators within a certain period of time)	FishSource Aquaculture scores (<6, ≥6, ≥8 or 10)	SFW Assessment Final Score (0-10)	
	ASC	ASC	SFP FS	MBA SFW	TBD

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