ASC Monitoring & Evaluation System

May 2017

Document history

Version	Date	Description of document
0.1	November 2015	Internal draft for comments
0.2	April 2017	Internal draft for public consultation

Executive Summary

The Aquaculture Stewardship Council's (ASC) mission is to transform aquaculture towards environmental sustainability and social responsibility using efficient market mechanisms that create value across the chain. A robust Monitoring and Evaluation (M&E) system is key to understanding and improving the effectiveness of ASC's activities and strategies, as well as to demonstrate results and impacts to our stakeholders.

This document explains how the ASC M&E system was developed and how the different components of the M&E system (theory of change, results chains, indicators, in-depth evaluations and reporting) are linked. It also outlines how the design of the M&E system will be integrated into normal business operations to increase effectiveness, particularly in terms of ongoing performance monitoring.

This document also describes the procedures collecting, analysing and managing M&E data and how this data is used for reporting of results. It shows how ASC uses its M&E system to measure short and medium-term change, monitor its activities and their results on a continuous basis, and periodically evaluate the actual results against the intended ones. It allows ASC to understand how short and medium term results contribute to long term impacts and how the M&E system helps ASC to be accountable to stakeholders (prove) and for internal learning purposes (improve).

It is important to note that continuous improvement is a part of all processes at ASC. This document should be seen as part of the learning process that will evolve and improve over time, with feedback loops from our M&E systems, as well as input from stakeholders.

This document and the online Consultation Survey is available on our website. For questions on other internal documents, please contact standards@asc-aqua.org.

Questions for Stakeholder Consultation

1. Reviewing this document, do you understand the change ASC is trying to achieve, and the goals and strategies that are used to achieve them? What is not clear?
2. Are there any key impact areas missing?
3. Does our M&E system seem meaningful *and* feasible?
4. Based on your experience, are there any potential areas for positive or negative outcomes that are not reflected in the document (unintended effects)?
5. Are there any assumptions that we are missing or are not clear?
6. Any other comments, questions or suggestions?

1. Introduction and Background

Over half of the seafood consumed globally comes from aquaculture. As the world's population continues to increase, the drive for responsible, protein-rich food sources increases with it. Aquaculture is currently the fastest growing food-production system in the world. As the sector grows, so does its footprint on the environment and local communities.

The Aquaculture Stewardship Council (ASC) was established in 2010 by the World Wide Fund for Nature (WWF) and the Sustainable Trade Initiative (IDH) to address this very challenge, together with other existing and future initiatives and organisations. The ASC aims to transform the world's seafood markets by promoting and rewarding responsible fish farming practices through a market-oriented certification and labelling programme, resulting in minimised negative environmental and social impacts. This forms the basic "theory" of ASC:

This theory was further outlined in a high level narrative Theory of Change (ToC) that was approved by ASC's Board in 2014, see Annex 1. In the past year, ASC has been investing in elaborating the ToC and developing a M&E system around it in order for ASC and its stakeholders to:

- better understand the effectiveness of its activities and strategies in contributing to change in the sector
- provide valuable information on improvement areas including implementation of the standard, uptake and gaps in the compliance requirements.

ASC makes use of the best practices guidelines as set out by the ISEAL Alliance Code of Good Practice for Assessing the Impacts of Social and Environmental Standards (the Impacts Code). The Impacts Code offers a framework for building a M&E system capable of tracking and examining implementation and results of these activities. As a full ISEAL member, ASC is committed to implementing the Impacts Code including publicly reporting on the results.

The guiding principles for the ASC M&E system include: keeping it simple and practical (lean), build upon strengths, broad participation of users, accountability, and transparency.

The initial M&E system was based upon the 2014 ToC document and organisational documents including the organisational Logframe and Strategic Plan. Consultation with ASC staff in 2015 and 2016 led to the development of the draft results chains and the determination of critical pathways. Indicators with definitions and protocols were drafted to set up a practical and yet functional M&E framework.

Testing of the indicators showed two main areas for improvement: data accessibility and data quality. An important data source are audit reports. Significant advances were made in the past year by introducing measures to check (100%) completeness (of the data) in audit reports and implementing an IT solution to improve data quality and better manage data. The organisational wide database is expected to be operational in 2018. In the meantime, a number of measures being implemented in order to improve data quality, including creating a template for audit

reporting, regular calls/webinar with auditors and a yearly in-person meeting with certification assessment bodies (starting from 2016).

Based on the data analysis and lessons learned, the results chains and indicators went through another round of internal consultation at the end of 2016. This included a broad organisational review with all of the departments to understand the different user information needs. Feedback and adjustments were made, as well as internal alignment with other organisational planning and management tools. This process has improved the value of the M&E system with additional benefit of creating organisation buy-in and support for the M&E system.

The indicators and definitions have been reviewed to consider key international frameworks and initiatives including WWF and IDH, as well as alignment with the *SDGs and ISEAL's Common Core.* ASC is also working with partner organizations to share and leverage data from other processes such as chain of custody with Marine Stewardship Council (MSC) and assurance with Accreditation Services International (ASI).

The improved results chains and indicators were presented to the ISEAL M&E Peer Learning group for further input and adjustments in March 2017 and can be found in Annex 2.

2. Scope

The scope of the ASC M&E system is reflected in the M&E framework (see page 9) and focuses on three major result areas:

(i) social and environmental performance of the farm
(ii) system effectiveness and efficiency and
(iii) market performance.

In terms of farm level performance, the ASC programme covers a wide range of aquaculture species and the list of species is expected to grow. In order to ensure an effective system, specifically in the area of farm social and environmental performance, ASC is adopting a stepwise approach for its M&E system that considers the main potential impact in terms of coverage and hotspot impact areas. The initial focus will be on the two key species, salmon and shrimp, (out of current eight species standards) for which ASC offers certification. These species also have the largest number of certified farms to date.

The intention is to include all other farmed species covered by the programme in the long run. Once the framework has been tested and validated, the ASC will gradually roll it out to other species and other areas of work for internal use. As such, this document should be seen as a living document that will change over time to reflect learning and improvement.

For this defined scope of salmon and shrimp, the following sustainability areas have been identified as the most critical at this pilot stage. They may be adapted for other species and after the pilot phase of the next 3 years:

- Water quality
- Benthos state
- Feed utilisation
- Antibiotic use/disease management
- Wildlife
- Habitat loss or rehabilitation
- Working conditions, including overtime

- Wages
- Local community

The M&E system focuses on measuring sustainability impacts of producers that are in compliance with ASC performance based standards. The criteria and indicators in the standards serve as both compliance *and* M&E data points, tracking on-farm results. The M&E system will monitor at a farm/producer level as well as at supply chain level. The Theory of Change is designed for the ASC system as a whole and the result chains focus on the key desired outputs and outcomes and associated strategies to realise the change. Not every issue can be monitored, nor every aspect of the Theory of Change tested, especially in this initial phase of the M&E system build-up. Being a young organisation, some main constraining factors for a M&E system include availability and accessibility of quality data, limitations of collecting data through the audit process and data management systems.

Practice versus Performance Based Standard

Process or practice based standards outline HOW results are to be achieved and require implementation of a management system (e.g. is there a water quality management system?). In contrast, a performance based standard, focuses on WHAT result must be achieved setting specific targets that must be met in order to be in compliance (e.g. Minimum dissolved oxygen (DO) concentration in water discharged Requirement: 3 mg/l).

The other two main areas of the M&E system, system effectiveness and market performance, will be organization wide.

3. Defining the Intended Change

The long-term goals and desired impacts of ASC are set out by the mission, vision and Theory of Change.

The mission of the ASC is

> *To transform aquaculture towards environmental sustainability and social responsibility using efficient market mechanisms that create value across the chain.*

By carrying out this mission, ASC aims to achieve its Vision:

> *A world where aquaculture plays a major role in supplying food and social benefits for mankind whilst minimising negative impacts on the environment.*

The building blocks of the ASC M&E system include the Theory of Change, more detailed results chains, the M&E Framework and indicators.

3.1 ASC's Theory of Change

The ASC initially defined its intended change in a high level narrative Theory of Change which was formally adopted by the ASC Board in 2014. ANNEX 1. The narrative Theory of Change was later complemented with detailed results chains, which show causal relationships between the change ASC wishes to make (goals) and how it expects to get there. Based on the more detailed results chains, indicators were developed to closely monitor if the expected outcomes are achieved. By making explicit how we expect our activities to lead to our intended change, and testing this

through our M&E system, the Theory of Change enables us to continuously learn and refine our strategies.

The ASC will be seen to have achieved its mission if, as a result of ASC actions:

- Aquaculture is transformed towards environmentally sustainable and socially responsibility
- There is an increased global demand for (sales of) ASC certified seafood.

These two effects will together be called ASC's Vision of Success. The ASC's vision of success is captured and explained in the Theory of Change (ToC). As the name suggests, the Theory of Change highlights the intended changes that *hypothetically* will occur as a result of implementation of a ASC strategies. ASC core strategies are:

- Strengthen and develop the ASC global standards and certification programme. This will include defining responsible fish farming performance and practices. The ASC Standards are developed for species with high economic value. Based on global best practices[1], social and environmental requirements for aquaculture of these species are identified.

- Increase the Output of certified seafood and availability of labelled products through focus on key countries particularly in Asia, Europe and the Americas. Driving changes in farming practices by harnessing market forces. Increasing stakeholder awareness on a retail-level and exposing consumers to the ASC's logo, will increase the global demand for responsibly farmed seafood such that it is a viable practice.

- Promote ASC successfully with stakeholders, including consumers, and raise awareness of the programme. To do this successfully ASC will employ rigorous independent and transparent accreditation and certification processes. The processes follow the FAO guidelines and the ISEAL Codes of Good Practice (the Assurance Code). They are implemented by professional and competent bodies and their personnel. Credibility of the programme gives standard users confidence and trust leading to more buy-in and more demand for ASC certified products.

- Agree and make operational ASC collaboration with other relevant certification and ratings organisations. Collaborating with actors in the aquaculture sector, scientific community, environmental and social groups, existing standard schemes (including and not limited to fisheries and aquaculture), and other stakeholders to gain synergies and efficiency in reaching the ultimately shared goal of more responsibility in the sector.

- Strengthen ASC organisational development. Last but not least, healthy development of the ASC as an organisation is of paramount importance to create a strong foundation for realising its mission and vision.

The Theory of Change reflects the long-term process of how we bring about change, to achieve our mission in the long run. It also reflects the most important external factors that influence the success of our program.

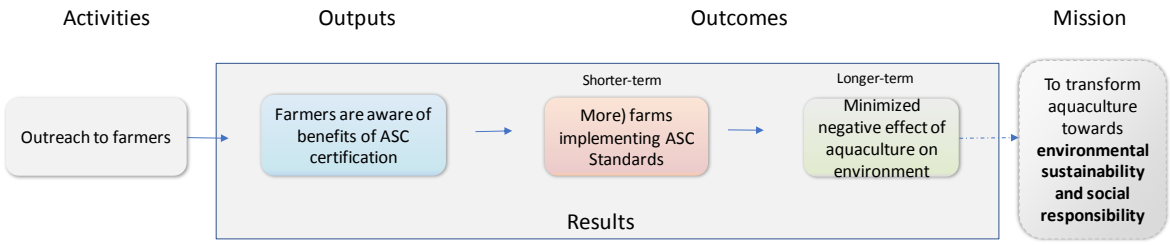
3.2 Results chains

The results chains complement the ToC and illustrate the process of how ASC sees the change takes place and can be found in Annex 2.

[1] ASC definition of 'best practice': at the launch of a standard, approximately 15 per cent of the best performing farms will be able to meet that standard's requirements.

Drafting the results chains starts at the Vision of Success and ASC's goals. The questions asked areas to, what has to happen in order to achieve the desired goals and how do we define the results? This also helps us identify and understand - IF we have not achieved our goals – what has to change in order for us to reach our goals? Through the results chains, we make explicit how we expect our strategies will lead to the expected outcomes and how these outcomes contribute to impacts.

The results chains are displayed in four stages: long term and short term outcomes, outputs and activities. This is highlighted in the following example of one simplified results chain.



Intended Short and Longer Term Impact and Results

ASC's **Mission is to** *transform aquaculture towards environmental sustainability and social responsibility* that preserves the environment, biodiversity and water resources, while improving farmers, workers and communities' wellbeing.

Expected **outcomes** that will contribute to these impact areas will occur at different rates depending on many factors, including enabling and hindering factors, as well as many assumptions. Some of these are highlighted here and more details in the M&E Framework (page 9).

Longer term outcomes

- Minimised negative effect of aquaculture on the environment
- Improved working conditions and enhanced positive effect of aquaculture on the local community
- Increased efficiency through reduced production costs, and
- Increased sales of ASC certified fish to make responsible farming viable.

Shorter-term outcomes:

- Increased number of farmers implementing the ASC standards and better aquaculture practices.
- Credible system that rigorously and transparently verifies changes on the farm level and that inspires stakeholders with trust and confidence, leading ultimately to more demand for responsible certified products.
- Market preference for certified products. When a buyer chooses to purchase ASC certified fish, certified farms are rewarded for their responsible practices through that market preference. Purchasing preferences increase demand and market access for certified products.

Outputs are direct results from the implementation of activities. Outputs are the stepping stone to shorter-term outcomes and include:

- Farmers are aware of the benefits of ASC certification
- Accessibility of the ASC programme
- Effective, efficient and transparent programme
- Expansion of the programme scope
- Increased awareness of benefits of ASC certified fish

As the programme becomes more visible to the public, there is more awareness of the benefits by both farmers, buyers and consumers. The assumption is that this increased awareness of the benefits leads to more farmers embarking on implementation of the ASC standards, and more influence on market preference for certified fish creating more demand on farmers to implement the environmental and social requirements of the standard to get certified.

Assumptions

The Theory of Change and results chains are *theories* of how the ASC programme works. There are many **assumptions** built in the results chains that are important to the ability of ASC to achieve its mission and have impact:

- Assumptions that explain why each result or change is necessary to achieve the long-term impact
- Assumptions about the context in which ASC operates as a global standard
- Assumptions about the connection between specific activities and the incremental results they are expected to generate.

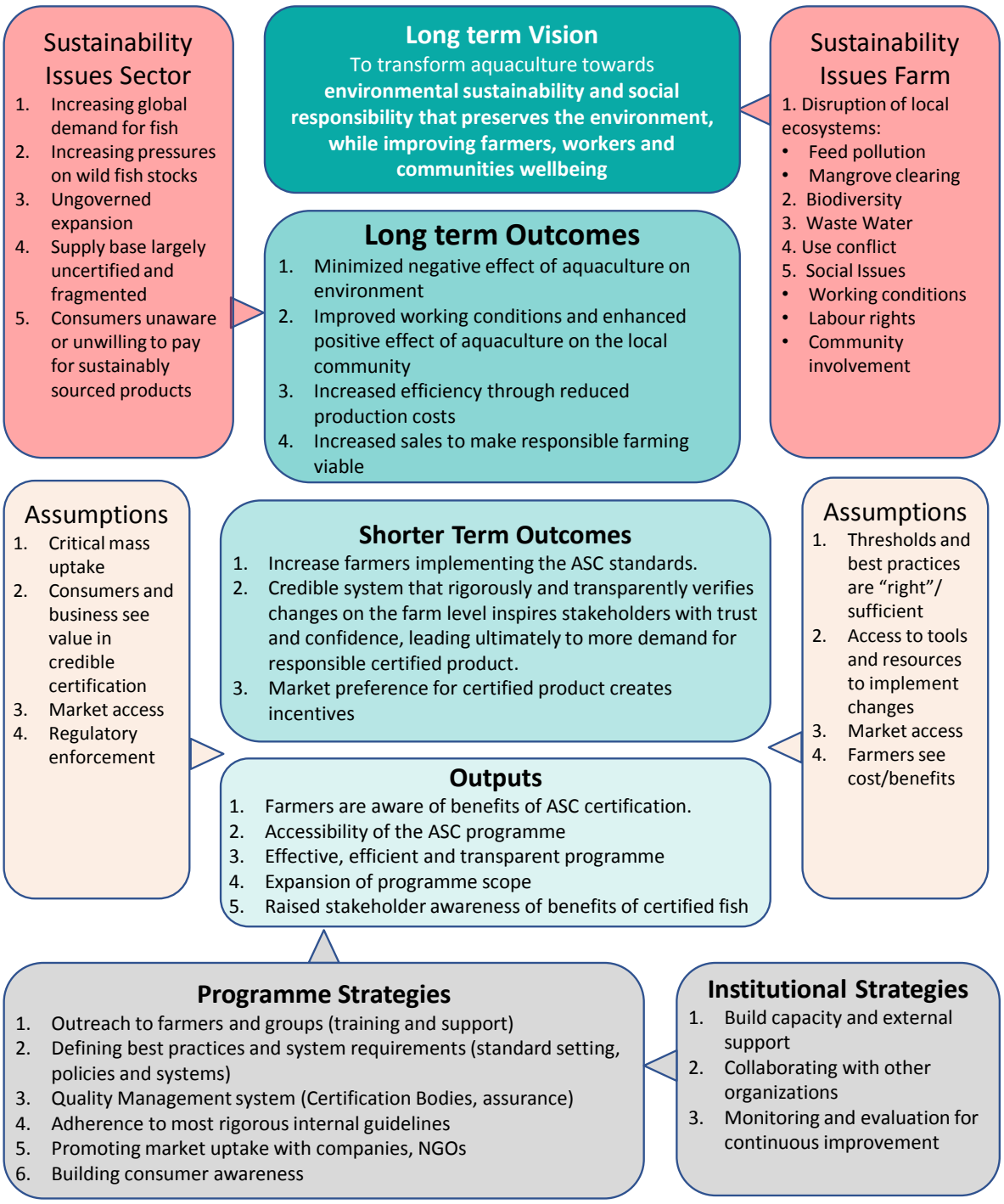
There are assumptions at all levels of results, assumptions about how certain activities will lead to specific results and how these in turn can lead to further changes. The M&E system will be testing these assumptions to build evidence on what works under what conditions and to adjust activities and focus.

It is important to note that the reality of change is much more complex. However, by keeping the results chains simplified, we can focus on core strategies and results, see Annex 2.

3.3 M&E Framework

The ASC M&E Framework describes the sustainability issues that ASC is responding to at farm and sector level, the long-term goals, expected outcomes, strategies to achieve them and the assumptions in order to be successful in bringing about change. See the ASC M&E Framework on the following page.

ASC M&E Framework:
Defining the Intended Change



3.4 Unintended effects

The Theory of Change and the results chains are the hypothesis or theory of how ASC intends to make change happen. While it is based on the best knowledge, there can be changes (positive and negative) that occur that ASC did not anticipate – these are unintended effects.

unintended effects (or unanticipated effects) are outcomes that are not the ones foreseen and intended by a purposeful action.

Unintended effects are challenge by their nature – as it requires ASC to try to think of all of the possible "what if's". However, ASC works to identify these to reinforce the potential positive "spillover" and take proactive measures to manage (avoid/mitigate) the negative ones. This is an integral part of the stakeholder consultation, farmer surveys and internal risk assessment. We do this by asking ourselves the questions – based on their experience with ASC and similar programmes - - what are the possible negative effects? What are the surprises or positive effects that were not anticipated? Asking farmers of their challenges with the program? The M&E system will question and test the assumptions in the Theory of Change and by

Topmost outcomes that are not prime objectives of the ASC programme but have positive socio-economic results include:

- **Cost reduction**. Requirements on inputs (e.g. on feed, use of chemicals) aiming to improve environmental performance of farming practices, can create economic benefits for farms due to reduced amount of purchased inputs to meet those requirements
- **Opportunities for attracting investment and loan**. Potential investors or banks view ASC certified farms, as opposed to uncertified ones, as reduced risks due to the implementation of better practices and overall professionalization in participating in the ASC programme.
- **Supporting regulatory frameworks.** In countries where national and local regulatory frameworks are either lacking or ineffective in terms of enforcement, the ASC standards and assurance system are instrumental for governments for meeting their goals.
- **Transparency of farm performance.** Lack of accessibility of quality data has been a challenge to the understanding of farm changes as well as sector level trends. The ASC's transparency policy stipulating that all audit reports are publicly available in an accessible format allows for external stakeholders (including researchers) to analyse and build models to test assumptions, outcomes (intended and unintended), etc. ultimately leading to improved interventions and outcomes.

The main negative outcomes that are not intended as part of ASC interventions, but have been identified as potential effects include:

- **High implementation and certification costs**. The more stringent the standards and requirements for the assurance scheme, the more likely that costs for farms to get certified are high, especially in regard to initial investment costs in improving farm infrastructure.
- **No further improvement** due to performance-based nature of the standards. It is of a concern that once certified farms have fully met all ASC requirements (performance thresholds), there is little room or incentive for farms to improve their practices unless the standards are revised to raise the bar.
- **Ungoverned expansion of land/water use for fish farming.** Successful ASC certification may motivate farms to expand their production in areas that may compete with other staple crops (e.g. rice), or other sources of incomes (e.g. tourism), or cause detriment to the environment and surrounding community (areas of high conservation values). This would be rather critical if it would happen in countries with ineffective enforcement of legislation.

The unintended negative effects will also be carefully monitored so that ASC can steer its interventions, and where possible, to mitigate those effects.

3.5 Influencing factors

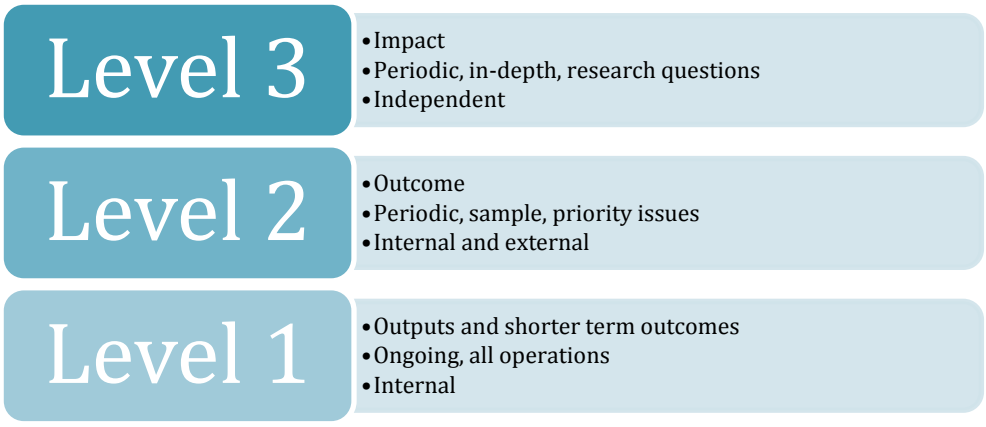
ASC operates in a complex environment and change is not linear. The success of ASC in achieving its mission is dependent on other external factors, often outside of its control. These can be both enabling and hindering factors. Similar to unintended effects, external factors need to be regularly assessed, identified and appropriate actions taken. Over time and with change, opportunities may arise that ASC can leverage or challenges occur that must be addressed to respond to potential negative effects.

Influencing factors include:

- Increased awareness of nutritional values of seafood has led to a steady growth of aquaculture due to the stable production of wild catch. The ASC programme can contribute to sustaining aquaculture in a responsible manner.
- Some of the larger seafood consuming markets are not yet receptive to certified products, making the uptake pace on the demand side mismatched with the supply speed.
- Policy may change on various levels, international or national, and the change could go either way, in or out of favour for the ASC programme.
- Disease outbreaks or natural disasters. Farmers may have to step out of certification to focus their resources on coping with the issue and consequent financial damage.
- Climate change and extreme weather patterns. As with the previous, this can affect farmers directly with impacts on production and productivity and disrupt supply chains.
- Literacy levels of farmers (especially smallholders)

4. Ongoing Monitoring System

Based on the Theory of Change and results chains, the M&E system has been developed to support ongoing monitoring of results, incorporating learning to adapt the ASC programme. While the purpose of the ASC M&E system is to track and report progress on results at all levels – from outputs, outcomes to impact, as well as to "test" the hypotheses articulated in the Theory of Change and results chains - it would be extremely difficult and challenging to try to do all of this in a meaningful and feasible way. Thus, ASC is taking a strategic approach to looking at different "levels" of monitoring and evaluation:



4.1 Indicators

ASC has been collecting basic data on certified operations and markets since the start of its operations in 2012. These are made available in monthly reports on the ASC website.[2] Starting in 2017, a broader set of indicators will be collected to track progress towards our goals and "test" through regular collection of data on a prioritised set of indicators.

For the prioritised result chains, 30 key indicators were defined at different levels.

- 9 for outputs
- 5 for shorter term outcomes
- 16 for the longer-term outcomes

These indicators are explicitly linked to the intended change and the stage in the results chain. They were selected and refined by all of the departments based on the criteria: relevant to the Theory of Change, technically sound (consistent, accurate and timely) and feasible (resources, IT).

Most of the core M&E indicators are quantifiable and expressed in terms of change (e.g. increased number of, or reduced amount of, etc.) or comparison (e.g. ratio between certified/non-certified). Some of the M&E indicators are qualitative (e.g. increased coverage of local CABs).

With each indicator, the area of data collection and specific data or data points are also specified. The indicators need to be further broken down in the actual pieces of data that needs to be captured, how it is captured, frequency, by whom, etc. These specifications are considered the indicator protocols. This is important for ensuring consistency over time and robust data sets.

Stage in results chain	Intended change (output/ outcome)	Indicator	Area of data collection	Data to be captured	Data collection protocol			
					Data source	Collection method	Collected by	Frequency

The full list of M&E indicators, respective data points and data collection protocol is in Annex 3.

4.2 Performance monitoring

The majority of the indicators will be regularly collected from ongoing operations such as audit reports, assurance records, training records, outreach activities and media monitoring. These will be related to program reach and delivery, as well as uptake of activities. This information will also serve as key characteristics and baseline for outcome and impact evaluations.

Being a performance-based scheme, many metrics regarding farm performance and results are collected through assurance activities and will be used for both compliance assessment and monitoring & evaluation. The audit report template is constructed in the way that facilitates this data collection during the audit. All audit reports arriving into the system are checked to make sure that data is at least complete. This data on outcomes will also be collected across all certificate holders as part of ongoing operations.

While much of the data will be collected on an ongoing basis, there will be different reporting frequencies based on needs and priorities. This also allows for flexibility in the system to respond to specific issue areas that may arise.

[2] ASC in Numbers

At level 1, monthly reports will continue to be provided on the reach and market output indicators. In addition, data will be collated and analysed on a yearly basis with the main focus on tracking the programme's progress and direct results. At a minimum, the analysis is vis-à-vis the output and some shorter-term outcome indicators.

4.3 Outcome and Impact Evaluation

At Level 2 and 3, the topics and area of focus will be determined on a yearly basis responding to the needs of the organisation as well as the requests from stakeholders. The outcome level data will be used for these periodic analyses for both internal learning purposes and external reports.

This data will be augmented with additional data from certified operations through other mechanisms such as surveys and data from other sources including FAO, national or sector baselines and/or counterfactuals depending on the design of the survey or study.

Summaries of all outcome and impact evaluations will be made publicly available on the ASC website once they are finalised.

Outcome and impact evaluations will enable ASC to:

- Understand the direct and indirect impact of ASC Certification,
- Create cost benefits analysis for farmers and supply chain actors,
- Understand the impacts of the ASC logo and the contribution of ASC certification to the sustainability of the sector,
- Support and review the effective implementation of ASC's Standards and identify where additional guidance is needed,
- Understand the effectiveness of market penetration in new and emerging markets.

5. Use of results for internal learning

The M&E system will be used internally to learn for improving the system effectiveness and the standards. By gathering regular data over time through ongoing performance monitoring, we will be able to identify and analyse trends in system effectiveness to target training of auditors and farmers. The system will provide data to test the assumptions in the standard including thresholds.

The outcome evaluations will be used for targeted deeper dives into research questions of what is working, under what conditions and to identify influencing and enabling factors.

6. Transparency and Stakeholder engagement

ASC is designing and developing its M&E system in close cooperation with its stakeholders. By engaging its stakeholders in dialogue ASC wants to develop an understanding of what social and environmental issues matter the most to them (in relation to ASC's long-term goals), gain their input

and expertise in developing 'solutions' to address and measure these matters (through its M&E program), and align expectations and create acceptance of its program.

ASC has imbedded stakeholder engagement within its governance structure. Through this structure, ASC ensures that the interest of various stakeholder groups is balanced, subject matter expertise and the stakeholders that are materially affected are included, and decision making is inclusive and non-discriminatory.

In addition to this basic structure ASC specifically engages stakeholders with the monitoring and evaluation system through:

- Webinars: targeted stakeholder specific webinars presenting the M&E system to solicit input.
- Public consultation: Putting the M&E framework up for public consultation in order for all stakeholders to provide comments

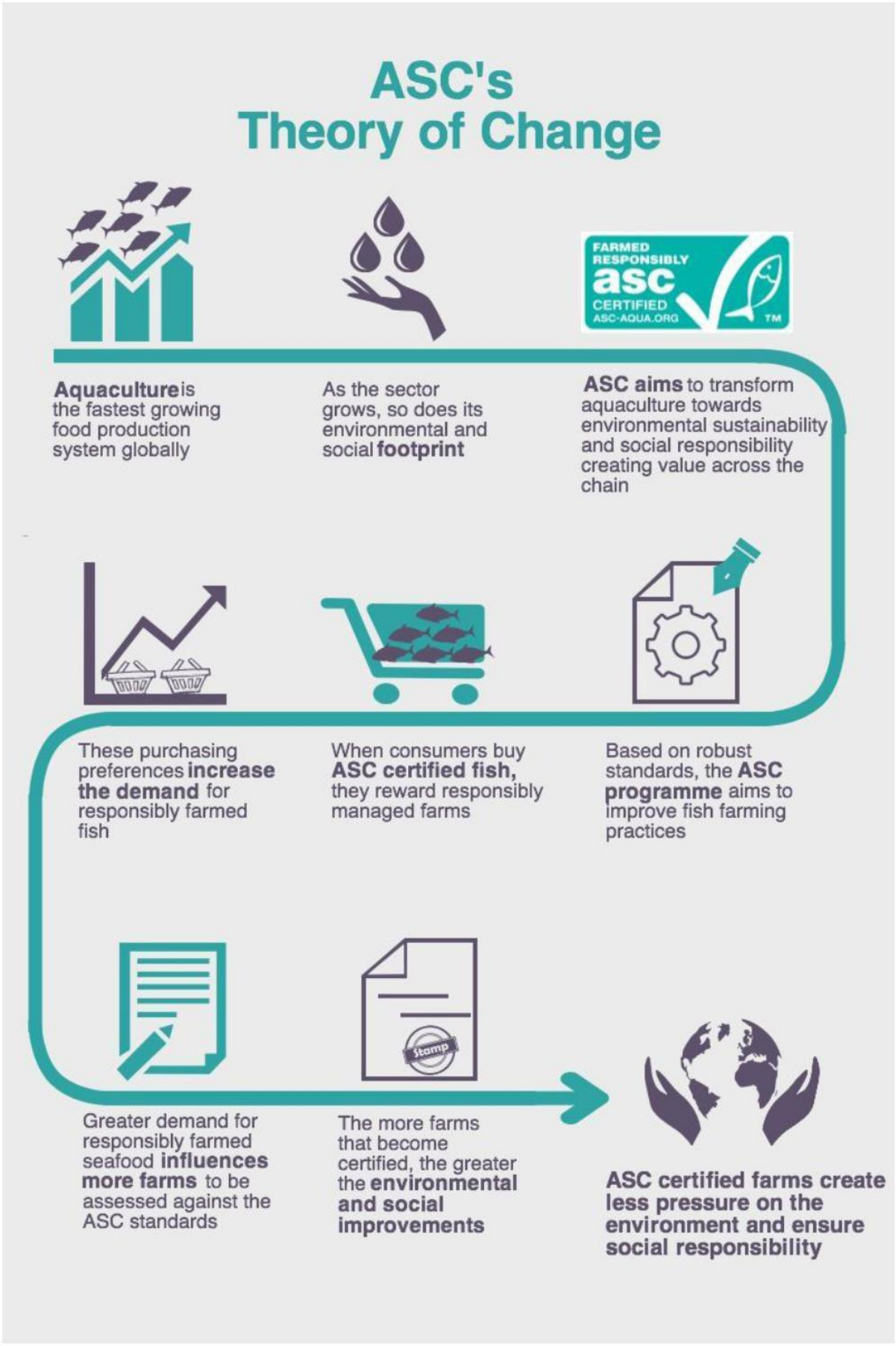
7. Annexes

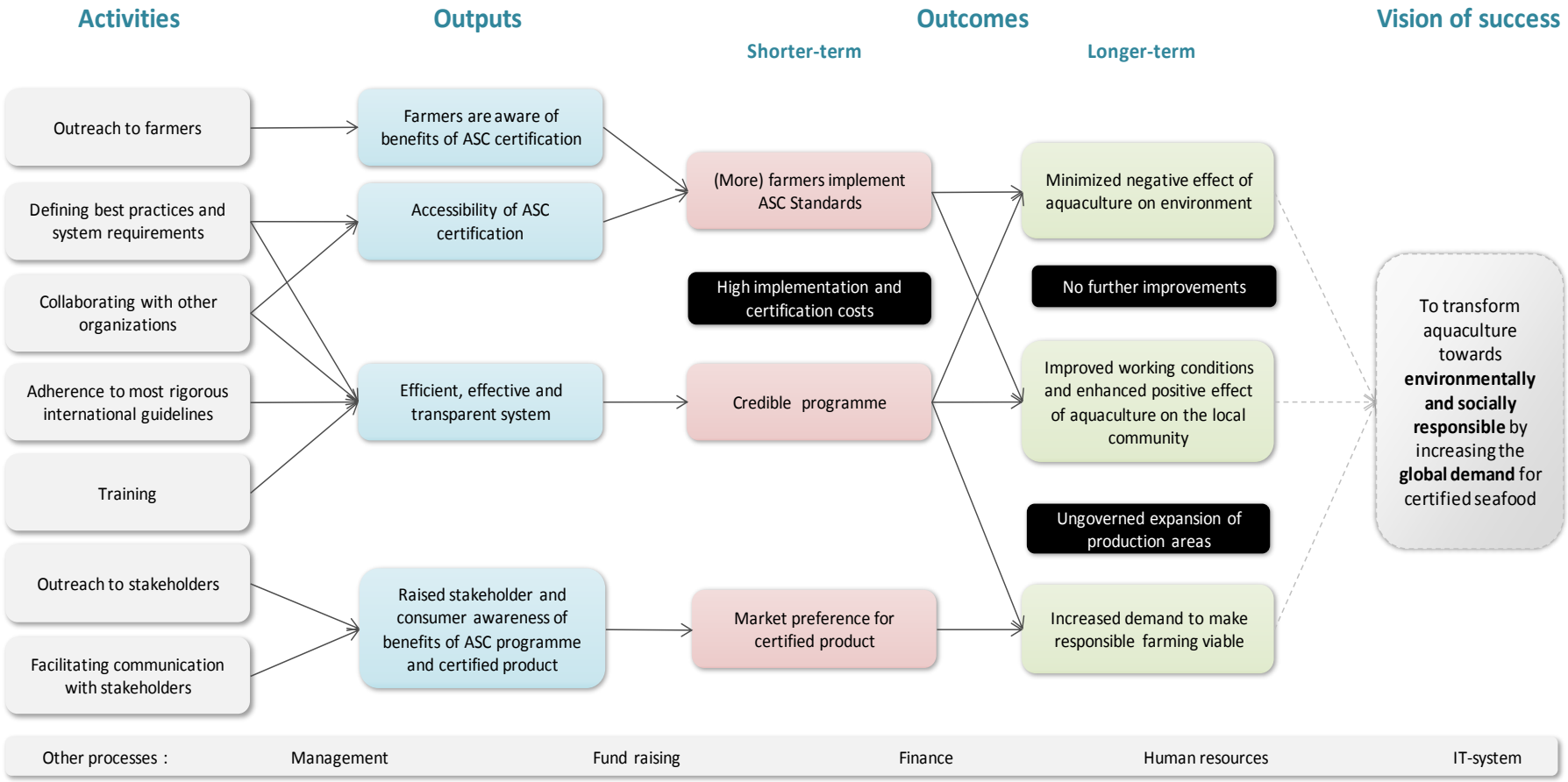
7.1 Annex 1: ASC's Theory of Change

7.2 Annex 2: Results Chain

7.3 Annex 3: ASC's list of M&E Indicators

7.4 Annex 4: Definitions


ASC's
Theory of Change
FARMED RESPONSIBLY
asc
CERTIFIED
ASC-AQUA.ORG
TM
Aquaculture is the fastest growing food production system globally
As the sector grows, so does its environmental and social footprint
ASC aims to transform aquaculture towards environmental sustainability and social responsibility creating value across the chain
These purchasing preferences increase the demand for responsibly farmed fish
When consumers buy ASC certified fish, they reward responsibly managed farms
Based on robust standards, the ASC programme aims to improve fish farming practices
Greater demand for responsibly farmed seafood influences more farms to be assessed against the ASC standards
Stamp
The more farms that become certified, the greater the environmental and social improvements
ASC certified farms create less pressure on the environment and ensure social responsibility


Activities
Outputs
Outcomes
Shorter-term
Longer-term
Vision of success
Outreach to farmers
Defining best practices and system requirements
Collaborating with other organizations
Adherence to most rigorous international guidelines
Training
Outreach to stakeholders
Facilitating communication with stakeholders
Farmers are aware of benefits of ASC certification
Accessibility of ASC certification
Efficient, effective and transparent system
Raised stakeholder and consumer awareness of benefits of ASC programme and certified product
(More) farmers implement ASC Standards
High implementation and certification costs
Credible programme
Market preference for certified product
Minimized negative effect of aquaculture on environment
No further improvements
Improved working conditions and enhanced positive effect of aquaculture on the local community
Ungoverned expansion of production areas
Increased demand to make responsible farming viable
To transform aquaculture towards environmentally and socially responsible by increasing the global demand for certified seafood
Other processes :
Management
Fund raising
Finance
Human resources
IT-system

Annex 3: ASC's list of M&E Indicators

Phase in results chain	Intended change	Indicators	Areas of data collection	Metric
Basic stats		Reach	Volumes	# MT of certified production/ species/ country
			Farms	# certified farms / species/ country
				Farm size in ha/ species/ countries
				% of pens, cages, ponds, RAS, extensive/intensive
			CoC holders	# CoC certificate holders/ species
				Countries of certified farms/ suppliers
				# partners (who buys ASC certified fish)
			License holders	# logo license holders
			Labelled products	# products with ASC logo
			Markets (countries)	# markets (receptive/less receptive)/ countries
			Other certifications	# of farms holding other certification (GAA, GG)
			Workers	# workers working at certified farms/species/country
Outputs				
Outputs	**1. Farmers are aware of benefits of ASC certification**	1.1 Increased number of farmers/feed producers engaged in different processes led by ASC	Farmer survey	# of surveyed farmers mention about benefits of ASC
				Types of benefits reported by farmers
			Farmers engaging in ASC led public consultations	# farmers providing feedback during public consultation and feedback periods
			Certified farms	# of certified farms/species/country
				# of farms leaving the programme/species/country
			Farmer outreach	# farmers reached out by ASC/in contact with ASC
	2. Accesssibility of ASC certification	2.1 Increased number of smallholders in system	Group certification	# group certificate holders
				# smallholders (family business, no hired workers)
	3. Effective, efficient and transparent assurance system	3.1 Increased coverage of local auditors/assessors	CABs	# qualified auditors/species/country participating in certification
		3.2 Increased number of stakeholders engaged in ASC-led/related processes	Stakeholders engagement	# stakeholders in certification process
		3.3 Increased effectiveness of the accreditation and ceritifcation processes	Complaints/incidents (#appeals)	# closed cases with satisfaction
				# incidents/complaints raised against CABs
				# incidents/complaints raised against ASC
				# incidents/complaints raised on farm
				# incidents/complaints raised on CoC holder
			Non-conformities	# NCs CABs received from ASI
			Suspensions	# accreditation suspensions
				# farm certificates suspended
			Accreditation process	# CoC certificate suspended
			Certification process	# farms certified ontime
				# comments of QA accepted by CABs
				# days to close VR
				# days to provide QA feedback
		3.4 Increased coverage of species ASC offers certification	ASC Standards	# species covered by ASC standards
	4. Raised seafood buyer and consumer awareness of benefits of ASC programme and certified product	4.1 Increased number of supply chain companies engaged the ASC programme	Contact	# CoC certified companies
			Logo use	# of licensing agreements signed
				# of marketing undertaking agreements signed
		4.2 Increased number of consumers being familiar with the ASC programme and certified products	Events	# awareness and promotion activities organised by ASC
				# awareness and promotion activities organised by partners (companies and NGOs)
			Labelled products	# labelled products with consumer-facing
			Media coverage	# mentions print media/online news/social media
			Consumer awareness	% of surveyed consumers have seen/understand ASC logo
	5. Expansion of Programme scope	5.1 Increased market uptake of certified seafood product (only species ASC covers)		# of licensing agreements signed
				# requests from companies for logo use/country
				# of marketing undertaking agreements signed
				# of labelled products/species
				# of markets
				# of species

Phase in results chain	Intended change	Indicators	Areas of data collection	Metric
Shorter-term outcomes				
Shorter-term outcomes	**6. (More) farms implementing ASC standards**	6.1 Increased number of (certified) farms	Farms	# farms certified # farms in assessment # farms implementing ASC standards (but not yet certified through funded projects/AIPs # farms leaving the programme
	7. Credible programme	7.1 Inceased number of initiatives/ organisations supporting/ recognising/ using ASC programme	ASC recognition	# initiatives recognising/ recommending ASC (e.g. MBA, consumer protection organisations (Öko-test), Good Fish Foundation, WWF, etc) # of organisations referencing ASC astheir preference (non seafood companies)(e.g. Olympics committees (Rio, Tokyo), IFC, Ecobusiness fund, Rabo Bank, etc.)
		7.2 Compliance with international guidelines for certification		# initiatives ASC is in compliance with (GSSI, ISEAL)
		7.3 Engagement of researchers community		# academic articles supporting on ASC standards # research institutes engaged in standard development
	8. Market preference creates incentives for certified product	8.1 Ratio (%) between declared certified product volumes vs. certified farm production volumes	Volumes	Volume of ASC certified seafood Volume of declared products

Phase in results chain	Intended change	Indicators	Areas of data collection	Metric
Longer-term outcomes	**9. Minimised negative effect of aquaculture on environment**	9.1 Improving water quality	Water quality	kg N/P in effluent per ton fish
				Diunal Oxygen
			Benthos state	Benthic biomass
				Faunal index identification of key indicator species)
		9.2 Increased protection of wildlife (wild population and marine mammals/predators)	Wildlife and escapes management (relaitve to production volume)	# of escape event
				motality/survival rate
				# mortalities (accidental/ intentional) of wildlife
		9.3 Increased mangove restoration practices/ dicreased wetland converted areas (ha)	Habitat	# ha restored/newly planted mangrove
		9.4 Reduced amount of (non-) therapeutic chemicals used	(Non-)therapeutic use	# times of (non-)therapeutic treatment
				# farms using non-chemical treatments
				kg chemicals/antibiotics used per kg/tonnes of fish
		9.5 Reduced bFCR and eFCR	bFCR and efCR	# kg feed used per kg fish produced (bFCR) and harvested (eFCR)
				# MT net aquaculture production
		9.6 Increased % of feed ingredients from sustainably/responsibly certified sources	Feed Ingredient Origin	% farms using ASC Feed
	10. Improved working conditions and enhanced positive effect of aquaculture on the local community	10.1 Improved on farm housing/living conditions	Health and safety	# job-related accidents requiring medical treatment
				# workers trained on H&S issues related to their areas of work
		10.2 Reduced overtime hours	Overtime	# overtime hours
		10.3 Ratio of the wage at ASC certified farms compared to non-certified farms in the same region	Wages	% of overtime compensation paid at premium rate
				% of workers receving living wages
				lowest weekly wage for different types of workers
		10.4 Increased positive feedback from surrounding community	Community relations	# average resoluton time (of complaints)
				# of complaints from community surrounding farms
				# of complaints from community surrounding farms are positively resolved
	11. Increased efficiency through reduced production costs	11.1 Higher yield		survival/mortality rate
		11.2 Reduced Input costs		FCR
				kg chemicals/antibiotics used per kg/tonnes of fish
	12. Increased sales to make responsible farming viable	12.1 Increased commitment by retailers and brands to ASC certified products	Commitment	# retailers and brands making (public) commitments to buy increased amounts of ASC certified products
		12.2 Growth of purchased ASC certified products	Market expansion	# ASC products
			Volume	Volume ASC certified products (over last x years)
		12.3 % of ASC global production certified/global production	Trade	Total volume of certified seafood (only the species ASC covers)
				volume of shipped ASC certified seafood (farm)
		12.4 Improved supply & demand ratio		# farmers having access to new clients/contract/markets
				% progress (dashboard) of buyers commitments

Phase in results chain	Intended change	Indicators	Areas of data collection	Metric	Data level (1/2/3)	Monitoring 1.0- data from 2010, 2.0 Improved 3.0 - 2018
18-Apr-17						
Basic stats		Reach	Volumes	# MT of certified production/ species/ country	1	1.0
			Farms	# certified farms / species/ country	1	1.0
				Farm size in ha/ species/ countries	1	3.0
				% of pens, cages, ponds, RAS, extensive/intensive	1	3.0
			CoC holders	# CoC certificate holders/ species	1	1.0
				Countries of certified farms/ suppliers	1	1.0
				# partners (who buys ASC certified fish)	1	3.0
			License holders	# logo license holders	1	1.0
			Labelled products	# products with ASC logo	1	1.0
			Markets (countries)	# markets (receptive/less receptive)/ countries	1	1.0
			Other certifications	# of farms holding other certification (GAA, GG)	1	3.0
			Workers	# workers working at certified farms/species/country	1	3.0
Outputs						
Outputs	1. Farmers are aware of benefits of ASC certification	1.1 Increased number of farmers/feed producers engaged in different processes led by ASC	Farmer survey	# of surveyed farmers mention about benefits of ASC	2	2.0
				Types of benefits reported by farmers	2	2.0
			Farmers engaging in ASC led public consultations	# farmers providing feedback during public consultation and feedback periods	1	3.0
			Certified farms	# of certified farms/species/country	1	1.0
				# of farms leaving the programme/species/country	1	2.0
			Farmer outreach	# farmers reached out by ASC/in contact with ASC	1	3.0
	2. Accesssibility of ASC certification	2.1 Increased number of smallholders in system	Group certification	# group certificate holders	1	3.0
				# smallholders (family business, no hired workers)	1	3.0
	3. Effective, efficient and transparent assurance system	3.1 Increased coverage of local auditors/assessors	CABs	# qualified auditors/species/country participating in certification	1	1.0
		3.2 Increased number of stakeholders engaged in ASC-led/related processes	Stakeholders engagement	# stakeholders in certification process	1	3.0
		3.3 Increased effectiveness of the accreditation and ceritifcation processes	Complaints/incidents (#appeals)	# closed cases with satisfaction	1	1.0
				# incidents/complaints raised against CABs	1	1.0
				# incidents/complaints raised against ASC	1	1.0
				# incidents/complaints raised on farm	1	1.0
				# incidents/complaints raised on CoC holder	1	1.0
			Non-conformities	# NCs CABs received from ASI	1	1.0
			Suspensions	# accreditation suspensions	1	1.0
				# farm certificates suspended	1	1.0
			Accreditation process	# CoC certificate suspended	1	1.0
			Certification process	# farms certified ontime	1	1.0
				# comments of QA accepted by CABs	1	3.0
				# days to close VR	1	3.0
				# days to provide QA feedback	1	3.0
		3.4 Increased coverage of species ASC offers certification	ASC Standards	# species covered by ASC standards	1	1.0
	4. Raised seafood buyer and consumer awareness	4.1 Increased number of supply chain companies engaged the ASC programme	Contact	# CoC certified companies	1	1.0
			Logo use	# of licensing agreements signed	1	1.0
				# of marketing undertaking agreements signed	1	1.0
				# awareness and promotion activities organised by ASC	1	3.0

Phase in results chain	Intended change	Indicators	Areas of data collection	Metric	Data level (1/2/3)	Monitoring 1.0- data from 2010, 2.0 Improved 3.0 - 2018
	of benefits of ASC programme and certified product	4.2 Increased number of consumers being familiar with the ASC programme and certified products	Events	# awareness and promotion activities organised by partners (companies and NGOs)	1	1.0
			Labelled products	# labelled products with consumer-facing logo/country/species	1	1.0
			Media coverage	# mentions print media/online news/social media	1	2.0
			Consumer awareness	% of surveyed consumers have seen/understand ASC logo	2	2.0
	5. Expansion of Programme scope	5.1 Increased market uptake of certified seafood product (only species ASC covers)		# of licensing agreements signed	1	1.0
				# requests from companies for logo use/country	1	1.0
				# of marketing undertaking agreements signed	1	1.0
				# of labelled products/species	1	1.0
				# of markets	1	1.0
				# of species	1	1.0
Shorter-term outcomes						
Shorter-term outcomes	**6. (More) farms implementing ASC standards**	6.1 Increased number of (certified) farms	Farms	# farms certified	1	1.0
				# farms in assessment	1	1.0
				# farms implementing ASC standards (but not yet certified through funded projects/AIPs	2	3.0
				# farms leaving the programme	1	1.0
	7. Credible programme	7.1 Inceased number of initiatives/ organisations supporting/ recognising/ using ASC programme	ASC recognition	# initiatives recognising/ recommending ASC (e.g. MBA, consumer protection organisations (Öko-test), Good Fish Foundation, WWF, etc)	2	3.0
				# of organisations referencing ASC astheir preference (non seafood companies)(e.g. Olympics committees (Rio, Tokyo), IFC, Ecobusiness fund, Rabo Bank, etc.)	2	3.0
		7.2 Compliance with international guidelines for certification		# initiatives ASC is in compliance with (GSSI, ISEAL)	1	2.0
		7.3 Engagement of researchers community		# academic articles supporting on ASC standards	1	3.0
				# research institutes engaged in standard development	1	3.0
	8. Market preference creates incentives for certified product	7.1 Ratio (%) between declared certified product volumes vs. certified farm production volumes	Volumes	Volume of ASC certified seafood	1	1.0
				Volume of declared products	1	1.0

Phase in results chain	Intended change	Indicators	Areas of data collection	Metric	Data level (1/2/3)	Monitoring 1.0- data from 2010, 2.0 Improved 3.0 - 2018
Longer-term outcomes	**9. Minimised negative effect of aquaculture on environment**	9.1 Improving water quality	Water quality	kg N/P in effluent per ton fish	1	3.0
				Diunal Oxygen	1	3.0
			Benthos state	Benthic biomass	1	3.0
				Faunal index identification of key indicator species)	1	3.0
		9.2 Increased protection of wildlife (wild population and marine mammals/predators)	Wildlife and escapes management (relaitve to production volume)	# of escape event	1	3.0
				motality/survival rate	1	3.0
				# mortalities (accidental/ intentional) of wildlife	1	3.0
		9.3 Increased mangove restoration practices/ dicreased wetland converted areas (ha)	Habitat	# ha restored/newly planted mangrove	1	3.0
		9.4 Reduced amount of (non-) therapeutic chemicals used	(Non-)therapeutic use	# times of (non-)therapeutic treatment	1	3.0
				# farms using non-chemical treatments	1	3.0
				kg chemicals/antibiotics used per kg/tonnes of fish	1	3.0
		9.5 Reduced bFCR and eFCR	bFCR and efCR	# kg feed used per kg fish produced (bFCR) and harvested (eFCR)	1	3.0
				# MT net aquaculture production	1	3.0
		9.6 Increased % of feed ingredients from sustainably/responsibly certified sources	Feed Ingredient Origin	% farms using ASC Feed	1	3.0
	10. Improved working conditions and enhanced positive effect of aquaculture on the local community	10.1 Improved on farm housing/living conditions	Health and safety	# job-related accidents requiring medical treatment	2,3	3.0
				# workers trained on H&S issues related to their areas of work	1	3.0
		10.2 Reduced overtime hours	Overtime	# overtime hours	2,3	3.0
		10.3 Ratio of the wage at ASC certified farms compared to non-certified farms in the same region	Wages	% of overtime compensation paid at premium rate	2,3	3.0
				% of workers receving living wages		3.0
				lowest weekly wage for different types of workers	2,3	3.0
		10.4 Increased positive feedback from surrounding community	Community relations	# average resoluton time (of complaints)	1,2,3	3.0
				# of complaints from community surrounding farms	2,3	3.0
				# of complaints from community surrounding farms are positively resolved		3.0
	11. Increased efficiency through reduced production costs	11.1 Higher yield		survival/mortality rate	3	3.0
		11.2 Reduced Input costs		FCR	3	3.0
				kg chemicals/antibiotics used per kg/tonnes of fish	3	3.0
	12. Increased sales to make responsible farming viable	12.1 Increased commitment by retailers and brands to ASC certified products	Commitment	# retailers and brands making (public) commitments to buy increased amounts of ASC certified products	1	1.0
		12.2 Growth of purchased ASC certified products	Market expansion	# ASC products	1	1.0
			Volume	Volume ASC certified products (over last x years)	1	1.0
		12.3 % of ASC global production certified/global production	Trade	Total volume of certified seafood (only the species ASC covers)	1	1.0
				volume of shipped ASC certified seafood (farm)	1	3.0
		12.4 Improved supply & demand ratio		# farmers having access to new clients/contract/markets	2,3	3.0
				% progress (dashboard) of buyers commitments	1	3.0

Annex 4: Definitions
(from ISEAL IMPACTS Code)

Effects - Intended or unintended change due directly or indirectly to an intervention. (Adapted from OECD Glossary, 2002)

Impacts - Positive and negative long-term effects resulting from the implementation of a standards system, either directly or indirectly, intended or unintended. (Adapted from OECD Glossary).

Indicator - Quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement of outcomes, to reflect the changes connected to a standards system, or to help assess the performance of an organisation. (Adapted from OECD Glossary, 2002).

Indicator Protocol -An indicator protocol is a detailed description that explains how an indicator is constructed. It includes the metrics needed for an indicator, units of measure, definitions for key terms, data source(s), data collection frequency and approach, scope and other technical references.

Input - A resource mobilized by a standards system to support activities to further desired long-term impacts. Examples of inputs include physical, human, financial, and capital resources. (Adapted from Rainforest Alliance Glossary, 2013).

Monitoring and Evaluation System - An ongoing process through which an organisation draws conclusions about its contribution to intended outcomes and impacts. A monitoring and evaluation system consists of a set of interconnected functions, processes and activities, including systematic collection of monitoring data on specified indicators and the implementation of outcome and impact evaluations.

Outcome -The likely or achieved short-term and medium-term results from the implementation of a standards system's strategies. (Adapted from OECD Glossary, 2002).

Outcome Evaluation - Systematic and objective in depth ex-post assessment of the short-term and medium-term results or effects from the implementation of a standards system. These studies seek to shed light on the extent to which standards system's desired changes are occurring as well as why the system is or is not working. Unlike impact evaluations, outcome evaluations are not designed to draw conclusions about the extent to which an intervention can be attributed to the intervention of a standards system.

Output - The products, capital goods, and services that result directly from the activities of a standards system. (Adapted from OECD Glossary, 2002)

Performance Monitoring -A continuing function that uses systematic collection of data on specified indicators to provide indications of the extent to which outputs and short and medium -term results are being achieved. (Adapted from OECD Glossary, 2002)