



IMPACT-DRIVEN APPROACH TO SUSTAINABILITY

ADD-ON

Principles and Criteria for Aquaculture – Finfish,
Crustaceans, Molluscs, Seaweed/Macroalgae

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INTRODUCTION

As part of efforts to increase environmental sustainability within good agricultural practices, the GLOBALG.A.P. Secretariat introduces an *Impact-Driven Approach to Sustainability* in our farm assurance products. This approach consists of collecting data from producers on input consumption, processing the data, and transforming it into information with a variety of uses.

Collecting input consumption data from producers and transforming it into information is intended to:

- a) Support producers in making their production systems more efficient through improved decision-making so that the whole supply chain benefits
- b) Help the GLOBALG.A.P. Secretariat gain knowledge of producer realities, which in turn can:
 - (i) Improve GLOBALG.A.P. standards and any other interventions within the supply chain
 - (ii) Help make farm assurance products leaner and simplify the assurance process
- c) Monitor and evaluate the impact of standards on sustainable farming through the reflection of input indicators on performance
- d) Give the buyer a stronger sense of trust in a certification system that is based on outcomes

N°	Principle	Criteria	Level
IDA AQ	IMPACT-DRIVEN APPROACH TO SUSTAINABILITY FOR AQUACULTURE – FINFISH, CRUSTACEANS, MOLLUSCS, SEAWEED/MACROALGAE		
	<i>Principles in this add-on cover criteria related to grow-out activities for aquaculture operations.</i>		
IDA AQ 1	QUANTITATIVE MORTALITY INDICATORS		
IDA AQ 1.1	Mortalities in the grow-out stage are recorded after each mortality event has occurred or as a mass balance result at harvest.	<p>The producer shall record each mortality event in the grow-out stage and on a monthly basis (if not possible monthly, then as frequently as possible within the farming system) report the following data:</p> <ul style="list-style-type: none"> - Number of mortalities in biomass (If the producer records the number of deceased farmed aquatic species, the producer shall indicate the average biomass of a deceased farmed aquatic species. Biomass can also be calculated through a mass balance of input of seedlings vs. biomass harvested (e.g., for shrimp). The input of seedlings refers to the estimated number of farmed aquatic species initiating a defined grow-out stock.) - Cause of mortality (e.g., handling farmed aquatic species, water quality, algal blooms, temperature changes, parasite infections, extreme weather events, disease or parasite treatments, feed quality) 	Major Must
IDA AQ 1.2	Mortalities in the holding facilities prior to slaughter are recorded after each mortality event has occurred.	<p>“Holding facilities prior to slaughter” shall refer to those times when farmed aquatic species are transported live to the slaughter/processing station. The producer shall record each mortality event in the holding facilities prior to slaughter and on a monthly basis (if not possible monthly, then as frequently as possible within the farming system) report the following information:</p> <ul style="list-style-type: none"> - Number of mortalities in biomass (If the producer records the number of deceased farmed aquatic species, the producer shall indicate the average biomass of a deceased farmed aquatic species.) - Cause of mortality 	Major Must

N°	Principle	Criteria	Level
IDA AQ 2	QUANTITATIVE FEED INDICATORS FOR PERFORMANCE AND FISHMEAL AND FISH OIL USE		
IDA AQ 2.1	To evaluate aquafeed performance, the economic fish conversion ratio (eFCR), fish-in/fish-out (FIFO), and forage fish dependency ratio (FFDR) are calculated and recorded and related to predefined biomass.	<p>The producer shall record and on a monthly basis (if not possible monthly, then as frequently as possible within the farming system) report the eFCR, FIFO, and FFDR.</p> <p>a) Calculation of eFCR: $eFCR = \frac{\text{Feed (in kg or mt)}}{\text{Net aquaculture production (in kg or mt; live weight)}}$ $\text{Net aquaculture production} = \frac{[\text{Final biomass}] - [\text{Initial biomass}]}{\text{Initial biomass}}$ $= [\text{estimated number of individuals}] \times [\text{average individual weight}]$ </p> <p>b) Calculation of FIFO: $FIFO = eFCR \times \frac{(\% \text{fishmeal inclusion} + \% \text{fish oil inclusion})}{(\text{fishmeal yield (22.5\%)} + \text{fish oil yield (5\%)})} (*)$ </p> <p>c) Calculation of FFDR: $FFDR = eFCR \times \frac{(\% \text{forage fishmeal inclusion} + \% \text{forage fish oil inclusion})}{(\text{fishmeal yield (22.5\%)} + \text{fish oil yield (5\%)})} (*)$ </p> <p>(*)Reference: IFFO – The Marine Ingredients Organization https://www.iffo.com/ffdr-data</p> <p>Note on forage fish meal and fish oil: originating from whole wild fish</p>	Major Must

N°	Principle	Criteria	Level
IDA AQ 3	QUANTITAVE ANTIMICROBIAL AND VACCINATION USE INDICATORS		
IDA AQ 3.1	All administered antimicrobials are recorded and related to predefined biomass.	<p>The producer shall record the use of antimicrobials and on a monthly basis (if not possible monthly, then as frequently as possible within the farming system) report the following data:</p> <ul style="list-style-type: none"> - Commercial name of antimicrobial used - Amount of antimicrobial used in the treatment (active ingredient) - Biomass of farmed aquatic species treated - Registration of a diagnosis justifying the treatment - World Health Organization (WHO) classification of antimicrobial <p>If no antimicrobial is used, this shall be registered as zero.</p>	Major Must
IDA AQ 3.2	All administered vaccinations are recorded and related to targeted disease and to predefined biomass.	<p>The producer shall record the use of any vaccination and as frequently as possible submit the following data:</p> <ul style="list-style-type: none"> - Commercial name of vaccination used and targeted pathogens - Amount of vaccination used in the treatment and related to defined biomass - Biomass of farmed aquatic species treated - Indication on the effectiveness of the vaccine against the target disease <p>If no vaccinations were used in a given period of time, zero consumption shall be registered. This contributes to the quality and consistency of data.</p>	Major Must

N°	Principle	Criteria	Level
IDA AQ 4	ENERGY		
IDA AQ 4.1	On-farm energy use is monitored and recorded for the grow-out stage.	<p>There shall be records of on-farm energy use (e.g., invoices detailing energy consumption). The producer shall be aware of where and how energy is consumed on the farm and through farming practices. Trend analysis of energy use shall be available (listed per cycle and per biomass).</p> <p>Records of the following indicators shall be submitted on a monthly basis (if not possible monthly, then as frequently as possible within the farming system).</p> <ul style="list-style-type: none"> - Total amount of energy used by production site - Amount of energy used per source by production site - Share of renewable energy in energy use <p>The sum of all energy shall be expressed as a single resulting number in kWh/month, for example, by using conversion factors available to the producer or via the farm management system that the producer uses. The above calculations shall be based, at least, on the following:</p> <ul style="list-style-type: none"> - The total energy use on the farm for each energy source (electricity, fuels, other) - Knowledge of which sources are renewable and which nonrenewable (where information is available) <p>In the absence of energy meters, estimations are acceptable. If no energy use took place in a given period of time, zero consumption shall be registered. This contributes to the quality and consistency of data.</p>	Major Must

N°	Principle	Criteria	Level
IDA AQ 4.2	Based on the results of the monitoring, there is a plan to improve energy efficiency on the farm.	A documented plan identifying opportunities to improve energy efficiency shall be available (implementing insulation where needed, revising transport planning to optimize use of energy, etc.). Metric: Improvement from each predefined group of batches measured in kWh related to biomass at harvest, from the consecutive certification body (CB) audit (a certification cycle after the company has initiated Impact-Driven Approach implementation) onward.	Major Must
IDA AQ 4.3	The plan to improve energy efficiency considers minimizing the use of nonrenewable energy where possible.	<p>The producer shall consider reducing the use of nonrenewable energy to the lowest possible and using renewable energy instead. Identification of renewable energy sourcing possibilities shall be available. The use of wood chips shall be taken with caution, as no forests shall be cut to produce them.</p> <p>The producer shall distinguish between renewable and nonrenewable sources and the exact source (electricity, wind, solar, gas, fossil fuel, others) and shall be able to estimate the share of energy used between:</p> <ul style="list-style-type: none"> - Percentage of energy used which originates from renewable sources - Percentage of energy used which originates from nonrenewable sources. <p>In some cases, producers may not have access to the information, for example, due to an electricity provider which does not disclose this information.</p> <p>In Option 2 producer groups, evidence at quality management system (QMS) level is acceptable. Results (data) on metrics at producer group and farm level should be available to indicate compliance.</p>	Major Must

N°	Principle	Criteria	Level
IDA AQ 5	QUANTITATIVE ESCAPE INDICATORS		
IDA AQ 5.1	Each escape is recorded and related to predefined batches.	<p>There shall be a documented action plan that aims to enhance habitats and maintain biodiversity, <i>aiming for zero escapes</i>.</p> <p>If an escape occurs, the producer shall record and on a monthly basis (if not possible monthly, then as frequently as possible within the farming system) report the following data:</p> <ul style="list-style-type: none"> a) Registration date of the escape(s) b) Reporting on the number of escapes either in biomass or number of escaped individuals (If the producer reports the number of escaped individuals, the producer shall indicate the average biomass of an escaped individual.) c) Cause of each escape d) Reporting that the producer is aware that from which batch the escape occurred e) Evidence that escape incidents have been reported to the authorities and whether the escaped farmed aquatic species were under antimicrobial treatment at the time of escape 	Major Must

N°	Principle	Criteria	Level
IDA AQ 6	ENSURING TRACEABILITY WHEN PARALLEL OWNERSHIP APPLIES		
IDA AQ 6.1	An effective system is in place to identify all products originating from production sites/producer group members registered for the IDA add-on and segregate them from products produced by other production sites/producer group members.	<ul style="list-style-type: none"> - Individual producers/producer groups shall have a system in place to ensure that products from production sites/producer group members registered for the IDA add-on are segregated from products originating from other production sites/producer group members. - An annual mass balance calculation for products from production sites/producer group members registered for the IDA add-on shall be available for each product. - Communication with clients about production sites/producer group members registered and not registered for the IDA add-on shall be available. - In the case of producer groups and Option 1 multisite producers, products shall be identified with each producer group member's GLOBALG.A.P. Number (GGN). The producer group's GGN shall never be used for traceability. Random controls of products dispatched during the last 12 months shall show that only products from producer group members registered for the IDA add-on were delivered to clients demanding it. <p>This principle and the relevant criteria are not applicable if parallel ownership does not apply to products registered for the IDA add-on.</p>	Major Must

N°	Principle	Criteria	Level
IDA QMS	QUALITY MANAGEMENT SYSTEM		
IDA QMS 1	The audit of the producer’s quality management system (QMS) shows evidence of the correct implementation of the IDA add-on for all participating producer group members/production sites.	The implementation of the IDA add-on is included in the producer’s QMS based on the respective part of “GLOBALG.A.P. general regulations – Rules for producer groups and multisite producers with QMS.”	Major Must
IDA QMS 2	The producer conducts an annual internal audit. Effective corrective actions are taken when non-conformances are detected.	The IDA add-on is correctly audited internally and the internal audit reports are available. Non-conformances are identified, and corrective actions are taken to enable compliance of all participating producer group members.	Major Must
IDA QMS 3	In the case of parallel ownership (PO), there is effective communication to clients. Processes to ensure traceability and product identification are in place.	The QMS manager shall communicate to their clients if not all of the producer group members/production sites are registered for the IDA add-on. In Option 2 producer groups, products shall be identified with each producer group member’s GLOBALG.A.P. Number (GGN). In the case of Option 1 multisite producers with QMS, products shall be identified with the production sites’ sub-GLNs, if available, or with any other internal identification code. The producer group’s/multisite producer’s GGN shall never be used for traceability. Random controls of products dispatched during the last 12 months shall show that only products from producers registered for the IDA add-on were delivered to clients demanding it.	Major Must

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