



ASC Feed Standard

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Version control, available language(s) and copyright notice

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Version control

Document version history:

Version:	Effective date:	Remarks/changes:
V1.01	14 January 2023	<ul style="list-style-type: none">• ASC branding, introductory text, general layout, and hyperlinks updated• Language, phrasing and flowcharts updated for clarity• Definitions List replaced with link to ASC Vocabulary Portal• Indicator 1.6.1 (list amended)• No changes to other indicators or requirements
V1.0	14 January 2023	New document

It is the responsibility of the user of the document to use the latest version as published on the ASC website.

To ensure the continued effectiveness of the ASC standards, as outlined in ASC's Theory of Change, the review must occur at least every five years. The next review of the ASC Feed Standard is intended for 2025.

Available language(s)

The official version of this document is English. The ASC may translate the Standard into additional languages as necessary. In case of any inconsistencies and/or discrepancies between available translation(s) and the English version, the online English version (pdf-format) will prevail.

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About the Aquaculture Stewardship Council (ASC)

The Aquaculture Stewardship Council (ASC) is an independent, not-for-profit organisation that operates a voluntary, independent third-party certification and labelling programme based on scientifically robust standards.

The ASC standards define criteria designed to help transform the aquaculture¹ sector² towards environmental sustainability and social responsibility, as per the ASC Mission.

ASC Vision

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

ASC Mission

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

ASC Theory of Change

A Theory of Change (ToC) is an articulation, description and mapping out of the building blocks required to achieve the organisation's vision.

ASC has defined a ToC which explains how the ASC certification and labelling programme promotes and rewards responsible fish farming practices through incentivising the choices people make when buying seafood.

ASC's Theory of Change can be found on the [ASC website](#).

¹ **Aquaculture:** see Definition List.

² **Aquaculture sector:** see Definition List.

The ASC Document and Certification System

ASC is a code-compliant member of the [ISEAL Alliance](#) and implements a voluntary, independent third-party certification system³ consisting of three independent actors:

- | | | |
|------|----------------------------------|---|
| I. | Scheme Owner | i.e. Aquaculture Stewardship Council |
| II. | Accreditation Body | i.e. Assurance Services International (ASI) |
| III. | Conformity Assessment Body (CAB) | i.e. accredited CAB |

Scheme Owner

ASC, as scheme owner:

- sets and maintains standards according to the [ASC Standard Setting Procedure](#) which is in compliance with the “ISEAL Standard-Setting Code of Good Practice”. ASC standards are normative documents;
- sets and maintains the Interpretation Manual which provides:
 - a. guidance to the Unit of certification (UoC) on how to interpret and best implement the indicators within the Standard;
 - b. guidance to the auditor how to assess a UoC against the indicators within the Standard;
- sets and maintains the Certification and Accreditation Requirements (CAR) which adheres at a minimum to the “ISEAL Assurance Code of Good Practice”. The CAR describes the accreditation requirements, assessment requirements and certification requirements. The CAR is a normative document;
- sets and maintains the Certification Requirements for the Unit of Certification (RUoC). The RUoC describes the certification requirements, that apply to the entity seeking certification, in addition to the standard requirements. The RUoC is a normative document.

These above listed documents are publicly available on the ASC website.

Accreditation Body

Accreditation is the assurance process of assessing the Conformity Assessment Body (CAB) against accreditation requirements and is carried out by an Accreditation Body (AB). The appointed AB of ASC is Assurance Services International (ASI, “Accreditation Services International” prior to January 2019) which uses the CAR as normative document for the accreditation process.

Assessment findings of ASI-accreditation audits and an overview of current accredited CABs is publicly available via the ASI-website (<http://www.accreditation-services.com>).

³ **Third-party Certification System:** see Definition List.

Conformity Assessment Body

The UoC contracts the CAB which employs auditor(s) that conduct a conformity assessment (hereafter 'audit') of the UoC against the relevant standard. The management requirements for CABs as well as auditor competency requirements are described in the CAR and assured through ASI accreditation.

ASC Audit and Certification Process

The UoC is audited at Indicator-level.

An ASC audit follows strict process requirements. These requirements are detailed in the CAR. Only ASI-accredited CABs are allowed to audit and certify a UoC against ASC standards. As scheme owner, ASC itself is not - and cannot be - involved in the actual audit and/or certification decision of a UoC. Granted certificates are the property of the CAB. ASC does not manage certificate validity.

Audit findings of all ASC audits, including granted certificates, are made publicly available on the ASC-website. These include the audit findings that result in a negative certification decision.

Note: in addition to the Standard there are Certification Requirements that apply to UoC seeking certification. These requirements are detailed in the Requirements for the Unit of Certification (RUoC).

ASC Logo Use

ASC-certified entities shall only sell their product carrying the ASC Logo if a Logo Licence Agreement (LLA) has been signed. For more information see: [ASC Logo](#).

Unauthorised logo display is prohibited and will be treated as a trademark infringement.

Structure of ASC Standards

A Standard⁴ is “a document that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory”.

ASC Standards are designed as follows:

- ASC Standards consist of multiple Principles – a Principle is a set of thematically related Criteria which contribute to achieving the broader outcome defined in the Principle title;
- Each Principle consists of multiple Criteria – each Criterion defines an outcome that contributes to achieving the outcome of the Principle;
- Each Criterion consists of one or several Indicators – each Indicator defines an auditable state that contributes to achieving the Criterion outcome.

Both Principles and Criteria include Rationale statements providing the reasons (backed by reference notes if needed) as to why the Principle or Criterion is needed.

Language use, acronyms and definitions

The Principles, Criteria and Indicators are written in an active form, using “the UoC” as subject.

Throughout the ASC documents, specific wording is used to indicate:

- A requirement⁵ i.e. shall
- A recommendation⁶ i.e. should
- And provides inclusiveness of choices
- Or provides exclusiveness of choices

An Acronym List and Definition List are included in Annex 1.

⁴ **Standard:** see Definition List.

⁵ **Requirement:** see Definition List.

⁶ **Recommendation:** see Definition List.

Scope and Unit of Certification

The Scope of the ASC Feed Standard (hereafter “the Standard”) addresses key negative environmental and social impacts associated with the (aquaculture) feed⁷ industry. Entities (the UoC) certified to the ASC Feed Standard contribute in reducing or eliminating these negative impacts.

The Scope of the Standard is translated into 5 Principles:

- Principle 1** - The UoC has a management system to implement the ASC feed standard, including operating legally, and in a socially and environmentally responsible manner
- Principle 2** - The UoC sources ingredients responsibly
- Principle 3** – The UoC accounts for eligible ingredients input and feed output
- Principle 4** - The UoC sources marine ingredients responsibly
- Principle 5** - The UoC sources plant ingredients responsibly

Unit of Certification

The Unit of Certification (UoC) is a feed manufacturer⁸ (refer to the CAR & RUoC documents for further definition). The ASC Feed Standard does not differentiate between aquafeed manufacturers that produce pelleted or extruded aquafeed, as long as the feed manufacturer and the feed ingredients⁹ meet the indicators of this Standard.

For feed manufacturers that produce both aquafeed and other livestock and poultry feed¹⁰, the ASC Feed Standard applies to the entire facility for Principle 1, whilst Principles 2-5 apply to only the ingredients used for the manufacturing of the aquafeed.

The requirements for certification processes are documented in the CAR.

Scope of Standard

Within each criterion, the applicability is defined in the scope heading.

- **Principle 1** – applies to the entire UoC, not only to aquafeeds.
- **Principles 2 and 3** – all ingredients that represent >1% of the total annual ingredient-weight (volume) received by the UoC for use in aquafeeds. In case the UoC also produces livestock feed, the received volume shall be based on the ingredient volume

⁷ **Aquaculture feed**: see Definition List.

⁸ **Feed manufacturer**: see Definition List.

⁹ **Feed ingredient**: see Definition List.

¹⁰ **Feed**: see Definition List.

destined for inclusion in aquafeed. Excluded are feed additives (per default, regardless of volume limit): premixes¹¹, vitamins, minerals, trace elements¹² and colourants.

- **Principle 4** – Marine-based ingredients used by the UoC in aquafeeds.
- **Principle 5** – Plant-based ingredients used by the UoC in aquafeeds.

The ASC Feed Standard addresses the following actors in the ingredient supply chain:

- Feed Manufacturer (UoC),
- Ingredient Manufacturer¹³:
 - Commodity trading¹⁴ and transporting¹⁵ companies are not considered as Ingredient Manufacturer.
- Primary raw material production¹⁶.

Relationship between the Standard and applicable law

In the case that an applicable law or collective bargaining agreement is stricter than a requirement in the Standard, such law or collective bargaining agreement will prevail unless such law has become obsolete. In the case that an applicable law or collective bargaining agreement is less strict than a requirement in the Standard, the requirement in the Standard will prevail, unless the requirement is forbidden by law or statute.

¹¹ **Premixes**: see Definition List.

¹² **Trace elements**: see Definition List.

¹³ **Ingredient manufacturer**: see Definition List.

¹⁴ **Commodity trade**: see Definition List.

¹⁵ **Transport company**: see Definition List.

¹⁶ **Primary raw material production**: see Definition List.

Principle 1 - The UoC has a management system to implement the ASC feed standard, including operating legally, and in a socially and environmentally responsible manner.

Criterion 1.1 - The UoC is in possession of all necessary legal licenses and permits.

Scope Criterion 1.1 - Every UoC

Rationale – The aquaculture sector is rapidly growing, which can result in regulatory challenges. As a result, there is an increased risk that the industry be(comes) unregulated. Since it is illegal¹⁷ in most countries to have a business without possessing all needed licences and permits, the UoC is required to be in possession of these as a minimum.

Within the ASC Feed Standard, regulatory compliance is required throughout Principle 1; with a focus on permits and licenses under Criterion 1.1, Labour laws under Criterion 1.3 and environmental laws under Criterion 1.17.

Indicators:	
Indicator 1.1.1	The UoC shall be in possession of all required legal licenses and permits.

¹⁷ FAO. 2018. The State of World Fisheries and Aquaculture 2018 - Meeting the sustainable development goals. <http://www.fao.org/3/i9540en/i9540EN.pdf>

Criterion 1.2 - The UoC implements an effective management system to maintain compliance with the ASC requirements.

Scope Criterion 1.2 - Every UoC

Rationale - A management system is the way in which an organisation manages the inter-related parts of its business in order to achieve its objectives. The level of complexity of the system will depend on each organisation's specific context, its size, scope and risks of its activities. The management system includes policies, procedures and processes, so that objectives are achieved effectively and efficiently. This includes compliance with ASC requirements; in other words, the management system is applied to all criteria in this standard.

The Indicators in this Criterion are based on the common quality control adaptive management method which entails a Plan-Do-Check-Act (PDCA)-cycle^{18,19}.

Indicators:	
Indicator 1.2.1	The UoC shall have a management system ²⁰ in place covering the entire UoC, signed off by responsible management, to ensure continuous implementation ²¹ of all ASC requirements: ASC Feed Standard and ASC Requirements for the Unit of Certification (RUoC).
Indicator 1.2.2	The UoC shall have a system to prevent acts of corruption, extortion, embezzlement or bribery.
Indicator 1.2.3	The UoC shall have a system to ensure records are not falsified and information is not misrepresented.
Indicator 1.2.4	The UoC shall have at least one named member of management who is responsible for the implementation of the ASC requirements.
Indicator 1.2.5	The UoC shall ensure that relevant employees ²² have the required competencies to implement the ASC requirements.
Indicator 1.2.6	The UoC shall monitor compliance against the ASC requirements through, as a minimum, annually scheduled internal audits and implement corrective measures where relevant.
Indicator 1.2.7	The UoC shall be able to demonstrate compliance against the ASC requirements to ASC auditors, ASC scheme owner, and the ASC assurance body.
Indicator 1.2.8	The UoC shall review the management system when needed and at least annually, and address any issues identified within an appropriate timescale.

¹⁸ Peter J. Koiesar. (1994). What Deming Told the Japanese in 1950, Quality Management Journal, 2:1, 9-24.

¹⁹ M. Sokovic, D. Pavletic, K. Kern Pipan, Quality Improvement Methodologies – PDCA Cycle, RADAR Matrix, DMAIC and DFSS, Journal of Achievements in Materials and Manufacturing Engineering 43/1 (2010) 476-483. http://jamme.acmsse.h2.pl/papers_vol43_1/43155.pdf

²⁰ **Management System:** see Definition List.

²¹ This includes policies deemed needed by the UoC, such as a written policy on human rights.

²² **Employee:** see Definition List

Criterion 1.3 - The UoC complies with applicable labour laws and regulations.

Scope Criterion 1.3 – Every UoC

Rationale – In combination with the indicators under Criterion 1.1, compliance with labour regulations represents a fundamental basis for the development of socially responsible feed production.

Indicators:	
Indicator 1.3.1	The UoC shall comply with all applicable labour-related laws and regulations and maintain a system for its compliance.
Indicator 1.3.2	The UoC shall ensure all employees are familiar with their labour-related rights; including ASC requirements on labour-related rights, even if not covered by applicable laws and regulations.

Criterion 1.4 - The UoC does not engage in – nor support – forced, bonded, compulsory labour or human trafficking.

Scope Criterion 1.4 – Every UoC

Rationale – Within the United Nations (UN) Universal Declaration of Human Rights (UDHR) it is recognised that forced, bonded, compulsory labour²³ and human trafficking²⁴ is a persistent problem in many industries²⁵ and regions of the world²⁶. The fishing and aquaculture industries are no exception to this^{27,28}.

According to recent estimates²⁹, 40.3 million people around the world are victims of modern slavery of which 25 million people are victim of forced, bonded or compulsory labour. This includes human trafficking, debt bondage (labour demanded as a means of payment of debt), and more subtle forms of forced labour that force employees to remain in their jobs against their will through other means of threat. As with child labour, poverty is a key driver of forced labour. However, this phenomenon is not limited to low-income countries. In some industries and regions of high-income countries, (migrant) employees can equally become the victims of forced labour.

Relevant reference documents:

- I. ILO Forced Labour Convention, 1930 (No. 29);
- II. ILO Abolition of Forced Labour Convention, 1957 (No. 105);
- III. ILO The Protection of Wage Convention, 1949 (No. 95);
- IV. ILO The Private Employment Agencies Convention, 1997 (No. 181).

Indicators:	
Indicator 1.4.1	The UoC shall not (be) engage(d) in, or support, forced, bonded, compulsory labour ³⁰ or human trafficking ³¹ . This includes: <ul style="list-style-type: none">- work that is exacted from any person under the menace of any penalty³²;- work for which the person has not offered himself or herself voluntarily³³;- the use of deception or other forms of coercion, for the purpose of exploitation of people.

²³ **Forced, bonded, compulsory labour:** see Definition List.

²⁴ **Human trafficking:** see Definition List.

²⁵ Oxfam. 2018. Ripe for change – Ending human suffering in supermarket supply chains. <https://policy-practice.oxfam.org.uk/publications/ripe-for-change-ending-human-suffering-in-supermarket-supply-chains-620418>

²⁶ Global Slavery Index. 2018. <https://www.globalslaveryindex.org/resources/downloads/>

²⁷ Human Rights Watch. 2018. Hidden chains - Rights abuses and forced labor in Thailand's Fishing Industry.

²⁸ <https://www.globalslaveryindex.org/2018/findings/importing-risk/fishing/>

²⁹ <https://www.globalslaveryindex.org/2018/findings/highlights/>

³⁰ **Forced, bonded, compulsory labour:** see Definition List

³¹ **Human trafficking:** see Definition List

³² While a penalty in itself can be more visible, the menace of a penalty can be more hidden but is equally seen as leading to a form of forced labour. Menace of a penalty includes for example the fear of suppression of rights or privileges, and threats of retaliation which can be realised in different forms, such as in physical, mental and social harm.

³³ **Voluntarily:** see Definition List

Indicator 1.4.2	If forced, bonded, compulsory labour or human trafficking is found, the UoC shall implement effective remediation procedures to comply with 1.4.1, that put the best interest of the person first, such as resolving debts or other forms of bondage, as well as enabling revised employee conditions or repatriation. Remediation actions are documented and are verified to ensure effectiveness.
Indicator 1.4.3	If forced, bonded, compulsory labour or human trafficking is found, the UoC shall implement effective corrective actions that prevent recurrence. Corrective actions are documented and are verified to ensure effectiveness.
Indicator 1.4.4	The UoC shall ensure that any employment/recruitment agency(ies) used is screened and monitored to ensure that it is: <ul style="list-style-type: none"> - licensed or certified by the competent national authority, - conforms with Criteria 1.1.
Indicator 1.4.5	The UoC, or if applicable the agency(ies) involved in recruitment, shall not take into its possession ³⁴ any original identity documentation such as IDs, visas, passports, without which the employee would not be able to freely terminate the employment, travel or leave the country.
Indicator 1.4.6	The UoC, or if applicable the agency(ies) involved in recruitment, shall not withhold any part of the employee's salary, property, or benefits, even if local regulation allows for this. The only situations where withholding is permitted is when required by law.
Indicator 1.4.7	The UoC, or if applicable the agency(ies) involved in recruitment, shall not charge employees any fees for recruitment ³⁵ or during employment. This includes any costs, or deposits, associated with the processing of official documents including work visas. For migrant workers ³⁶ , this includes any costs, or deposits, associated with travel and repatriation.
Indicator 1.4.8	The UoC shall allow employees to freely move around the workplace in order to use sanitary facilities and have access to drinking water during their work shift.
Indicator 1.4.9	The UoC shall not keep employees involuntarily on site outside of a work shift.
Indicator 1.4.10	The UoC shall offer employees reasonable and safe transportation to leave the premises when the workplace is not readily accessible and public transportation is not available; allowing employees to leave the site once their shift is over.
Indicator 1.4.11	The UoC shall not require employees to reside in employer-operated accommodation as a condition of employment for non-remote, readily accessible, operations.
Indicator 1.4.12	The UoC, or if applicable the agency(ies) involved in recruitment, shall not engage in prison labour.

³⁴ If storage is provided by the UoC, the UoC shall ensure that storage is voluntary and items can be freely accessed by employees

³⁵ For migrant workers, evidence shall include recruitment/employment cost incurred by the UoC; costs shall be summarised by year as well as by country from which employed migrant workers originate.

³⁶ **Migrant worker:** see Definition List.

Criterion 1.5 - The UoC protects children and young workers.

Scope Criterion 1.5 – Every UoC

Rationale – Children³⁷ and young workers³⁸ are particularly vulnerable to economic exploitation due to their inherent age-related limitations in physical development, knowledge, lack of independence and experience. These vulnerabilities can lead to worst forms of child labour which are to be prioritised for elimination without delay. Employment, and exploitation, of children and young workers occurs globally and in many (if not all) industries³⁹. The aquaculture sector is, unfortunately, no exception to this⁴⁰.

However, not all work done by children should be categorised for elimination. Children's participation in work that does not negatively affect their health and personal development nor interferes with their schooling, is generally regarded as being something positive. This includes activities such as helping their parents around the home, assisting in a family (farming) business or earning pocket money outside school hours and during school holidays. These non-harmful forms of participation in work contribute to a child's development and within some contexts to the welfare of their families; it provides them with skills and experience; and helps to prepare them to become productive members of society during their adult life⁴¹.

Relevant reference documents:

- I. ILO Minimum Age Convention, 1973 (No. 138);
- II. ILO Worst Forms of Child Labour Convention, 1999 (No. 182);
- III. OHCHR Convention on the Rights of the Child⁴².

Indicators:	
Indicator 1.5.1	The UoC shall not (be) engage(d) in child labour ⁴³ . This includes work that: <ul style="list-style-type: none">– is mentally, physically, socially or morally dangerous and harmful to children⁴⁴; or– interferes with their schooling⁴⁵
Indicator 1.5.2	If child labour is found, the UoC shall implement effective remediation procedures to comply with 1.5.1 that put the best interest of the child first, such as enabling the child to attend school and remain in school until no longer mandatory. Remediation actions are documented and are verified to ensure effectiveness.

³⁷ **Child:** see Definition List.

³⁸ **Young worker:** see Definition List.

³⁹ https://www.ilo.org/ipec/areas/Agriculture/WCMS_172348/lang--en/index.htm

⁴⁰ ILO. 2017. Global estimates of child labour: Results and trends, 2012-2016.

https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_575499.pdf

⁴¹ <https://www.ilo.org/ipec/facts/lang--en/index.htm>

⁴² <https://www.ohchr.org/Documents/ProfessionalInterest/crc.pdf>

⁴³ **Child labour:** see Definition List.

⁴⁴ Mentally or socially dangerous may include: working in isolation, working in an environment containing abusive language. Physically dangerous may include: heavy lifting and exposed to moving parts of machinery, working in noisy or dusty conditions or extreme temperatures. Morally dangerous includes working in an environment such as exposed to substance abuse or gambling, see also definition for worst forms of child labour.

⁴⁵ As per the [ILO definition](#), this includes for example: depriving them of the opportunity to attend school; obliging them to leave school prematurely; or requiring them to attempt to combine school attendance with excessively long and heavy work.

Indicator 1.5.3	If child labour is found, the UoC shall implement effective corrective actions that prevent recurrence. Corrective actions are documented and are verified to ensure effectiveness.
Indicator 1.5.4	The UoC may ⁴⁶ employ children as of the age of 15 ⁴⁷ , or above the age of completion of mandatory schooling ⁴⁸ (whichever is higher), to conduct non-hazardous work ^{49,50} .
Indicator 1.5.5	The UoC may employ children as of the age of 13 ^{51,52} to conduct light work ⁵³ if: <ul style="list-style-type: none"> – The child received appropriate training prior to work; – The child receives appropriate supervision.
Indicator 1.5.6	The UoC shall ensure that any children ⁵⁴ , including young employees ⁵⁵ , carrying out work, only perform non-hazardous work (1.5.4) or light work (1.5.5), according to a risk assessment. The risk assessment shall be part of a general Risk Management Framework (see Figure 4, Annex 7).
Indicator 1.5.7	The UoC shall encourage, and shall not prevent, children of employees living on-site to attend mandatory schooling.

⁴⁶ **May**: see definition for “requirement”

⁴⁷ ILO Convention 138 allows for 14 years as exception in certain developing countries. ASC follows ILO Convention 138 and equally allows employment from 14 years in these countries.

⁴⁸ National laws or regulations may permit the employment or work of persons who are at least 15 years of age but have not yet completed their compulsory schooling, to conduct work which meets the following requirements

- not likely to be harmful to their health or development; and
- not such as to prejudice their attendance at school, their participation in vocational orientation or training programmes approved by the competent authority or their capacity to benefit from the instruction received.

⁴⁹ **Hazardous work**: see Definition List.

⁵⁰ See Tables 4 and 5 in Annex 7.

⁵¹ ILO Convention 138 allows for 12 years as exception in certain developing countries. ASC follows ILO Convention 138 and equally allows employment from 12 years in these countries.

⁵² This indicator and the scope of the Standard does not apply to children helping out at home and participating in work; for example, helping parents around the home, earning pocket money outside school hours and during school holidays, assisting in a family business or participating in other activities which are not an essential contribution to the productivity and profitability of a business,

⁵³ **Light work**: see Definition List

⁵⁴ **Child**: see Definition List.

⁵⁵ **Young employee**: see Definition List

Criterion 1.6 - The UoC does not discriminate against its employees.

Scope Criterion 1.6 – Every UoC

Rationale – Discrimination⁵⁶ is still a common problem in the workplace. While some of the more blatant forms of discrimination may have faded, many remain or have taken on new or less visible forms. It can perpetuate poverty, stifle development, productivity, and competitiveness, and ignite political instability⁵⁷.

A work relationship should be based on knowledge, skills, and competencies.

Relevant reference documents:

- I. ILO Equal Remuneration Convention, 1951 (No. 100);
- II. ILO Discrimination (Employment and Occupation) Convention, 1958 (No. 111);
- III. ILO Workers with Family Responsibilities Convention, 1981 (No. 156).

Indicators:	
Indicator 1.6.1	The UoC shall ensure equal treatment of all applicants for employment, and employees in all cases, including: disciplinary practices, job assignment, pay & benefits, promotion and other career opportunities, recruitment process and conditions, retirement, termination, training, working conditions; irrespective of, age, caste, colour, disabilities, ethnicity, gender, legal status, marital status, nationality, parental status, participation in trade unions, political opinion, pregnancy, race, religion, sexual orientation.
Indicator 1.6.2	The UoC, or if applicable the agency(ies) involved in recruitment, shall not test for pregnancy or virginity, nor practice or encourage forced contraception.
Indicator 1.6.3	The UoC, or if applicable the agency(ies) involved in recruitment, shall only perform medical tests if required for health and safety reasons, according to a risk assessment. The risk assessment shall be part of a general Risk Management Framework (see Figure 4, Annex 7).
Indicator 1.6.4	Where the UoC, or if applicable the agency(ies) involved in recruitment, perform medical tests, employees' data must be protected, and employees have the right to their test results.
Indicator 1.6.5	Where the UoC, or if applicable the agency(ies) involved in recruitment, determine that medical tests are required according to their risk assessment, employees have the right to use an independent doctor, if preferred.

⁵⁶ **Discrimination:** see Definition List.

⁵⁷ ILO. 2011. Equality at work: the continuing challenge. https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/publication/wcms_166583.pdf

Indicator 1.6.6	The UoC shall have effective communication ⁵⁸ , procedures, and monitoring in place to ensure harassment ⁵⁹ , abusive or exploitative behaviour does not occur in the workplace.
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⁵⁸ This includes providing employees with contact information for worker voice organisations engaged in labour-related rights, if active in the region.

⁵⁹ **Harassment:** see Definition List.

Criterion 1.7 - The UoC provides a safe and healthy work environment.

Scope Criterion 1.7 – Every UoC

Rationale – ILO sets forth, through various Conventions (see below), the principle that workers should be protected from sickness, disease and injury arising from their employment as a basic right. Yet for millions of workers, the reality is very different. The ILO estimates⁶⁰ that 2.78 million people die each year from occupational accidents and work-related diseases. A further 374 million people suffer from non-fatal work-related injuries and illnesses each year, many of these resulting in extended absences from work. It is estimated that 3.94% of the world's annual Gross Domestic Product (GDP) is lost as a consequence of occupational diseases and accidents.

Health and safety within the global aquaculture industry, including processing, is still widely overlooked, according to the UN Food and Agriculture Organization (FAO)⁶¹. The world's estimated 19 million aquaculture workers regularly contend with hazardous⁶² conditions. Some aquaculture workers are highly trained and in secure jobs. However, globally, many aquaculture workers are employed in precarious arrangements and drawn from often vulnerable populations, including women, Indigenous people, children, seasonal workers, migrant workers, rural and remote workers. Many of these risks remain either neglected or unaddressed due to gaps in knowledge, limited independent analyses of prevention and a lack of investment in risk reduction strategies.

Employers face costly early retirements, loss of skilled staff, absenteeism, and high insurance premiums due to work-related accidents and diseases. Yet many of these work-related accidents and diseases are preventable through the provision of a safe and healthy work environment.

Relevant reference documents:

- I. ILO Weekly Rest (Industry) Convention, 1921 (No. 14);
- II. ILO Occupational Safety and Health Convention, 1981 (No. 155);
- III. ILO Occupational Health Services Convention, 1985 (No. 161);
- IV. ILO Chemicals Convention, 1990 (No. 170);
- V. ILO Prevention of Major Industrial Accidents Convention, 1993 (No. 174).

Indicators:	
Indicator 1.7.1	The UoC shall maintain a health & safety risk assessment ⁶³ .
Indicator 1.7.2	The UoC shall include at least the following risk factors (step 2 Figure 4, Annex 7) in the health and safety risk assessment (see 1.7.1): - Risk of physical injuries, acute or chronic, in the workplace ⁶⁴

⁶⁰ <https://www.ilo.org/global/topics/safety-and-health-at-work/lang--de/index.htm>

⁶¹ <http://www.fao.org/blogs/blue-growth-blog/despite-advances-in-health-and-safety-operations-fisheries-remains-a-dangerous-sector/en/>

⁶² **Hazardous:** see Definition List.

⁶³ **Risk assessment:** see Definition List.

⁶⁴ This includes the following activities, hazards and areas: chemical and biological substances, diving, electricity and electrical equipment, equipment, fire, mechanical and manual handling, natural/physical disaster/event, employee welfare, workplace practices, workplace environment.

	- Risk of mental injuries, acute or chronic, in the working environment ⁶⁵
Indicator 1.7.3	The UoC shall implement appropriate measures (step 4 Figure 4, Annex 7), monitor indicators of risk (step 5a), monitor the effectiveness of measures implemented (step 5b), and repeat risk assessment depending on monitoring outcome.
Indicator 1.7.4	The UoC shall provide well maintained and appropriate Personal Protective Equipment (PPE) free of charge and according to the need defined in the health & safety risk assessment in indicator 1.7.1.
Indicator 1.7.5	The UoC shall ensure that appropriate health & safety measures (see 1.7.3) are effectively implemented; this includes appropriate health & safety notices/instructions in the workplace, appropriate equipment maintenance, appropriate training ⁶⁶ for employees including on emergency responses, as well as PPE used appropriately by employees.
Indicator 1.7.6	The UoC shall provide adequate First Aid (including supplies) administered by qualified personnel in the event of a work-related injury; this includes access to professional support such as an ambulance.
Indicator 1.7.7	Where not provided by a State/National social security/health system, the UoC shall provide and pay for insurance ⁶⁷ for all employees for work-related accidents or injuries; this includes as a minimum the cost for transport and medical treatment/medication needed to treat the accident or injury, the cost for transport and medical treatment/medication needed for recovery, compensation for lost working hours, as well as the cost for any required repatriation in case of migrant workers.
Indicator 1.7.8	The UoC shall allow employees the freedom to remove themselves from an unsafe situation without fear of retribution.
Indicator 1.7.9	The UoC shall provide access to adequate and clean sanitary facilities, with adequate privacy, which includes separation by gender if required.
Indicator 1.7.10	The UoC shall provide access to free, clearly labelled, potable water for all employees.
Indicator 1.7.11	The UoC shall provide access to a designated area to prepare food and eat during breaks.
Indicator 1.7.12	The UoC shall not require employees to purchase from employer-operated stores or services, such as the use of canteens, as a condition of employment; where alternative stores or services are not available due to the remote location, cost is reasonable and does not include the UoC making a profit from stores and services provided to employees.
Indicator 1.7.13	The UoC shall provide suitable areas for breast feeding women, and shall allow for additional workday breaks for pregnant and breast-feeding women; nursing breaks shall be counted as working time and remunerated accordingly.

⁶⁵ This includes the following activities, hazards and area: chemical and biological substances, diving, electricity and electrical equipment, equipment, fire, mechanical and manual handling, natural/physical disaster/event, employee welfare, workplace practices, workplace environment.

⁶⁶ Trainings are free of charge for employees and are carried out during remunerated working hours.

⁶⁷ Where no suitable insurance is available, the UoC may have a system to cover these costs directly.

Indicator 1.7.14	The UoC shall not engage in, or tolerate, mental ⁶⁸ , physical or verbal abuse, or any other form of harassment ⁶⁹ .
Indicator 1.7.15	The UoC shall ensure structural integrity of all buildings and structures within the UoC.
Indicator 1.7.16	The UoC shall adhere to maritime legislation, specifically regarding the health and safety dimension, for situations where the UoC interacts with maritime traffic.

⁶⁸ **Mental abuse:** see Definition List.

⁶⁹ **Harassment:** see Definition List.

Criterion 1.8 - The UoC respects the right to associate and the right for collective bargaining.

Scope Criterion 1.8 – Every UoC

Rationale – The right to freedom of association is the right to join a formal or informal group to take collective action towards the employer. Freedom of Association and the effective recognition of the right to collective bargaining is one of the core principles of the ILO “Declaration on Fundamental Principles and Rights at Work.” (Conventions 87, 98 and 135).

Collective bargaining⁷⁰ provides a more balanced power relationship for attaining beneficial and productive solutions to potentially conflictual relations between workers and employers, including wage negotiations and working conditions. It provides a means of building trust between the parties through negotiation and the articulation and satisfaction of the different interests of the negotiating partners. Collective bargaining plays this role by promoting peaceful, inclusive and democratic participation of representative workers’ and employers’ organisations.

Relevant reference documents:

- I. ILO Freedom of Association and Protection of the Right to Organise Convention, 1948 (No.87);
- II. ILO Right to Organise and Collective Bargaining Convention, 1949 (No. 98);
- III. ILO Workers’ Representatives Convention, 1971 (No. 135).

Indicators:	
Indicator 1.8.1	The UoC shall inform all employees that they are free to join or form workers organisations (i.e. trade unions or other organisations that represent their labour concerns and interests), of their own choosing.
Indicator 1.8.2	The UoC shall inform all employees that they are free to bargain collectively.
Indicator 1.8.3	The UoC shall not interfere in any way with the establishment, functioning ^{71,72} or administration of workers’ organisation(s) or collective bargaining.
Indicator 1.8.4	The UoC shall, in areas where the right to freedom of association is restricted by law, accept comparable means for freedom of association and collective bargaining.

⁷⁰ **Collective bargaining:** see Definition List.

⁷¹ This includes the UoC allowing worker organisation representatives access to employees and employee work places, during working hours.

⁷² This includes the UoC engaging in meaningful negotiations when approached by worker organisations.

Criterion 1.9 - The UoC contracts employees in a transparent manner.

Scope Criterion 1.9 – Every UoC

Rationale – Employment agreements generally address important aspects of the employment such as wages, benefits, termination procedures, covenants not to compete, and the respective duties and responsibilities of employer and employee. It is a legally binding mutual agreement between two parties, the employer and the employee, and is designed to give both parties security and protection.

Indicators:	
Indicator 1.9.1	<p>The UoC shall ensure that all employees have received, understood and agreed upon, written and understandable information about their employment terms and conditions prior to migration, and starting employment. This information shall include, at a minimum:</p> <ul style="list-style-type: none"> – a description of the role and any responsibilities, – the type of contract (e.g. permanent, fixed-term, contractor), – working hours, including allowance for breaks, – paid annual leave and allowance for days off on public holidays, – sick leave, – wages, – any agreed wage deductions (e.g. accommodation, meals), – compensation for overtime, – benefits (e.g. insurances), – provision for free personal protective equipment, – termination terms and conditions; notice period, – access to relevant policies (e.g. anti-discrimination 1.6, and access to trade unions and collective bargaining 1.8).
Indicator 1.9.2	<p>The UoC shall provide all employees transparency on any process involved in, and documentation on advances, loans, hours worked, pay and the calculation of any deductions, and store copies hereof within the facility.</p>
Indicator 1.9.3	<p>The UoC shall not use systematic employment arrangements – such as but not limited to: labour-only contracting⁷³, sub-contracting, family contracting⁷⁴, home-working, false-apprenticeships⁷⁵, exclusive use of fixed-term contracts – to avoid any social or labour rights towards their employees.</p>

⁷³ **Labour-only contracting:** see Definition List.

⁷⁴ **Family contracting:** see Definition List.

⁷⁵ **False apprenticeships:** see Definition List.

Criterion 1.10 - The UoC pays employees at or above the legal minimum wage.

Scope Criterion 1.10 – Every UoC

Rationale – Within the Universal Declaration of Human Rights⁷⁶, it is stated that “Everyone who works has the right to just and favourable remuneration ensuring for himself/herself and his/her family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection.”

This statement captures the idea that every worker deserves a decent reward for their efforts which is set in a transparent manner and safeguarded through company management. Widespread evidence suggests that some wages within the aquaculture sector are still below national legal minimum wages. In addition, low wages also result in other societal barriers.

Relevant reference documents:

- I. ILO Maternity Protection Convention, 1919 (No. 3);
- II. ILO Protection of Wages Convention, 1949 (No. 95);
- III. ILO Maternity Protection Convention, 1952 (No. 103);
- IV. ILO Minimum Wage Fixing Convention, 1970 (No. 131);
- V. ILO Maternity Protection Convention, 2000 (No. 183).

Indicators:	
Indicator 1.10.1	The UoC shall set wages (before overtime and bonuses) at or above the legal minimum wage ⁷⁷ ; if a minimum wage has not been established by law, the UOC calculates basic needs ⁷⁸ wages, in consultation with workers or their representative worker organisations.
Indicator 1.10.2	The UoC shall pay wages in legal tender ⁷⁹ at regular intervals but at a minimum monthly, and directly to employees, in accordance with national law, and shall not be delayed, deferred or in any way withheld.
Indicator 1.10.3	The UoC shall document information of wage payment and receipt of all employees, including receipt of information on advances, loans, hours worked, pay and the calculation of any deductions.
Indicator 1.10.4	The UoC shall ensure that employees are entitled to maternity or paternity protection in accordance with the requirements of national laws and regulations or ILO Convention 183 ⁸⁰ , whichever is greater.

Note: Given the complexities related to determining an applicable Living Wage⁸¹, and defining the pathway to reach it, ASC is engaged in broader, cross-cutting industry, discussions to develop Living-Wage Indicators. This is in line with the intent as set out by the original Aquaculture Dialogues. It is envisioned that the Living Wage will become part of the ASC Feed Standard into the future.

⁷⁶ <https://www.un.org/en/about-us/universal-declaration-of-human-rights>

⁷⁷ **Minimum wage:** see Definition List.

⁷⁸ **Basic needs:** see Definition List.

⁷⁹ **Legal tender:** see Definition List.

⁸⁰ A list of points from ILO Convention 183 can be found in the Implementation Guidance.

⁸¹ **Living wage:** see Definition List.

Criterion 1.11 - The UoC prevents excessive working hours.

Scope Criterion 1.11 – Every UoC

Rationale – Despite the regulation of working time being one of the oldest concerns of labour legislation⁸², excessive working hours are still a widespread issue in many industries and regions.

In many parts of the world, there is a significant link between low wages and excessive working time. Workers subject to extensive overtime can suffer consequences in their work-life balance and are subject to higher fatigue-related accident rates.

ILO standards on working time provide the framework for regulating hours of work, daily and weekly rest periods, and annual holidays which serve to promote higher productivity while safeguarding workers' physical and mental health.

Relevant reference documents:

- I. ILO Hours of Work (Industry) Convention, 1919 (No. 1);
- II. ILO Weekly Rest (Industry) Convention, 1921 (No. 14);
- III. ILO Holidays with Pay Convention (revisited), 1970 (No. 132);
- IV. ILO Night Work Convention, 1990 (No. 171);
- V. ILO The Safety and Health in Agriculture Convention, 2001 (No. 184);
- VI. ILO Recommendation Reduction of Hours of Work (Recommendation 116).

For employees⁸³ aged 18, or higher:

Indicators:	
Indicator 1.11.1	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on regular working hours, but shall not exceed 8 hours per day and 48 hours in a normal week (excluding breaks) ^{84,85} .
Indicator 1.11.2	The UoC shall keep records of the hours worked by employees.
Indicator 1.11.3	The UoC shall ensure that overtime hours are voluntary, occur only under exceptional circumstances and are not requested regularly.
Indicator 1.11.4	The UoC shall ensure that overtime is not more than 12 hours per week.
Indicator 1.11.5	The UoC shall ensure that overtime hours are paid at a premium rate ⁸⁶ as defined by collective bargaining agreements (if applicable) or industry

⁸² ILO. 2007. Working time around the world: trends in working hours, laws and policies in a global comparative perspective.

https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_104895.pdf

⁸³ **Employee:** see Definition List.

⁸⁴ Where the hours of work on one or more days of the week are less than eight, the limit of eight hours may be exceeded on the remaining days of the week by the sanction of the competent public authority, or by collective bargaining agreement; provided, however, that in no case shall the daily limit of eight hours be exceeded by more than one hour.

⁸⁵ Where persons are employed in shifts it shall be permissible to employ persons in excess of eight hours in any one day and forty-eight hours in any one week, if the average number of hours over a period of three weeks or less does not exceed eight per day and forty-eight per week.

⁸⁶ **Premium rate:** see Definition List.

	standards. In cases where this is not defined, a premium rate of a minimum of 125% of the agreed salary is applied to overtime hours.
Indicator 1.11.6	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on workday breaks, but shall not be less than 1 hour per 8 hours of work.
Indicator 1.11.7	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on daily rest, but shall not be less than 11 consecutive hours per 24 hours.
Indicator 1.11.8	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on weekly rest, but shall not be less than 24 consecutive hours (1 day) of rest within a 7-day period.
Indicator 1.11.9	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on annual leave ⁸⁷ .
Indicator 1.11.10	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on premium rates, working hours, breaks, daily rest, weekly rest and health assessments for night work.

For young employees⁸⁸:

Indicators:	
Indicator 1.11.11	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on working hours, but shall not exceed 8 hours per day ⁸⁹ and 40 hours in a week (excluding breaks) ⁹⁰ .
Indicator 1.11.12	The UoC shall keep records of the hours worked by every employee.
Indicator 1.11.13	The UoC shall not allow overtime hours.
Indicator 1.11.14	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on workday breaks, but shall not be less than 0.5 hour per 4.5 hours of work.
Indicator 1.11.15	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on daily rest, but shall not be less than 12 consecutive hours per 24 hours.
Indicator 1.11.16	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on weekly rest, but shall not be less than 48 consecutive hours (2 days) of rest within a 7-day period.
Indicator 1.11.17	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on annual leave ⁹¹ .
Indicator 1.11.18	The UoC shall not allow young employees, to work between 10pm and 6am.

⁸⁷ Best practice according to ILO Convention 132 is to provide no less than three paid working weeks for one calendar year of full-time service (Indicator 1.11.1).

⁸⁸ **Young Employee:** see Definition list

⁸⁹ Combined school, work and transportation time (to/from school and work) shall not exceed a total of 10 hours per day.

⁹⁰ These hours shall not be averaged over a period longer than a week.

⁹¹ Best practice according to ILO Convention 132 is to provide no less than three paid working weeks for one calendar year of full-time service (Indicator 1.11.11).

For children⁹² conducting light work not yet classified as young employee:

Indicators:	
Indicator 1.11.19	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on working hours, but shall not exceed 3 hours per day ⁹³ and 14 hours in a week (excluding breaks) ⁹⁴ .
Indicator 1.11.20	The UoC shall keep records of the hours worked by every employee.
Indicator 1.11.21	The UoC shall not allow overtime hours.
Indicator 1.11.22	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on workday breaks, but shall not be less than 0.5 hour per 3 hours of work.
Indicator 1.11.23	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on daily rest, but shall not be less than 14 consecutive hours per 24 hours.
Indicator 1.11.24	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on weekly rest, but shall not be less than 48 consecutive hours (2 days) of rest within a 7-day period.
Indicator 1.11.25	The UoC shall comply with collective bargaining agreements (if applicable) and industry standards on annual leave ⁹⁵ .
Indicator 1.11.26	The UoC shall not allow children, not yet classified as young employee, to work between 8pm and 6am.

⁹² **Children:** see Definition list

⁹³ Combined school, work and transportation time (to/from school and work) shall not exceed a total of 8 hours per day. Hours of work on school days shall not exceed 2 hours.

⁹⁴ These hours shall not be averaged over a period longer than a week.

⁹⁵ Best practice according to ILO Convention 132 is to provide no less than three paid working weeks for one calendar year of full-time service (Indicator 1.11.19).

Criterion 1.12 - The UoC has disciplinary practices that respect the dignity and health of the employee.

Scope Criterion 1.12 – Every UoC

Rationale – Disciplinary practices⁹⁶ are not covered by a specific ILO Convention but there are several UN agreements (see below) that collectively establish an international norm for disciplinary practices. The latter are intended to course-correct the behaviour or performance of workers, as there is a risk that this could be done in an unfair or degrading manner.

Despite not being embedded in an ILO Convention, most of the UN member states have ratified these treaties, indicating their commitment to abolish any practice that may compromise or damage an individual’s physical and mental well-being. In addition, many countries have specific national legislation making abuse in the workplace a criminal offense.

Aiming to protect both the dignity and the physical and mental health of any individual, these instruments strive to deliver an effective and consistent method of dealing with disciplinary and performance matters. Improving motivation, establishing and carrying out a constructive disciplinary process is a key part of responsible human resource management.

Relevant reference documents:

- I. Universal Declaration of Human Rights (1948);
- II. International Covenant on Civil and Political Rights (1966);
- III. Declaration on the Protection of All Persons from Being Subjected to Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (1975).

Indicators:	
Indicator 1.12.1	The UoC shall have transparent disciplinary procedures and applies them in a progressive and objective manner, ensuring dignity and respect towards the employee.
Indicator 1.12.2	The UoC shall not deduct from wages or benefits for the purpose of disciplinary action.

⁹⁶ **Disciplinary practices:** see Definition List.

Criterion 1.13 - The UoC provides effective worker grievance mechanisms.

Scope Criterion 1.13 – Every UoC

Rationale – Grievances⁹⁷ and conflicts are an inevitable part of employment relationships. Worker grievance mechanisms⁹⁸ are also called ‘dispute’, ‘complaints’ or ‘accountability’ mechanisms and offer a system in which both the worker and the employer have the possibility to effectively address a workplace problem⁹⁹. The latter can for instance relate to disputes between individuals as well as to workplace condition complaints.

When implemented effectively, these systems facilitate dialogue between parties before – rather than in reaction to – disputes.

Relevant reference documents:

- I. ILO The Examination of Grievances Recommendation, 1967 (No. 130).

Indicators:	
Indicator 1.13.1	The UoC shall have a system in place, which all employees are familiar with, which facilitates dialogue between parties (e.g. between employees and different management levels) before, rather than in reaction to, disputes.
Indicator 1.13.2	The UoC shall have a grievance procedure accessible and applicable to all employees.
Indicator 1.13.3	The UoC shall have a grievance procedure that includes requirements for non-retaliation.
Indicator 1.13.4	The UoC shall address all grievances within a 90-day timeframe of submission.
Indicator 1.13.5	The UoC shall track grievances, resulting responses and remedy.
Indicator 1.13.6	The UoC shall have a decision-making grievance committee that is made up of members representing the diversity of employees, in order to ensure special consideration for vulnerable groups such as new and expectant mothers, and migrant workers.
Indicator 1.13.7	The UoC’s grievance committee shall ensure that grievances are processed fairly, resulting in an effective outcome, and facilitates dialogue where needed.
Indicator 1.13.8	The UoC shall ensure a confidential process is provided for, if preferred by the employee/entity submitting a grievance, and shall only share information as necessary to investigate the grievance.

⁹⁷ **Grievance:** see Definition List.

⁹⁸ **Grievance mechanism:** see Definition List.

⁹⁹ **Workplace problem:** see Definition List.

Criterion 1.14 - The UoC provides safe, decent and hygienic worker accommodation.

Scope Criterion 1.14 – Every UoC

Rationale – Within the United Nations (UN) Universal Declaration of Human Rights (UDHR) it is recognised that everyone has the right to a standard of living (including housing) which is adequate for the health and well-being of themselves and their family. In many sectors, including in feed production, workers can reside for a period of time in accommodation provided by the employer. This is especially the case when workplaces are remote or where workers cannot commute between shifts due to distances or other logistical challenges.

As workers in these situations are not always able to find alternatives, the accommodation provided by the employer must be safe, decent and hygienic.

Relevant reference document(s):

1. ILO Workers’ Housing Recommendation, 1961 (No. 115).

Indicators:	
Indicator 1.14.1	The UoC shall ensure that any dormitory facilities provided for personnel or their family are safe, whether it owns, leases or contracts the dormitories from a service provider; this includes provision of safety systems, emergency/escape routes, ventilation, reasonable protection from heat, cold, noise, smell and dust, as well as adequate privacy, including separation by gender if required.
Indicator 1.14.2	The UoC shall ensure that any dormitory facilities provided for personnel or their family are clean, hygienic and meets their basic needs ¹⁰⁰ , whether it owns, leases or contracts the dormitories from a service provider.
Indicator 1.14.3	The UoC shall arrange for annual meetings between employee representatives and management, to discuss improvements to housing.
Indicator 1.14.4	The UoC shall ensure that dormitory facilities are located separately from production facilities.
Indicator 1.14.5	The UoC shall ensure that any rent is reasonable and does not include the UoC making a profit from accommodation provided to employees.
Indicator 1.14.6	The UoC shall provide access to appropriate sanitary facilities (within the dormitory facilities) that are clean and that provide adequate privacy, including separation by gender if required.

¹⁰⁰ **Basic needs:** see Definition List.

Criterion 1.15 - The UoC contributes to maintaining or enhancing the social and economic well-being of local communities.

Scope Criterion 1.15 – Every UoC

Rationale – Feed industry operations often form an important part of the economic backbone of the (often remote) communities in which they are located. At the same time as providing employment opportunities, conflicting activities or interests between the industry’s operation and local communities can lead to tensions and other negative impacts. These can for example revolve around siting of operations in relationship to communities, and potential impacts from emissions such as noise, smell, dust, as well as impacts from increased traffic, etc.

This Criterion aims to make the UoC aware of its impact on the neighbouring community and requires the UoC to engage in a constructive manner.

Indicators:	
Indicator 1.15.1	The UoC shall proactively engage ¹⁰¹ with the local community to periodically identify, avoid or mitigate significant negative social impacts ¹⁰² resulting from activities of the UoC.
Indicator 1.15.2	The UoC shall have a grievance procedure accessible and applicable to the local community.
Indicator 1.15.3	The UoC shall make known to the community how grievances can be submitted and how the mechanism for dealing with grievances works.
Indicator 1.15.4	The UoC shall have a grievance procedure that includes requirements for non-retaliation.
Indicator 1.15.5	The UoC shall address all grievances resulting from activities created by the UoC within a 90-day timeframe from the date of submission by local communities.
Indicator 1.15.6	The UoC shall track grievances, resulting responses and remedy.
Indicator 1.15.7	The UoC shall have a decision-making grievance committee, including members representing local communities, in order to ensure special consideration for vulnerable groups.
Indicator 1.15.8	The UoC’s grievance committee shall ensure that grievances are processed fairly, resulting in an effective outcome, and facilitates dialogue where needed.
Indicator 1.15.9	The UoC shall ensure a confidential process is provided for, if preferred by the person/entity submitting a grievance, and shall only share information as necessary to investigate the grievance.
Indicator 1.15.10	The UoC shall not restrict or negatively affect community and community members’ rights to food security, and access to resources including land and water, resulting from activities by the UoC.

¹⁰¹ The intention of this indicator is for the UoC to reach out, and in a joint effort with the local community, develop monitoring and action plans as needed; however, where involvement is not desired by local communities, a joint project is not required. ASC acknowledges that local communities may not in all instances wish to engage.

¹⁰² ASC is in the process of developing an Environmental and Social Risk Framework. See Definition List for ‘Risk Assessment’.

Indicator 1.15.11	The UoC shall, to the extent possible ¹⁰³ , source goods and services, including employment, from the local communities.
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¹⁰³ ASC acknowledges that sourcing locally is not always possible. Where the UoC makes efforts to source locally, but a review by the UOC indicates that for example staff with the desired technical knowledge, or goods of a desired quality, are not available, then sourcing locally is not required.

Criterion 1.16 - The UoC respects Indigenous and tribal people’s rights, cultures and traditional territories.

Scope Criterion 1.16 – Every UoC

Rationale – Many of the world’s resources are located on land owned or controlled by Indigenous and tribal peoples¹⁰⁴. The UN estimates that there are over 370 million Indigenous and tribal peoples living in over 90 countries¹⁰⁵. This means businesses are frequently in close contact with Indigenous and tribal peoples, and improving these relationships is becoming increasingly important.

Historically, many Indigenous and tribal peoples have suffered from abuse, discrimination, and marginalisation, and this continues today in many areas. As a result, many Indigenous and tribal peoples live in poverty and poor health; and their cultures, languages and ways of life are threatened. Indigenous and tribal peoples comprise five per cent of the world’s population, yet they make up 15 per cent of the world’s poor and one-third of the world’s extremely poor¹⁰⁶. In many areas, their average life expectancy is shorter than non-Indigenous people¹⁰⁷. Facing these realities, Indigenous and tribal peoples are often particularly vulnerable to the negative impacts of commercial development and business activities¹⁰⁸.

Compounded by the fact that Indigenous and tribal peoples are often an integral part of aquaculture operations’ ‘local communities’, businesses have an opportunity to involve Indigenous and tribal peoples in business ventures as owners, suppliers, contractors and employees. This can contribute to the long-term success of projects and help embed the business in the local community.

Relevant reference document(s):

- I. ILO Indigenous and Tribal Populations, 1989 (No. 107)
- II. ILO Indigenous and Tribal Populations, 1957 (No. 169)

Indicators:	
Indicator 1.16.1	The UoC shall proactively engage ¹⁰⁹ with the Indigenous and tribal peoples to identify, avoid and mitigate significant social impacts ¹¹⁰ resulting from activities of the UoC.
Indicator 1.16.2	The UoC shall have a grievance procedure accessible and applicable to Indigenous peoples.

¹⁰⁴ **Indigenous peoples:** see Definition List.

¹⁰⁵ UNDESA. 2017. [State of the World’s Indigenous Peoples III, Education](https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2017/12/State-of-Worlds-Indigenous-Peoples_III_WEB2018.pdf).
https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2017/12/State-of-Worlds-Indigenous-Peoples_III_WEB2018.pdf

¹⁰⁶ International Fund for Agricultural Development, Engagement with Indigenous Peoples Policy, 2009.
https://www.thegef.org/sites/default/files/publications/Indigenous_Peoples_Principle_EN.pdf

¹⁰⁷ See ST/ESA/328.

¹⁰⁸ UN Global Compact. 2013. A Business Reference Guide on the Declaration on the Rights of Indigenous Peoples.
https://www.unglobalcompact.org/docs/issues_doc/human_rights/IndigenousPeoples/BusinessGuide.pdf

¹⁰⁹ The intention of this indicator is for the UoC to reach out, and in a joint effort with the local community, develop monitoring and action plans as needed; however, where involvement is not desired by local communities, a joint project is not required. ASC acknowledges that local communities may not in all instances wish to engage.

¹¹⁰ ASC is in the process of developing an Environmental and Social Risk Framework. See Definition List for ‘Risk Assessment’.

Indicator 1.16.3	The UoC shall make known to the Indigenous and tribal peoples how grievances can be submitted and how the mechanism for dealing with grievances works.
Indicator 1.16.4	The UoC shall have a grievance procedure that includes requirements for non-retaliation.
Indicator 1.16.5	The UoC shall address all grievances resulting from activities created by the UoC within a 90-day timeframe from the date of submission by Indigenous and tribal peoples.
Indicator 1.16.6	The UoC shall track grievances, resulting responses and remedy.
Indicator 1.16.7	The UoC shall have a decision-making grievance committee, including members representing Indigenous and tribal peoples, in order to ensure special consideration for vulnerable groups.
Indicator 1.16.8	The UoC's grievance committee shall ensure that grievances are processed fairly, resulting in an effective outcome, and facilitates dialogue where needed.
Indicator 1.16.9	The UoC shall ensure a confidential process is provided for, if preferred by the person/entity submitting a grievance, and shall only share information as necessary to investigate the grievance.
Indicator 1.16.10	The UoC shall not restrict or negatively affect Indigenous and tribal people's rights and access to sites which are of special cultural, ecological, economic, religious or spiritual significance, and for which the Indigenous and tribal peoples hold legal or customary rights ¹¹¹ .
Indicator 1.16.11	The UoC shall not restrict or negatively affect Indigenous and tribal people's rights to food security, and access to resources including land and water, resulting from activities by the UoC.
Indicator 1.16.12	The UoC shall, to the extent possible ¹¹² , source goods and services, including employment, from local Indigenous and tribal peoples.

Note: ASC intends to implement Free, Prior and Informed Consent¹¹³ (FPIC) indicators into a future version of the ASC Feed Standard. Given the complexities related to this topic, ASC is engaged in broader, cross-cutting industry discussions to develop consistent FPIC-indicators.

¹¹¹ **Customary rights:** see Definition List.

¹¹² ASC acknowledges that sourcing locally is not always possible. Where the UoC makes efforts to source locally, but a review by the UOC indicates that for example staff with the desired technical knowledge, or goods of a desired quality, are not available, then sourcing locally is not required.

¹¹³ **Free, Prior and Informed Consent:** see Definition List.

Criterion 1.17 - The UoC is in compliance with applicable environmental laws and regulations.

Scope Criterion 1.17 - Every UoC

Rationale – In combination with the Indicators under Criterion 1.1, compliance with environmental regulations represents a fundamental basis for the development of an environmentally responsible aquaculture feed sector.

Indicators:	
Indicator 1.17.1	The UoC shall comply with all applicable environmental-related laws and regulations and maintain a system for compliance with them.

Criterion 1.18 - The UoC uses water responsibly.

Scope Criterion 1.18 - Every UoC

Rationale – Demand for freshwater is increasing due to a range of factors including changing availability, population growth, urbanisation, income growth and dietary shifts, with agricultural production being the main consumer of water. As such there is growing competition for this precious resource. It is important that feed manufacturers are aware of their water use and act to improve the water efficiency of their production process.

The source of freshwater (i.e., surface water, ground water) and the local conditions (e.g., rainfall, sensitivity of ecosystems) are very important in determining whether or not the utilisation of this resource is detrimental to the natural environment. As such, water use data should be reported by source.

Indicators:	
Indicator 1.18.1	The UoC shall identify all sources of water used, e.g., municipal water supplies, surface water sources, ground water sources, seawater, produced water ¹¹⁴ , separated into “freshwater” and “other water” ¹¹⁵ .
Indicator 1.18.2	The UoC shall calculate, record and, using the template provided on the ASC website, annually report to ASC its water consumption per water source in megalitres/t (total) product produced/year (using the methodology as outlined in Annex 2, section A1).
Indicator 1.18.3	Where wells are used, groundwater levels shall be measured and recorded on a regular basis (taking into account seasonal fluctuation) and at least once a year.
Indicator 1.18.4	The UoC shall develop and implement a Water Conservation and Efficiency Plan (WCEP) ¹¹⁶ with the intent to reduce water consumption as a result of inefficient practices, where possible. The WCEP shall include the identification of responsible practices, and measures to move away from poor practices and increase responsible practices within a meaningful timeline.
Indicator 1.18.5	Using the template provided on the ASC website, the UoC shall annually report to ASC whether the UoC is operating in a region of “high” or “extremely high” water stress, according to the Aqueduct Water Risk Atlas https://www.wri.org/aqueduct
Indicator 1.18.6	In areas of “high” and “extremely high” water stress according to the Aqueduct Water Risk Atlas https://www.wri.org/aqueduct , the UoC shall

¹¹⁴ **Produced water:** see Definition List.

¹¹⁵ This follows the reporting requirements by GRI, whereby “freshwater” is categorised as ≤1,000 mg/L Total Dissolved Solids, and “other water” is categorised as >1,000 mg/L Total Dissolved Solids.

¹¹⁶ The WCEP shall be embedded within a Management Framework as outlined in Annex 7, fig. 4;

- whereby the “intent” in step 1 is pre-defined as “the UoC reduces water consumption as a result of inefficient practices”,
- the “risk factors” in step 2 are pre-defined as “not achieving the intent of the WCEP within a 6-year period”,
- the “risk assessment” is carried out according to step 3,
- “measures” include both the “improvement of practices” as well as “removal of most points of water wastage” and are carried out according to step 4, and
- “monitoring” and a “repeat” of the process according to steps 5a and 5b.

	annually perform a risk assessment ¹¹⁷ to assess if the WCEP (1.18.4) includes adequate measures to minimise the risk that the UoC is contributing to water supply problems for ecosystems and communities using the same water source.
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¹¹⁷ The risk assessment shall be embedded within a Management Framework as outlined in Annex 7, fig. 4;

- whereby the risk factor in step 2 is pre-defined as “the UoC is contributing to water supply problems for ecosystems and communities”,
- the risk assessment is carried out according to step 3, and
- measures in step 4 shall be implemented as far as these can be managed by the UoC.

Criterion 1.19 - The UoC handles waste responsibly.

Scope Criterion 1.19 - Every UoC

Rationale – Effective waste management ensures that resources are used in an efficient manner by reducing the amount of materials thrown away unnecessarily. It also ensures that waste containing dangerous substances are disposed of properly and do not cause harm. Feed manufacturers should aim to reduce waste and where this is not possible, find ways to reuse or recycle it. All waste must be stored and disposed of in a safe and responsible manner, with particular care taken for waste that contains substances known to be hazardous to people and the environment.

Indicators:	
Indicator 1.19.1	The UoC shall identify all types of waste ¹¹⁸ generated, separated into hazardous and non-hazardous waste, and method of disposal, as well as what level of recovery is carried out on-site.
Indicator 1.19.2	The UoC shall calculate, record and, using the template provided on the ASC website, annually report to ASC its waste in tonne (t) per year per method of disposal (using the methodology as outlined in Annex 2, section A4).
Indicator 1.19.3	The UoC shall develop and implement a documented Waste Management Plan (WMP) ¹¹⁹ with the intent to improve waste avoidance and resource recovery where possible. The WMP shall include the identification of responsible practices, and measures to move away from poor practices and increase responsible practices within a meaningful timeline.
Indicator 1.19.4	The UoC shall handle and store chemicals and hazardous materials and waste ¹²⁰ in a safe manner.
Indicator 1.19.5	The UoC shall account for all chemicals and other hazardous waste on site.
Indicator 1.19.6	The UoC shall dispose of waste materials which are not re-used or recycled, in a responsible manner. Dumping waste outside the UoC site in unofficial sites and littering is prohibited.

¹¹⁸ Waste: see Definition List.

¹¹⁹ The WMP shall be embedded within a Management Framework as outlined in Annex 7, fig. 4;

- whereby the “intent” in step 1 is pre-defined as “the UoC avoids waste and recovers resources where possible”,
- the “risk factors” in step 2 are pre-defined as “not achieving the intent of the WMP within a 6-year period”,
- the “risk assessment” is carried out according to step 3,
- “measures” include the 1) improvement of practices, 2) reduction in waste generation, 3) increase in waste recovery, 4) adaptation of activities to replace hazardous with non-hazardous waste, 5) increase in the use of responsible disposal of waste, 6) removal of most points of waste leakage and loss of waste, and waste not disposed of responsibly; a) for chemical and hazardous waste, and for b) non-hazardous waste for which materials are known to cause physical harm when discarded; e.g. the threat of marine pollution resulting from plastics, and are carried out according to step 4, and
- “monitoring” and a “repeat” of the process according to steps 5a and 5b.

¹²⁰ Chemical and hazardous waste: see Definition List.

Criterion 1.20 - The UoC handles effluent responsibly.

Scope Criterion 1.20 - Every UoC

Rationale – Effluents¹²¹ created from the production of aquafeeds can create problems for human and environmental health if not managed correctly. Therefore, it is important that feed manufacturers have procedures in place to avoid such incidences from occurring.

Indicators:	
Indicator 1.20.1	The UoC shall identify all effluents (including from production, site runoff, offices and any on-site accommodation) and destination of the discharge (e.g. to surface water, groundwater, seawater, municipal treatment facilities, separated into discharge by “freshwater” and “other water”), and what level of treatment is carried out on-site.
Indicator 1.20.2	The UoC shall calculate and, using the template provided on the ASC website, annually report to ASC its effluent discharge in megalitres (ML) per year per destination (using the methodology as outlined in Annex 2, section A2); the recording shall include all incidences of spills or accidental discharges
Indicator 1.20.3	The UoC shall develop and implement an Effluent Management Plan (EMP) ¹²² with the intent to reduce negative impacts on receiving waters in terms of ecosystems and human health. The EMP shall include the identification of responsible practices, and measures to move away from poor practices and increase responsible practices within a meaningful timeline. The plan shall also include spill prevention and response measures.

¹²¹ **Effluent:** see Definition List.

¹²² The EMP shall be embedded within a Management Framework as outlined in Annex 7, fig. 4;

- whereby the “intent” in step 1 is pre-defined as “the UoC reduces negative impacts on receiving waters in terms of ecosystems and human health”,
- the “risk factors” in step 2 are pre-defined as “not achieving the intent of the EMP within a 6-year period”,
- the “risk assessment” is carried out according to step 3,
- “measures” include the “improvement of practices”, “discharge limits or minimum treatment requirements for substances of concern”, “spill prevention and spill response measures”, and are carried out according to step 4, and
- “monitoring” and a “repeat” of the process according to steps 5a and 5b.

Criterion 1.21 - The UoC uses energy responsibly and monitors Greenhouse Gases (GHG) emissions.

Scope Criterion 1.21 - Every UoC

Rationale – The energy used in the production of aquafeeds is not only a source of economic costs; it may also contribute to depletion of finite natural resources and emissions of greenhouse gases (GHG) and other pollutants from burning of fossil fuels. There is scientific consensus that the global climate is changing and that this is closely related to the rising levels of GHG emissions coming from human activities. Most GHG emissions in aquafeed supply chains occur upstream during production of feed ingredients, including from deforestation for crop production, fertiliser use on fields, and fuel use in fisheries. Direct emissions from feed mills, meanwhile, are typically associated with the provision of energy and particularly the burning of fossil fuels. Therefore, it is important that energy is used as efficiently as possible to minimise the associated economic and environmental costs. The use of alternative sources to fossil fuels is encouraged. Different energy sources have different implications for the environment via both direct emissions from burning of fuels and indirect emissions from electricity generation and mining, refining, and transport of fuels. Therefore, it is important to have the results broken down into specific energy sources, including the share of renewable energy in the mix. Feed manufacturers should play their role in climate change mitigation by measuring the GHG emissions from their direct operations and engaging in activities to reduce these.

Indicators:	
Indicator 1.21.1	The UoC shall identify all energy sources (e.g. diesel, petrol, natural gas, electricity, and other sources; specifying electricity from the national/regional grid and electricity coming from other renewable and non-renewable sources).
Indicator 1.21.2	The UoC shall calculate, record and, using the template provided on the ASC website, annually report to ASC its energy consumption in megajoules (MJ) per tonne of (total) product produced in the assessed year (using the methodology as outlined in Annex 2, section A3).
Indicator 1.21.3	The UoC shall develop and implement an Energy Efficiency Management Plan (EEMP) ¹²³ with the intent to improve energy efficiency and to increase the proportion of energy coming from renewable energy sources ¹²⁴ . The EEMP shall include the identification of responsible practices, and measures to move away from poor practices and increase responsible practices within a meaningful timeline.

¹²³ The EEMP shall be embedded within a Management Framework as outlined in Annex 7, fig. 4;

- whereby the intent in step 1 is pre-defined as “the UoC improves energy efficiency and/or increases the proportion of energy coming from renewable sources”,
- the risk factors in step 2 are pre-defined as “not achieving the intent of the EEMP within a 6-year period”,
- the “risk assessment” is carried out according to step 3,
- “measures” include the improvement of practices, removal of most points of energy wastage, replacement of non-renewable energy sources with renewable energy sources, where deemed feasible by the UoC, and are carried out according to step 4, and
- “monitoring” and a “repeat” of the process according to steps 5a and 5b.

¹²⁴ **Renewable energy sources:** see Definition List

Indicator 1.21.4	The UoC shall calculate, record and, using the template provided on the ASC website, report (publicly ¹²⁵ and to ASC) its Greenhouse Gas (GHG) emissions in kg CO ₂ equivalents per tonne of (total) product produced/year (using the methodology as outlined in Annex 2, section B).
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¹²⁵ Via the website of the UoC.

Principle 2 - The UoC sources ingredients responsibly.

Criterion 2.1 - The UoC implements a Supplier Code of Conduct.

Scope Criterion 2.1 - Every UoC

Rationale – The Supplier Code of Conduct is an important starting place for managing the potential socio-environmental risks of the ingredients¹²⁶ that go into aquaculture feed. The Code of Conduct is a tool to prompt greater communication around sustainability expectations between the feed manufacturer and its suppliers (i.e. ingredient manufacturers and their supplying manufacturers) and as such is best made public. The aim of the code of conduct is thus to raise awareness and ensure mitigation measures have been initiated for socio-environmental risks. In contrast the Due Diligence carried out by the feed mill addresses only the more pressing of these risks, and requires an in-depth review by the feed mill to ensure that these risks have adequately been dealt with within the supply chain (i.e. ingredient manufacturers and raw material producers).

Indicators:	
Indicator 2.1.1	The UoC shall effectively implement a Supplier Code of Conduct that includes, at a minimum, the points listed in Indicators 2.1.3–2.1.8.
Indicator 2.1.2	The UoC shall have the Supplier Code of Conduct (Indicator 2.1.1) publicly ¹²⁷ available.
Indicator 2.1.3	Within the Supplier Code of Conduct (Indicator 2.1.1) the UoC requires ingredient manufacturers to meet, as a minimum, the licence and permit-related Indicators as defined in: <ul style="list-style-type: none"> – Criterion 1.1 (legal licenses and permits)
Indicator 2.1.4	Within the Supplier Code of Conduct (Indicator 2.1.1) the UoC requires ingredient manufacturers to meet, as a minimum, the environmental and social-related Indicators as defined in: <ul style="list-style-type: none"> – Criterion 1.3 (legal compliance with relevant Labour Laws) – Criterion 1.4 (forced, bonded or compulsory labour) – Criterion 1.5 (protection of children and young workers) – Criterion 1.6 (discrimination) – Criterion 1.7 (safe & healthy working environment) – Criterion 1.8 (freedom to associate & collective bargaining) – Criterion 1.9 (contracts workers in a transparent manner) – Criterion 1.10 (legal wages) – Criterion 1.11 (working hours) – Criterion 1.12 (disciplinary practices) – Criterion 1.13 (worker grievance mechanisms) – Criterion 1.14 (decent accommodation) – Criterion 1.15 (community engagement) – Criterion 1.16 (Indigenous people) – Criterion 1.17 (legal compliance with relevant Environmental Laws) – Criterion 1.18 (water use)

¹²⁶ **Ingredients:** see Definition List.

¹²⁷ Via the website of the UoC.

	<ul style="list-style-type: none"> - Criterion 1.19 (waste management) - Criterion 1.20 (effluent management) - Criterion 1.21 (energy consumption) - Indicator 3.4.2 and 3.4.3 (product characteristics)
Indicator 2.1.5	Within the Supplier Code of Conduct (Indicator 2.1.1) the UoC communicates that it will discontinue purchases from ingredient manufacturers that do not meet the Supplier Code of Conduct.
Indicator 2.1.6	Within the Supplier Code of Conduct (Indicator 2.1.1) the UoC shall require ingredient manufacturers to declare to the UoC whether they meet the Supplier Code of Conduct (Indicator 2.1.1) ^{128,129} .
Indicator 2.1.7	Within the Supplier Code of Conduct (Indicator 2.1.1) the UoC shall require its ingredient manufacturers to inform the UoC in case of any material changes in relation to Indicator 2.1.6.
Indicator 2.1.8	Within the Supplier Code of Conduct (Indicator 2.1.1) the UoC shall require ingredient manufacturers to communicate an equivalent set of requirements (Indicator 2.1.1.) with the same intention, to their suppliers (i.e. manufacturers of purchased feed materials).

¹²⁸ The UoC, ingredient manufacturers, and the ingredient manufacturers' supplying manufacturers shall use the following understanding when declaring whether or not they meet the Supplier Code of Conduct: All criteria and indicators listed in 2.1.3 and 2.1.4 are fully met or measures have been implemented to ensure they will be met (see Annex 7, figure 4, step 4).

¹²⁹ In other words, the ingredient manufacturer's supplying manufacturers, declares to the UoC's ingredient manufacturer.

Criterion 2.2 - The UoC conducts Due Diligence on ingredient manufacturers and primary raw material production.

Scope Criterion 2.2 - Every UoC

Rationale – Due Diligence provides a pathway to understand the origins and potential impacts of the ingredients in aquaculture feed. As a first step, feed manufacturers must strive for continuous improvement in achieving greater traceability¹³⁰ on the origins of their raw materials. In this Standard, a UoC must publish its primary raw material and their respective countries (or fisheries in case of marine ingredients) of origin. Then, within three years, the UoC must identify the region within the country of origin for its plant raw materials. Greater visibility allows feed manufacturers to conduct more meaningful due diligence on the potential negative impacts that these materials have created prior to reaching the feed manufacturer.

The Supplier Code of Conduct covers a wider range of topics, relying on self-declaration as a first step in raising awareness and working with supply chains; combined with this there is the Due Diligence, which includes an in-depth assessment of a smaller range but more serious risks at the ingredient manufacturer facility and at raw material production level.

Indicators:	
Indicator 2.2.1	The UoC shall require ingredient manufacturers to cooperate in providing relevant information that enables the UoC to conduct a Due Diligence on the ingredient manufacturer, as well as on primary raw material production ¹³¹ .
Indicator 2.2.2	The UoC shall maintain accurate and up-to-date listing(s) for all ingredients ¹³² that represent >1% of the total annual ingredient-weight (volume) received by the UoC. The list shall include the following information: <ul style="list-style-type: none"> – name and contact details of manufacturers of the ingredients; – primary raw material of the ingredients; – for terrestrial primary raw materials, the country(ies) of origin; – for marine primary raw material, the fishery(ies) of origin.
Indicator 2.2.3	The UoC shall annually publish ¹³³ the listed ingredients, their primary raw material and the country(ies)/fishery(ies) of primary raw material production (Indicator 2.2.2).
Indicator 2.2.4	The UoC shall publish ¹³⁴ (from the start of the second certification cycle onwards) the production region(s) ¹³⁵ within the country(ies) of primary raw material production on an annual basis. This only applies to terrestrial plant-derived ingredients.

¹³⁰ **Traceability:** see Definition List.

¹³¹ **Primary raw material (production):** see Definition List.

¹³² This excludes the following feed additives per default, even if they represent >1% total annual ingredient-weight (volume) received by the UoC: premixes, vitamins, minerals, trace elements, colourants.

¹³³ Commercial sensitive information relating to the name or identification of the supplier and/or manufacturer as well as diet formulation is not required to be publicly disclosed.

¹³⁴ Via the website of the UoC.

¹³⁵ **Region:** see Definition List.

Indicator 2.2.5	The UoC shall conduct the Due Diligence ¹³⁶ on its ingredient manufacturers of marine-based ingredients, plant-based ingredients ¹³⁷ and other feed stuffs for the risk factors listed in table 1, and using one of the four pathways defined in Annex 3. ¹³⁸
Indicator 2.2.6	The UoC shall conduct the Due Diligence on its primary marine and plant raw material production for the risk factors listed in table 1, and using one of the four pathways defined in Annex 3. ^{139,140}
Indicator 2.2.7	The UoC shall, in all cases where one of the two pathways “sectoral/fishery assessment” or “ingredient manufacturer assessment” is selected, follow all five risk management framework steps outlined in figure 4, Annex 7.
Indicator 2.2.8	The UoC shall have a system to ensure it only sources from supply chains where the outcome of the Due Diligence on the ingredient manufacturer indicates low risk for the risk factors referred to in 2.2.5. ^{141,142}
Indicator 2.2.9	The UoC shall have a system to ensure it only sources marine- and plant-based ingredients where the outcome of the Due Diligence on the respective primary raw material production indicates low risk for the risk factors referred to in 2.2.6. ^{143,144}
Indicator 2.2.10	Using the template provided on the ASC website, the UoC shall annually publish and report to ASC an overview of the outcome of the Due Diligences carried out and the respective pathways chosen. ¹⁴⁵
Indicator 2.2.11	In all cases where the pathways “sectoral/fishery assessment” or “ingredient manufacturer assessment” (see Annex 3) are chosen, the UoC shall publish and share with ASC an up-to-date summary report including the evidence as required under b. of each pathway in Annex 3.

¹³⁶ If an ingredient is composed of primary raw material originating from multiple countries/fisheries (i.e. mixed batches), the country/fishery with the highest risk dominates. An example would be wheat gluten from wheat produced in three countries – the country(ies) with the highest risk profile dominates the overall risk profile.

¹³⁷ **Plant-based ingredient:** see Definition List.

¹³⁸ In other words, no Due Diligence is required for ingredient manufactures of feed additives.

¹³⁹ In other words, no Due Diligence is required for non-marine and non-plant raw materials such as, for example, feed stuffs.

¹⁴⁰ The due diligence for marine raw material shall include all products derived from fisheries, whole fish as well as by-products, with the exception of by-catch retained under the EU landing obligation. The due diligence does not include by-products derived from aquaculture.

¹⁴¹ In other words, the Due Diligence is passed when low risk has been determined for all applicable risk factors.

¹⁴² A visualisation of these requirements can be found in Annex 5, Figures 1 and 2.

¹⁴³ In other words, the Due Diligence is passed when low risk has been determined for all applicable risk factors.

¹⁴⁴ A visualisation of these requirements can be found in Annex 5, Figures 1 and 2.

¹⁴⁵ The requirement to publish and report to ASC does not apply where due diligence has not been passed.

Principle 3 - The UoC accounts for eligible ingredients input and feed output.

Criterion 3.1 - The UoC implements an ingredient in-coming and out-going accounting system.

Scope Criterion 3.1 - Every UoC

Rationale – Aquaculture, as part of the broader seafood sector, is highly vulnerable to food fraud, especially product mislabelling and species substitution. In addition to this, there are traceability challenges related to the origin of the raw materials used and the complexity of the supply chain associated with aquaculture feed production.

The ASC Feed Steering Committee appreciates that by the time the Feed standard is released, it is most unlikely that there are sufficient volumes of sustainably certified raw materials to produce ASC certified feed. Until then and as the first step, feed mills can use one or both of the two ASC accepted models and ASC feed may come in two forms – according to the mass balance production model¹⁴⁶ (containing both eligible¹⁴⁷ and non-eligible ingredients¹⁴⁸) or according to the segregation production model¹⁴⁹ (containing only eligible ingredients). However, feed mills are encouraged to source increasingly more eligible ingredients for ASC feed.

To be able to produce feed under the segregation production model, feed mills are required to identify and segregate eligible ingredients from non-eligible ingredients throughout all stages of production.

To produce feed under the mass balance production model, feed mills are required to have an accounting system in place to ensure volumes of incoming eligible ingredients cover the volumes of outgoing feed produced under the mass balance production model.

Scope Indicators 3.1.1 - 3.1.2 – Every UoC

Indicator 3.1.1	The UoC shall record all ingredients received, including: <ul style="list-style-type: none">– Name and contact details of supplier;– Date of shipping and physical receipt;– Name and contact details of manufacturer;– Name of ingredient/unique identifier;– Unique Batch number / Lot code– Country (and region as required in Indicator 2.2.3 and 2.2.4) or fisheries of primary raw material production;– Quantity received (in kg or t);– Whether or not the ingredient consists of or contains, Genetically Modified material;
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¹⁴⁶ **Mass balance production model**: see Definition List.

¹⁴⁷ **Eligible Ingredients**: see Definition List.

¹⁴⁸ **Non-eligible Ingredients**: see Definition List.

¹⁴⁹ **Segregation production model**: see Definition List.

	<ul style="list-style-type: none"> – Whether or not the ingredient consists of or contains antibiotics, and if so, the inclusion level (mg or g/kg); – Validity of applicable Chain of Custody certification; – The marine sustainability category as defined in Principle 4; – Risk of legal deforestation/conversion for category 1) soy and oil palm-derived ingredients, as well as for category 2) highest-volume plant ingredients
Indicator 3.1.2	<p>The UoC shall record all dispatched product¹⁵⁰, including:</p> <ul style="list-style-type: none"> – Name and address of customer – Date of shipping and physical dispatch; – Name of product/unique identifier; – Quantity dispatched (in kg or t); – Whether or not the product consists of, or contains, Genetically Modified material; – Whether or not the product consists of or contains antibiotics, and if so, the inclusion level (mg or g/kg); – Whether or not the product was dispatched under the ASC segregation production model – Whether or not the product was dispatched under the ASC mass balance production model

Scope Indicators 3.1.3 and 3.1.4 – Only UoCs using the Segregation production model

Indicator 3.1.3	The UoC shall have a documented traceability system in place that ensures identity details of ingredients are recorded; this shall include ingredients during receiving, as well as any product produced thereof, through all stages within the UoC to dispatch.
Indicator 3.1.4	The UoC shall have in place systems to ensure ASC eligible ingredients and non-eligible ingredients remain segregated from receiving through all stages within the UoC to dispatch, in order to prevent mixing.

¹⁵⁰ **Product:** see Definition List.

Criterion 3.2 - The UoC determines eligible ingredients and calculates its mass-balance eligible volume.

Scope Indicator 3.2.1 – 3.2.4 - Only UoCs using the Mass balance production model

Rationale – Compliance with the sustainability indicators in this Standard requires an accurate classification of the ingredients coming into the mill. Not all ingredients which can be sourced by the UoC also count towards the mass balance eligible volume. The indicators in this criterion set the requirements for this calculation.

Indicators	
Indicator 3.2.1	The UoC shall determine which ingredients are eligible ingredients, and calculate the mass balance eligible volume following the instructions in Annex 5, recording the details of the calculation steps.
Indicator 3.2.2	The UoC shall carry out the mass balance calculation annually, over a period of 12 months, January until December ¹⁵¹ .
Indicator 3.2.3	The UoC shall assess if processing ingredient prior to their use to manufacture the end product is likely to result in a change ¹⁵² of more than 5% by weight (volume) between the time of ingredient receiving and the time of its use. If so, the weight (volume) difference for pre-processing shall be determined and recorded, and shall be considered for the calculation of the mass balance eligible volume.
Indicator 3.2.4	The UoC shall annually report the total volume of product sold under the mass balance production model by using the template provided on the ASC website.

Scope Indicator 3.2.5 - Only UoCs using the Segregation production model

Indicators	
Indicator 3.2.5	The UoC shall annually report the total volume of product sold under the segregation production model by using the template provided on the ASC website.

¹⁵¹ Other approaches for mass balance calculation will be reviewed by ASC and could be accepted in the future.

¹⁵² For example, due to the extraction or addition of water, or removal of waste.

Criterion 3.3 - The UoC labels products correctly.

Scope Indicator 3.3.1 – Only UoCs using the Mass balance production model

Rationale – To encourage uptake of the ASC Feed Standard, the UoC may only sell a portion of its output as ASC compliant feed. This initial version of the Standard permits manufacturers to choose between two models: the ASC Segregation production model and the ASC Mass balance production model. The indicators in this criterion set the requirements for labelling (or Identification) that can be made on final product depending on the model used.

Note: Both models can be in use at the UoC at any time.

Indicators	
Indicator 3.3.1	The UoC shall identify product which is sold under the mass balance production model by using the allowable feed claim, including the model applied (i.e. mass balance). The ASC logo shall not be used.

Scope Indicator 3.3.2 – Only UoCs using the Segregation production model

Indicators	
Indicator 3.3.2	The UoC shall identify product which is sold under the segregation production model by using a distinct feed name according to the feed names listed on the schedule to the certificate, followed by the allowable feed claim, including the model applied (i.e. segregation). The ASC trademarks can be used, subject to conditions.

Criterion 3.4 - The UoC is transparent on product characteristics.

Scope Criterion 3.4 - Every UoC

Rationale - Nitrogen and phosphorus are released to waters surrounding fish pens as a result of uneaten feeds and metabolic by-products. If not managed properly, this can lead to significant changes to pelagic and benthic ecosystems. Feed companies can assist their customers to better understand the potential impacts of their feeds on the local environment by providing them with an estimate of the nutrient emissions based on nutrient content of their feeds. While the use of genetically modified organisms (GMOs) in feed is permitted, it must be disclosed. Transgenic plants are commonly used in aquaculture and animal feeds throughout the world, yet some consumers and retailers want to be able to identify food products, including farmed fish, that are genetically modified or that have been fed genetically modified ingredients. Documentation on the use of GMOs must be provided to customers. The requirement ensures transparency around any transgenic material in the feed (ingredients >0.9%) in order to support informed choices by retailers and consumers.

Indicators:	
Indicator 3.4.1	The UoC shall disclose, with verifiable and supporting documentation upon request, the nitrogen (N) and phosphorus (P) content (in kilogram/tonne product or gram/kilogram product) of each feed product to all ¹⁵³ buyers of the product.
Indicator 3.4.2	The UoC shall disclose the presence ¹⁵⁴ of Genetically Modified Organisms ¹⁵⁵ (GMO), or ingredients ¹⁵⁶ produced from GMO of each product to all ¹⁵⁷ buyers of the product.
Indicator 3.4.3	The UoC shall disclose the active compound and inclusion levels (in mg or g/kilogram product) of added antibiotics or other added medicinal feed additives for each product to all ¹⁵⁸ buyers of the product.
Indicator 3.4.4	The UoC shall disclose relevant information regarding the inclusion level of whole-fish marine ingredients of each feed product ¹⁵⁹ to ASC certified farms and farm applicants for ASC certification.

¹⁵³ All buyers include also non-ASC farms.

¹⁵⁴ A threshold of 0.9% is permitted to allow for the adventitious, or accidental, presence of GM material in non-GM food or feed sources. Reference: EU Regulation 1830/2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms.

¹⁵⁵ **Genetically Modified Organism (GMO)**: see Definition List.

¹⁵⁶ Applies to macro ingredients as defined by EU regulation 1830/2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms.

¹⁵⁷ All buyers include also non-ASC farms.

¹⁵⁸ All buyers include also non-ASC farms.

¹⁵⁹ The information is needed for the calculation of the FFDR (Forage Fish Dependency Ratio for fishmeal/fish oil) and FFER (Fish Feed Equivalence Ratio) calculations in the ASC Farm Standard. This Indicator only applies to products destined for ASC certified farms.

Principle 4 - The UoC sources marine ingredients responsibly.

Criterion 4.1 - The UoC increases the majority sustainability level of its (whole-fish) marine ingredients.

Scope Criterion 4.1 - Every UoC

Rationale – Marine ingredients fulfil an important role within the aquafeed industry as they deliver essential nutrients. Given this key role, it is foreseeable that marine ingredients will remain part of the global feed ingredient supply, despite environmental and social concerns. ASC recognises this and seeks to incentivise the fisheries, and the marine ingredient producing industry, to improve the sustainability of supplying fisheries over time as an effective way of addressing and reducing impacts.

Given the global differences in sustainability performance of (forage) fisheries, an improvement model (“Majority Sustainability Level”) has been developed in which four sustainability levels are identified (Sustainability Levels L1 – L4; see Annex 4). The improvement model is applied to the majority volume (50-100%) of whole-fish marine ingredients. A minority volume (0-49%) can be allocated to any of the remaining levels, or a combination thereof. This flexibility ensures that supplying fisheries involved in improvement programmes retain market access – the critical incentive to keep improving. Overall, the Majority Sustainability Level reconciles the undeniable differences, and challenges, that global (forage) fisheries face in terms of their environmental sustainability, yet, enables feed manufacturers to progress their individual sourcing improvements conforming to a single, global, model.

Feed manufacturers enter at any of the defined levels on the basis of their recent sourcing profile of whole-fish marine ingredients. From here, the Majority Sustainability Level of the whole-fish marine ingredients must improve over time (majority volume moves one level higher per three years).

ASC will require 100% MSC, or equivalent, certified marine ingredients over time, as referenced by the Aquaculture Dialogues. As such this would become a fifth level in a revised version of the Majority Sustainability Level. Reviewing the feasibility of this fifth level will be determined through the Standard revision process and on the basis of careful considerations of volume demand and availability. In a similar fashion, the use of mass-balance will be reviewed and when appropriate and feasible, a transition to segregated supply will be considered.

Indicators:	
Indicator 4.1.1	The UoC shall determine the volume of marine ingredients ¹⁶⁰ received, for fish by-products ¹⁶¹ and for whole fish, score whole fish ingredients according to categories 1-4 in Table 2, and from that calculate the UoC’s Majority Sustainability Level (MSL) (Annex 4).
Indicator 4.1.2	For initial audits, the UoC shall calculate its Entry Level (EL). EL is the MSL of the 24 months prior to the initial audit.

¹⁶⁰ **Marine ingredient:** see Definition List.

¹⁶¹ **Marine by-products:** see Definition List.

Indicator 4.1.3	The UoC shall maintain its MSL during the initial certification cycle, at a minimum, the same as the EL (Annex 4) ¹⁶² .
Indicator 4.1.4	The UoC shall increase its MSL for each subsequent certification cycle, at a minimum, one level higher ¹⁶³ than the level of the previous certification cycle (Annex 4).
Indicator 4.1.5	The UoC shall calculate, report to ASC, and publish ¹⁶⁴ its Majority Sustainability Level (MSL) for each certification cycle.
Indicator 4.1.6	The UoC shall calculate, report to ASC, and publish ¹⁶⁵ the volume of the marine ingredients it has used over the previous certification cycle.

¹⁶² An EL at MSL baseline (Annex 4) is possible as long as the UoC can demonstrate during the initial audit that systems are in place to move to MSL 1 during the first year of the initial certification cycle.

¹⁶³ In the situation that a UoC can demonstrate that for its marine ingredients it is dependent on a single fishery, and that shifting supplies is not possible, the feed manufacturer is allowed to extend its cycle on the current overall Marine Sustainability Level for a maximum of 3 years to be in line with the FIP-progress trajectory. Supporting evidence (supplying fishery(ies), status of FIP-progress and expected time of completion) shall be added as an appendix to the ASC audit report.

¹⁶⁴ Via the website of the UoC.

¹⁶⁵ Via the website of the UoC.

Principle 5 - The UoC sources plant ingredients responsibly.

Criterion 5.1 - The UoC works towards a deforestation/conversion-free supply chain.

Scope Criterion 5.1 - Every UoC

Rationale – The aquaculture industry consumes a relatively small proportion of the global agriculture output, however, around 75%¹⁶⁶ of the global aquafeed ingredient volume is derived from agriculture. This makes the aquaculture feed industry inseparable from the negative impacts created by agriculture.

A key concern of agriculture is the expansion of farmland through means of deforestation¹⁶⁷ of (tropical and temperate) forests and conversion¹⁶⁸ of other natural ecosystems¹⁶⁹ (e.g. savannahs and grasslands). Amongst others, the UN Sustainable Development Goals address this key concern explicitly through SDG 15 – “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation¹⁷⁰ and halt biodiversity loss”.

The impacts of deforestation and land conversion are diverse. Forests and other natural ecosystems act as carbon sinks through absorbing and locking-in carbon dioxide. In addition, these ecosystems provide habitat for many species, thereby contributing to conserving biodiversity, contribute to regional climate control and provide humanity with an abundance of natural resources if managed well.

In late 2016, a diverse coalition came together for a common purpose: to accelerate progress and improve accountability on company commitments to protect forests, natural ecosystems, and human rights. Recognising the need to close the gap between commitments and results, the members of this coalition launched the Accountability Framework initiative (AFi)¹⁷¹.

ASC certified feed manufacturers contribute to the global effort to reduce deforestation and land conversion by means of a public commitment, followed by a public action plan, to transition towards deforestation and conversion free supply chains. The requirements formulated for this are aligned with the principles of the AFi.

Certified feed manufacturers are *encouraged* to include, as an additional goal, to work together with the supplier to have the suppliers become deforestation and conversion-free.

The production of soybeans and oil palm is linked to considerable environmental and social concerns in many of the primary raw material producing countries. As both crops are used for the production of ingredients destined for aquafeed, addressing these concerns is explicitly addressed through this Criterion. The assurance procedure defined in Annex 6 seeks to

¹⁶⁶ Tacon, A.G.J.; Hasan, M.R.; Metian, M.; *Demand and supply of feed ingredients for farmed fish and crustaceans: trends and prospects*; FAO Fisheries and Aquaculture Technical Paper No. 564. FAO, 2011. 87 pp. <http://www.fao.org/3/ba0002e/ba0002e.pdf>

¹⁶⁷ **Deforestation**: see Definition List.

¹⁶⁸ **Conversion**: see Definition List.

¹⁶⁹ **Natural ecosystems**: see Definition List.

¹⁷⁰ **Degradation**: see Definition List.

¹⁷¹ www.accountability-framework.org

ensure there is a low risk of soy and palm oil ingredients coming from areas with any land conversion and deforestation. The assurance procedure also gives incentive for producers to work with supply chains to ensure low risk of any land conversion and deforestation for the highest volume plant ingredients used in feed mills, as well as encourages producers to do the same for all other plant ingredients.

Indicators:	
Indicator 5.1.1	The UoC shall have made a public commitment ¹⁷² to transition to deforestation-free ¹⁷³ and conversion-free ¹⁷⁴ supply chains for the sourcing of all of its plant ingredients (categories 1-3). The public commitment shall include: <ul style="list-style-type: none"> - a cut-off date¹⁷⁵ related to deforestation and conversion that is no later than the month of release of the ASC Feed Standard v1.0.
Indicator 5.1.2	The UoC shall categorise its plant supply chains into the following categories: <ul style="list-style-type: none"> Category 1: ingredients known to have global risks (i.e. ingredients derived from soy and palm oil), Category 2: its highest-volume plant ingredients¹⁷⁶, Category 3: Other plant ingredients.
Indicator 5.1.3	The UoC shall assess the risks of legal deforestation and land conversion at the plant raw material production level for all of its plant ingredient supply chains, prioritising 1) ingredients known to have global risks (i.e. ingredients derived from soy and palm oil), and, 2) its highest-volume plant ingredients.
Indicator 5.1.4	The UoC should also include plant supply chains from category 3) other plant ingredients (5.1.2) in the analysis but the UoC is not obliged to do so to achieve, or maintain, certification.
Indicator 5.1.5	The UoC shall use one of the four pathways 1) Country Score Card, 2) sub-national/sectoral assessment, 3) ingredient manufacturer assessment, or 4) certification (as defined in Annex 6) to determine the level of risk for legal deforestation or conversion.
Indicator 5.1.6	The UoC shall, in all cases where one of the two pathways “sub-national/sectoral assessment” or “ingredient manufacturer assessment” (see 5.1.5) is selected, follow the general process for a risk management framework outlined in figure 4, Annex 7.
Indicator 5.1.7	The UoC shall have, within 1 year following the initial audit, a public action plan ¹⁷⁷ to achieve the commitment for the categories 1) ingredients known to have global risks (i.e. ingredients derived from soy and palm oil) and 2) its highest-volume plant ingredients which includes the following:

¹⁷² The commitment applies to aquaculture feed produced by the UoC.

¹⁷³ **Deforestation-free:** see Definition List.

¹⁷⁴ **Conversion-free:** see Definition List.

¹⁷⁵ **Cut-off date:** see Definition List.

¹⁷⁶ **Highest-volume plant ingredients:** this applies to ingredients, which collectively make up the majority of the total plant ingredient volume, i.e. ≥ 50%. Individual plant ingredients with the highest volumes make up the collective majority volume.

¹⁷⁷ This does not apply to the categories 1) ingredients known to have global risks (i.e. ingredients derived from soy and palm oil) and 2) its highest-volume plant ingredients for which low risk has been demonstrated, and does not apply to the category 3) other plant ingredients.

	<ul style="list-style-type: none"> - Timelines and target dates¹⁷⁸ - Quantitative and geographically specific¹⁷⁹ targets and milestones that can be objectively assessed.
Indicator 5.1.8	The UoC shall have a system to ensure it only sources plant ingredients from supply chains covered by its public commitment to transition to deforestation and conversion free supply chains (see 5.1.1). ¹⁸⁰
Indicator 5.1.9	For category 1) ingredients known to have global risks (i.e. ingredients derived from soy and palm oil) and category 2) highest-volume plant ingredients, the UoC shall have a system to ensure it only sources plant ingredients for which low risk has been demonstrated or for which an action plan is under implementation to achieve low risk (see 5.1.7).
Indicator 5.1.10	For category 1) ingredients known to have global risks (i.e. ingredients derived from soy and palm oil), the UoC shall have a system to ensure it only uses plant ingredients as eligible ingredients ¹⁸¹ for which low risk has been demonstrated ¹⁸² .
Indicator 5.1.11	The UoC shall annually report the progress towards its commitment in a public ¹²⁵ manner. This shall include reporting on performance against the quantitative and geographically specific milestones outlined in the public action plan (see 5.1.7).
Indicator 5.1.12	Using the template provided on the ASC website, the UoC shall annually publish and report to ASC an overview of plant ingredients determined to be low risk and the respective pathways chosen.
Indicator 5.1.13	The UoC shall participate in, at least, one multi-stakeholder platform ¹⁸³ that advances the transition to conversion free supply chains.

¹⁷⁸ **Target date:** see Definition List.

¹⁷⁹ At least at country-level. Appropriate geographic scale needs to match level of risk.

¹⁸⁰ A visualisation of these requirements can be found in Annex 5, Figure 2.

¹⁸¹ **Eligible ingredients:** see Definition List

¹⁸² This does not apply to the category 2) its highest-volume plant ingredients or 3) other plant ingredients.

¹⁸³ An example is the Cerrado Manifesto (<https://cerradostatement.fairr.org>).

Annex 1: List of Acronyms, Definitions and Verbal Forms used

Acronym List

AB	Accreditation Body
Afi	Accountability Framework initiative
ASC	Aquaculture Stewardship Council
ASI	Assurance Services International
CAB	Conformity Assessment Body
CAR	Certification and Accreditation Requirements
CASS	Conservation Alliance for Seafood Solutions
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CoC	Chain of Custody
CC	Code of Conduct
D/C	Deforestation and Conversion
DD	Due Diligence
EL	Entry Level
EEMP	Energy Efficiency Management Plan
EMP	Effluent Management Plan
EU	European Union
FAO	UN Food and Agriculture Organization
FIP	Fishery Improvement Project
FPIC	Free, Prior and Informed Consent
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GM / GMO	Genetically Modified / Genetically Modified Organism
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
ISEAL	International Social and Environmental Accreditation and Labelling (Alliance)
IUCN	International Union for Conservation of Nature
LLA	Logo Licence Agreement
IM	Ingredient Manufacturer
MJ	megajoules
ML	megalitres
MSC	Marine Stewardship Council
MSL	Majority Sustainability Level
NGO	Non-Governmental Organisation
OHCHR	Office of the High Commissioner for Human Rights
PDCA	Plan-Do-Check-Act
PPE	Personal Protective Equipment
RUoC	Requirements for the Unit of Certification
SDG	UN Sustainable Development Goal
t	Tonne (1,000 kg)
ToC	Theory of Change
UN	United Nations
UDHR	Universal Declaration of Human Rights
UoC	Unit of Certification
WCEP	Water Conservation and Efficiency Plan
WMP	Waste Management Plan

Definition List

The definitions applicable to this Standard can be accessed through the [ASC Vocabulary Portal](#).

Annex 2: Environmental Impacts by the Feed Manufacturer

Section A1 Water consumption calculation

Water and consumption shall be calculated as follows:

Water consumption – indicator 1.18.2:

1. Identify the year the calculation relates to. This is set as the previous calendar year (1 January – 31 December).
2. Calculate the total production volume of product (t) within the defined time-period (step 1).
3. List all sources of water, separated into the categories “freshwater” and “other water”¹⁸⁴, used during the production process, from ingredient receiving to final product dispatch
 - municipal water supplies (tap/mains water)
 - surface water sources (including from wetlands, rivers, lakes, collected/harvested rainwater)
 - ground water sources (e.g. wells)
 - seawater
 - produced water¹⁸⁵
4. Calculate the quantity of water used¹⁸⁶ (megalitres) per water source (step 3) within the set time period (step 1).
5. Sum the quantities of water used (step 4).
6. Calculate the total water use (step 5) per total product produced/year (step 2) and express in megalitres/t.
7. Report the results of steps 4, 5 and 6 to ASC via data@asc-aqua.org, using the template provided on the ASC website.

Section A2 Effluent discharge calculation

Effluent discharge shall be calculated as follows:

Effluent discharge – indicator 1.20.2:

1. Identify the year the calculation relates to. This is set as the previous calendar year (1 January – 31 December).
2. List all effluent by destination, separated into the categories “freshwater” and “other water”¹⁸⁷, generated during the production process, from ingredient receiving to final product dispatch:
 - municipal treatment facilities,
 - surface water (including wetlands, rivers, lakes),

¹⁸⁴ This follows the reporting requirements by GRI, whereby “freshwater” is categorised as ≤1,000 mg/L Total Dissolved Solids, and “other water” is categorised as >1,000 mg/L Total Dissolved Solids.

¹⁸⁵ **Produced water:** see Definition List.

¹⁸⁶ The calculation of use i.e. water consumption, shall be based on water withdrawal minus discharge, rather than based on estimates of water consumed.

¹⁸⁷ This follows the reporting requirements by GRI, whereby “freshwater” is categorised as ≤1,000 mg/L Total Dissolved Solids, and “other water” is categorised as >1,000 mg/L Total Dissolved Solids.

- ground water,
 - seawater.
3. Calculate the quantity of effluent discharged (megalitres) per destination (step 2) within the set time period (step 1).
 4. Sum the quantities of effluent discharged (step 3).
 5. Report the results of steps 3 and 4 to ASC via data@asc-aqua.org, using the template provided on the ASC website.

Section A3 Energy consumption calculation

Energy consumption shall be calculated as follows:

Energy consumption – indicator 1.21.2:

1. Identify the year the calculation relates to. This is set as the previous calendar year (1 January – 31 December).
2. Calculate the total production volume of product (t) within the defined time period (step 1).
3. List all sources of energy used during the production process, from ingredient receiving to final product dispatch:
 - Scope 1**—on-site consumption of energy carriers, including:
 - diesel (L)
 - petrol/gasoline (L)
 - natural gas (m³)
 - other fuels (specify)
 - Scope 2**—electricity and other off-site energy generation, including:
 - electricity (kWh), specifying:
 - electricity derived from the national or regional grid
 - electricity from an off-grid renewable source (specify source)
 - electricity from an off-grid non-renewable source that is not otherwise included in on-site fuel consumption (specify source)
 - district heating/cooling (kWh)
4. Calculate the quantity used per energy source (step 3) within the set time period (step 1).
5. Convert¹⁸⁸ the quantities used (step 4) to MJ and sum the totals.
6. Calculate the total energy use in MJ (step 5) per tonne of product produced in the assessment year (step 2).
7. Report the results of steps 4, 5 and 6 to ASC via data@asc-aqua.org, using the template provided on the ASC website.

Section A4 Waste consumption calculation

Waste consumption shall be calculated as follows:

¹⁸⁸ Several online conversion tools are available. An example: <http://www.abraxasenergy.com/energy-resources/toolbox/conversion-calculators/energy/>

Waste consumption – indicator 1.19.2:

1. Identify the year the calculation relates to. This is set as the previous calendar year (1 January – 31 December).
2. List the composition of waste by destination, separated into hazardous and non-hazardous waste, generated during the production process, from ingredient receiving to final product dispatch:
 - recovery by re-use¹⁸⁹
 - recovery by recycling¹⁹⁰ (including composting)
 - recovery by other means (specify)
 - disposal by incineration¹⁹¹ (with energy recovery)
 - disposal by incineration (without energy recovery)
 - disposal by landfilling¹⁹²
 - disposal by other means such as dumping, open burning (specify)
3. Calculate the quantity of waste generated (tonne) per destination (step 2) within the set time period (step 1).
4. Sum the quantities of waste generated (step 3).
5. Report the results of steps 2, 3 and 4 to ASC via data@asc-aqua.org, using the template provided on the ASC website.

Section B GHG Emission calculation – indicator 1.21.4

For the purposes of estimating GHG emissions associated with aquafeeds, calculations shall include the following inputs within each of the emissions scopes defined by the Greenhouse Gas Protocol¹:

- **Scope 1**—emissions from the on-site consumption of energy carriers (diesel, petrol/gasoline, natural gas) as quantified in Section A3.
- **Scope 2**—emissions associated with the purchase of electricity and other off-site energy generation (e.g. district heating) as quantified in Section A3.
- **Scope 3**—emissions associated with the production, processing, and transport of ingredients from crop, fishery, poultry/livestock, and other raw material sources.

GHG emissions shall be calculated as follows:

1. List inputs to feed production, including those energy inputs included in Section A3 as well as any feed ingredients that make up at least 1% of the average raw material feed composition.
2. Calculate the quantity of each input used in the production of one tonne of feed in the previous calendar year (1 January – 31 December).
3. Determine and record appropriate emission factors and their sources, communicated in kg CO₂-equivalent units, for each input listed in step 1. See further details below.
4. Multiply the quantity of each input from step 2 by the respective emission factor in step 3 to calculate the total emissions from each input associated with one tonne of feed.

¹⁸⁹ **Re-use**: see Definition List.

¹⁹⁰ **Recycling**: see Definition List.

¹⁹¹ **Incineration**: see Definition List.

¹⁹² **Landfilling**: see Definition List.

5. Sum the total emissions associated with one tonne of feed in kg CO₂-eq units.
6. Report results from 2, 3, 4, and 5 to ASC via data@asc-aqua.org, using the template provided on the ASC website.

Determining appropriate emission factors for inputs—Emission factors can be modelled directly, extracted from databases (e.g. Agri-footprint, ecoinvent), or calculated using ASC's online GHG calculator. The source of emission factors should be clearly stated. If modelling emission factors directly, include all GHGs and use the most recent 100-year global warming potential characterisation factors from IPCC². Feed ingredient emission factors shall include biogenic emissions where relevant (e.g. methane emissions from rice paddies) as well as emissions from land use change (e.g. clearing of forest for agricultural crop production) if transformation occurred within the previous 20 years. Land use change calculations shall be specific to the source country and follow recognised methods as detailed in available standards^{3,4}. Carbon sequestered in plant and animal material shall not be considered in calculation of emission factors (i.e. do not subtract sequestered carbon from the emission factors of raw material in feed ingredients), as this carbon is returned to the atmosphere upon consumption. In allocating impacts between co-products from feed production systems (e.g. fish by-product meal, feather meal), the preferred method of allocation is by relative mass, in accordance with available seafood product category rules for carbon footprint specifications^{5,6,7}. If another allocation method is used instead, it shall be clearly stated along with reasoning for its use.

To facilitate ease of calculation and consistency across assessments, producers can also use the GHG calculator provided via the ASC website to provide emission factors and calculations.

References - Section B GHG Emission calculation

¹World Resources Institute (2011). *Greenhouse Gas Protocol Product Life Cycle Accounting and Reporting Standard*. Washington, D.C.: World Resources Institute.

²Myhre, G., Shindell, D., Bréon, F., Collins, W., Fuglestedt, J., Huang, J., ... & Zhang, H. (2013). Anthropogenic and Natural Radiative Forcing. In T. Stocker *et al.* (Eds.) *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, U.K.: Cambridge University Press.

³BSI (2011) *PAS 2050: Specification for the assessment of the life cycle greenhouse gas emissions of goods and services*. London, U.K.: British Standards Institute.

⁴ISO (2018) *ISO 14067: Greenhouse gases—Carbon footprint of products—Requirements and guidelines for quantification and communication*. Geneva, Switzerland: International Organization for Standardization.

⁵BSI (2012) *PAS 2050-2: Assessment of life cycle greenhouse gas emissions: Supplementary requirements for the application of PAS 2050:2011 to seafood and other aquatic food products*. London, U.K.: British Standards Institute.

⁶ISO (2020) *ISO 22948: Carbon footprint for seafood—Product category rules (CFP-PCR) for finfish*. Geneva, Switzerland: International Organization for Standardization.

⁷Standards Norway (2013) *Norwegian Standard 9418: Carbon footprint for seafood—Product category rules (CFP-PCR)*. Oslo, Norway: Standards Norway.

Annex 3: Due Diligence (DD)

DD Assessments and where they need to occur

1. Ingredient manufacturer¹⁹³;
 - a. Marine-based ingredients
 - b. Plant-based ingredients
 - c. Feed stuffs (e.g. land animal, algae, insects based)
 - d.
2. Primary raw material¹⁹⁴:
 - a. Marine-based primary raw material¹⁹⁵;
 - b. Plant-based primary raw material.

DD Process

In line with the concept of the Risk Management Framework in Annex 7, the Due Diligence (DD) process is carried out according to predefined risk factors and includes a series of steps, with each step adapted to the risk in the local context. These steps follow a set sequence and include the following elements:

- 1) Define intent/purpose
 - This first step can be skipped as the intent has already been defined within these standards.
- 2) Define the risk factors
 - Use the risk factors outlined in table 1.
- 3) Assess the risk
 - a. Assess the level of risk. A risk assessment is not needed where the level of risk for the risk factors has been pre-determined as low according to pathway 1) ASC country score cards or pathway 4) ASC approved certifications listed in table 1.
- 4) Implement appropriate measures
 - a. Take action and implement measures where the outcome of the risk assessment does not determine low risk:
 - prevention
 - mitigation
 - remediation

¹⁹³ In the case of ingredients made from by-products from livestock (e.g. feather meal, blood meal, bone meal, haemoglobin powder), Due Diligence shall only extend to the ingredient manufacturer – not to the primary raw material (i.e. livestock farm).

¹⁹⁴ In the case of ingredients made from by-product from agriculture or fisheries, the primary raw material refers to the material used to make the principal product. For example:

1. Fishmeal made from fish trimmings – the primary raw material is the whole fish.
2. Wheat gluten derived from wheat processing – the primary raw material is wheat.
3. Soy lecithin derived from soy processing – the primary raw material is soy.

¹⁹⁵ The due diligence for marine raw material shall include all products derived from fisheries, whole fish as well as by-products, with the exception of by-catch retained under the EU landing obligation. The due diligence does not include by-products derived from aquaculture.

- cease sourcing, however, where possible mitigation is preferred over the discontinuation of sourcing.

5) Monitor:

- i. monitor the risk factors, or indicators for the risk factors, to ensure the risk level determined remains valid;
- ii. monitor the effectiveness of measures implemented.

➔ Repeat the risk management process when:

- monitoring indicates a different risk level than previously determined,
- monitoring indicates that measures implemented are not effective,
- significant changes occur, which could affect the risk level previously determined,
- in all cases, at least every certification cycle (3 years).

More guidance on implementing due diligence processes can be found in the UN guiding principles¹⁹⁶ and the OECD due diligence guidance¹⁹⁷.

DD Risk Factors

The UoC needs to demonstrate low risk for ingredient manufacturers, marine and plant-based primary raw material production at least for the Risk Factors outlined in Table 1. Ingredient manufacturers are companies/facilities that produce the ingredient used by the feed manufacturer.

¹⁹⁶ United Nations (2011), *Guiding Principles on Business and Human Rights, Implementing the United Nations "Protect, Respect and Remedy" Framework*

¹⁹⁷ OECD (2018), *OECD Due Diligence Guidance for Responsible Business Conduct*

Risk Factors

Table 1: Due Diligence Risk Factors for Ingredient Manufacturers, as well as for marine and plant-based primary raw material production, and schemes to demonstrate low risk.

	Legal	Social	Environmental
Risk factors for Ingredient Manufacturers	The risk that the ingredient manufacturer does not meet the following indicator: 1.1.1 legal licenses and permits, by operating in an area affected by poor regulatory oversight resulting in systematic violations of laws and regulation.	The risk that the ingredient manufacturer does not meet the following Criteria: 1.3 appl. labour regulations 1.4 forced labour 1.5 children and young workers 1.6 discrimination 1.13 grievance mechanism	The risk that the ingredient manufacturer does not meet the following Criteria: 1.17 appl. environmental regulations 1.18 water use 1.19 waste handling 1.20 effluent handling And Indicators: 3.4.2 GMO disclosure 3.4.3 disclosure of medicinal additives
Third-party schemes demonstrating low risk for Ingredient Manufacturers for the risk factors listed above	<i>See ASC website for approved schemes</i>	<i>See ASC website for approved schemes</i>	<i>See ASC website for approved schemes</i>

<p>Risk factors for Marine-based primary raw material producers</p>	<p>The risk that primary raw material originates from areas affected by poor regulatory oversight resulting in systematic illegal fishing within the fishery.</p>	<p>The risk that primary raw material is produced using forced labour or worst forms of child labour.</p>	<p>The risk that primary raw material originates from unreported or unregulated fishing.</p> <p>The risk that primary raw material originates from species that are IUCN endangered or critically endangered species.</p> <p>The risk that primary raw material originates from species caught that appear in the CITES appendices.</p>
<p>Third-party schemes demonstrating low risk for marine-based primary raw material producers for the risk factors listed above¹⁹⁸</p>	<p>MSC certified fisheries</p> <p>MarinTrust approved fisheries</p> <p>Fisheries certified to GSSI-recognised fisheries schemes</p>	<p><i>See ASC website for approved schemes</i></p>	<p>MSC certified fisheries</p> <p>MarinTrust approved fisheries</p> <p>Fisheries certified to GSSI-recognised fisheries schemes</p>
<p>Risk factors for Plant-based primary raw material producers</p>	<p>The risk that primary raw material originates from areas affected by poor regulatory oversight resulting in systematic violations of land use or environmental laws and regulation within the plant-based primary raw material production.</p>	<p>The risk that primary raw material is produced using forced labour or worst forms of child labour.</p>	<p>The risk that primary raw material originates from areas resulted from <u>illegal</u> deforestation/conversion.</p>

¹⁹⁸ Other third-party certification schemes that address the risks in the table will be reviewed by ASC and could be accepted in future versions of the standard.

Third-party schemes demonstrating low risk for plant based primary raw material producers for the risk factors listed above	<i>See ASC website for approved schemes</i>	<i>See ASC website for approved schemes</i>	<i>See ASC website for approved schemes</i>
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DD Pathways to Determine Low risk

Any of the four pathways 1) Country Score Card, 2) sectoral/fishery assessment, 3) ingredient manufacturer assessment, or 4) certification shall be used to determine the level of risk for each risk factor. Different pathways can be used to assess the different risk factors for legal, social and environment (see table 1). If a pathway does not result in low risk, another pathway shall be chosen. If none of the pathways enable the UoC to determine low risk, the UoC will not source from such supply chains until implemented mitigation measures have achieved low risk. For plant and marine-based raw material and in the case of co-mingling (i.e. mixed), material with the highest risk classifies the blend and whether or not the entire blend can be sourced. An illustration of the four different pathways which can be used for Due Diligence determination of low risk can be found in Figure 5, Annex 7.

The pathways are:

1. Country Score Card:

- a. ASC will provide a Country Risk Card on the ASC website that ranks the country risk level into low, medium and high risk, regarding the Risk Factors in Table 1. For countries scored low risk for the respective risk factors, no further DD steps are required for that particular risk factor by the UoC. For any countries which do not yet have a Country Risk Card, a different pathway is required to determine low risk.

2. Sub-national/sectoral assessment (for plant-based raw material production) / Industry/sector assessment (for ingredient manufacturer) / Fishery assessment (for marine-based raw material production):

- a. The UoC conducts an assessment of the sector / industry / fishery to demonstrate a low risk for the Risk Factors as listed in Table 1.
- b. Where low risk has been demonstrated, evidence shall include:
 - i. risk assessment or a summary thereof;
 - ii. risk assessment outcome i.e., risk level per risk factor;
 - iii. implemented monitoring program.

3. Ingredient Manufacturer assessments¹⁹⁹:

- a. The UoC works with the ingredient manufacturer to demonstrate that the ingredient manufacturer, marine or plant-based primary raw material has a low risk for the Risk Factors as listed in Table 1. For marine and plant-based

¹⁹⁹ AFi has guidance on Supply Chain Engagement and Monitoring & Verification: <https://accountability-framework.org/contents-of-the-framework/monitoring-and-verification/>

primary raw material production risk factors, the assessment relates to whether or not the ingredient manufacturer has an appropriate system or sufficient information to ensure low risk at the raw material production level.

- b. Where low risk has been demonstrated, evidence shall include:
 - i. risk assessment or a summary thereof;
 - ii. risk assessment outcome i.e., risk level per risk factor;
 - iii. measures taken and their effectiveness;
 - iv. implemented monitoring program.

4. Certification:

- a. ASC considers the schemes listed in Table 1 to address the Risk Factors to ensure low risk. For marine-based primary raw material production, the UoC may use the IUCN Red List and CITES Appendix I, II, III List to demonstrate low risk for the two environmental risk factors relating to endangered species, as listed in Table 1²⁰⁰.

²⁰⁰ This risk factor does not need to be assessed for fish retained under the EU landing obligation.

Annex 4: Calculation of the Majority Sustainability Level (MSL)

1. Step 1: Determine the whole fish Sustainability Category

All whole fish marine ingredients must be scored according to the table below. The following table explains how to assign the Sustainability Category to whole fish marine ingredients.

Table 2: This table describes the Sustainability Category assigned to whole fish marine ingredients.

Categories	Whole fish used as raw material sourced under the following conditions
Category 1	<ul style="list-style-type: none"> - Raw material is approved according to the MarinTrust Improvement Programme, and; - Raw material is listed active as (basic)²⁰¹ FIP on www.fisheryprogress.org, and; - The ingredient manufacturer is a MarinTrust Improver Programme Accepted Site (or equivalent²⁰²), and; - The ingredient received by the UoC is MarinTrust CoC certified from factory to feed mill or the UoC can demonstrate a verified traceability system from factory to mill.
Category 2	<ul style="list-style-type: none"> - Raw material is approved according to the MarinTrust Standard (or equivalent²⁰³), and; - The ingredient manufacturer is MarinTrust certified (or equivalent), and; - The ingredient received by the UoC is MarinTrust CoC certified from factory to feed mill or the UoC can demonstrate a verified traceability system from factory to mill.
Category 3	<ul style="list-style-type: none"> - Raw material is approved according to the MarinTrust Standard (or equivalent), and; - Raw material is engaged in a comprehensive²⁰⁴ FIP and is listed active as such on www.fisheryprogress.org, and;

²⁰¹ See also CASS: <https://solutionsforseafood.org/resources/fishery-improvement/>

²⁰² Equivalence to the MarinTrust Improver Programme Accepted Site and MarinTrust certified ingredient manufacturer will be based on assessment of compliance with ISEAL Codes of Good Practice as well as consideration of key sustainability criteria that are referenced in the MarinTrust. These shall include:

- Full traceability of all finished ingredients back to the originating supplying fisheries.
- The ability to segregate finished products according to category and provide information on the composition of each shipment made.
- The requirement for the factory to have mechanisms in place that ensure working is in compliance with employment, welfare and safety requirements in accordance to national legislation and following relevant key ILO Conventions (29,87,98,99,100,105,111,138,182)
- The requirement for the factory to be certified to a Good Manufacturing Practice standard which shall cover issues of product purity and safety as well as environmental issues including emissions and effluents.

²⁰³ Equivalence to the MarinTrust raw material standard will be based on assessment of compliance with ISEAL Codes of Good Practice as well as consideration of key sustainability criteria that are referenced in the MarinTrust Standard, notably Section 1.3 Responsible Sourcing of Fishery Raw Material. Recognition will be made public via the ASC Website.

²⁰⁴ See also CASS: <https://solutionsforseafood.org/resources/fishery-improvement/>

	<ul style="list-style-type: none"> - Raw material remains approved according to the MarinTrust Standard until Category 4 is achieved, and; - The ingredient manufacturer is MarinTrust certified (or equivalent), and; - The ingredient received by the UoC is MarinTrust CoC certified from factory to feed mill or the UoC can demonstrate a verified traceability system from factory to mill.
Category 4	<ul style="list-style-type: none"> - MSC Chain of Custody (Default Version); raw material is Marine Stewardship Council Chain of Custody certified (or equivalent²⁰⁵).

2. Step 2: Determine the Majority Sustainability Level

After determining the sustainability categories of whole fish marine ingredients, feed manufacturers need to calculate the Majority Sustainability Level (MSL) for the entire UoC. Majority is defined as $\geq 50\%$ (i.e. 50%, or higher) of whole-fish volume.

2.1. Volume Calculation

First, the volumes of marine ingredients shall be calculated per type. Volumes are calculated in tonnes. Marine ingredients are divided into the following types:

1. Volume from marine ingredients (whole-fish and by-products);
2. Volume from whole-fish marine ingredients;
 - 2.1. Volume of total whole-fish marine ingredients;
 - 2.2. Volume of whole-fish marine ingredients scoring at Category 1 (table 2);
 - 2.3. Volume of whole-fish marine ingredients scoring at Category 2 (table 2);
 - 2.4. Volume of whole-fish marine ingredients scoring at Category 3 (table 2);
 - 2.5. Volume of whole-fish marine ingredients scoring at Category 4 (table 2);
 - 2.6. Volume of whole-fish marine ingredients that does *not* score at Category 1-4 (table 2);

2.2. Majority calculation

Second, volumes per type of marine ingredients are used to calculate the Majority Sustainability Level using the following formulae:

- **Baseline** applies, where no volume can be attributed to any of the categories 1-4.
- **Level 1** applies, when the volume of 2.2 above $\geq 50\%$ of the volume 2.1;
- **Level 2** applies, when the volume of 2.3 above $\geq 50\%$ of the volume 2.1;
- **Level 3** applies, when the volume of 2.4 above $\geq 50\%$ of the volume 2.1;
- **Level 4** applies, when the volume of 2.5 above $\geq 50\%$ of the volume 2.1;

Note: where the majority calculation leads to two potential levels, the following shall apply:

²⁰⁵ Equivalence to MSC will be based on assessment of compliance with ISEAL Codes of Good Practice as well as consideration of sustainability criteria that are referenced in the MSC Principles and Criteria. Standards recognised as equivalent to MSC standard have been set in accordance with the ISEAL Code of Good Practice for Setting Social and Environmental Standards, and be recognised by/ meet the requirements of the Global Sustainable Seafood Initiative (GSSI) Global Benchmarking Tool. The standard shall be based on a full ecosystem approach with specific provisions for the management of low trophic level species and the protection of populations of dependent predators. Recognition will be made public via the ASC Website.

- **Level 2** applies, when $[(\text{volume 2.3}) + (\text{volume 2.4}) + (\text{volume 2.5})] \geq 50\% (\text{volume 2.1})$;
- **Level 3** applies, when $[(\text{volume 2.4}) + (\text{volume 2.5})] \geq 50\% (\text{volume 2.1})$;

Note: by-products are not factored into the majority calculation.

2.3. Prior to initial certification

The volume calculation in 2.1 includes marine ingredients received in the 24-month period before the initial audit. The MSL calculation in 2.2 is based on this volume and forms the Entry Level on the MSL-improvement ladder.

2.4. After initial certification

The volume calculation in 2.1 is repeated annually and includes marine ingredients received over a 12 month period, January to December.

Annex 5: Calculation of Mass Balance Eligible Volume

1. Determining Eligible Ingredients

Not all marine and plant ingredients which can be sourced by the UoC also count towards the mass balance eligible volume. The following ingredients count towards the mass balance eligible volume:

- Marine-based ingredients:
 - o by-products from aquaculture, by-catch retained under the EU landing obligation
 - o by-products from fisheries (if Due Diligence indicates low risk)
 - o whole fish (if Due Diligence indicates low risk, the sustainability category is 1-4)

- Plant-based ingredients:
 - o Category 1) Plant ingredients known to have global risks, i.e. soy/palm oil (if Due Diligence indicates low risk, Deforestation/Conversion (D/C)-free commitment made, low risk demonstrated for legal D/C).
 - o Category 2) Highest-volume plant ingredients (if Due Diligence indicates low risk, D/C free commitment made, low risk for legal D/C demonstrated OR an action plan is under implementation).
 - o Category 3) other plant ingredients (if Due Diligence indicates low risk, D/C free commitment made).

- Feed stuffs (if Due Diligence indicates low risk)

- Feed additives

- Ingredients which represent <1% of the total annual ingredient-weight (volume) received by the UoC for use in aquafeeds

The following ingredients can be sourced but do not count towards the mass balance eligible volume:

- Marine-based ingredients:
 - o whole fish (if Due Diligence indicates low risk but not scoring at sustainability category 1-4)

- Plant-based ingredients:
 - o Category 1) Plant ingredients known to have global risks, i.e. soy/palm oil (if Due Diligence indicates low risk and D/C free commitment made, low risk for legal D/C cannot be demonstrated but an action plan is under implementation).

Figure 1: Determining eligible ingredients

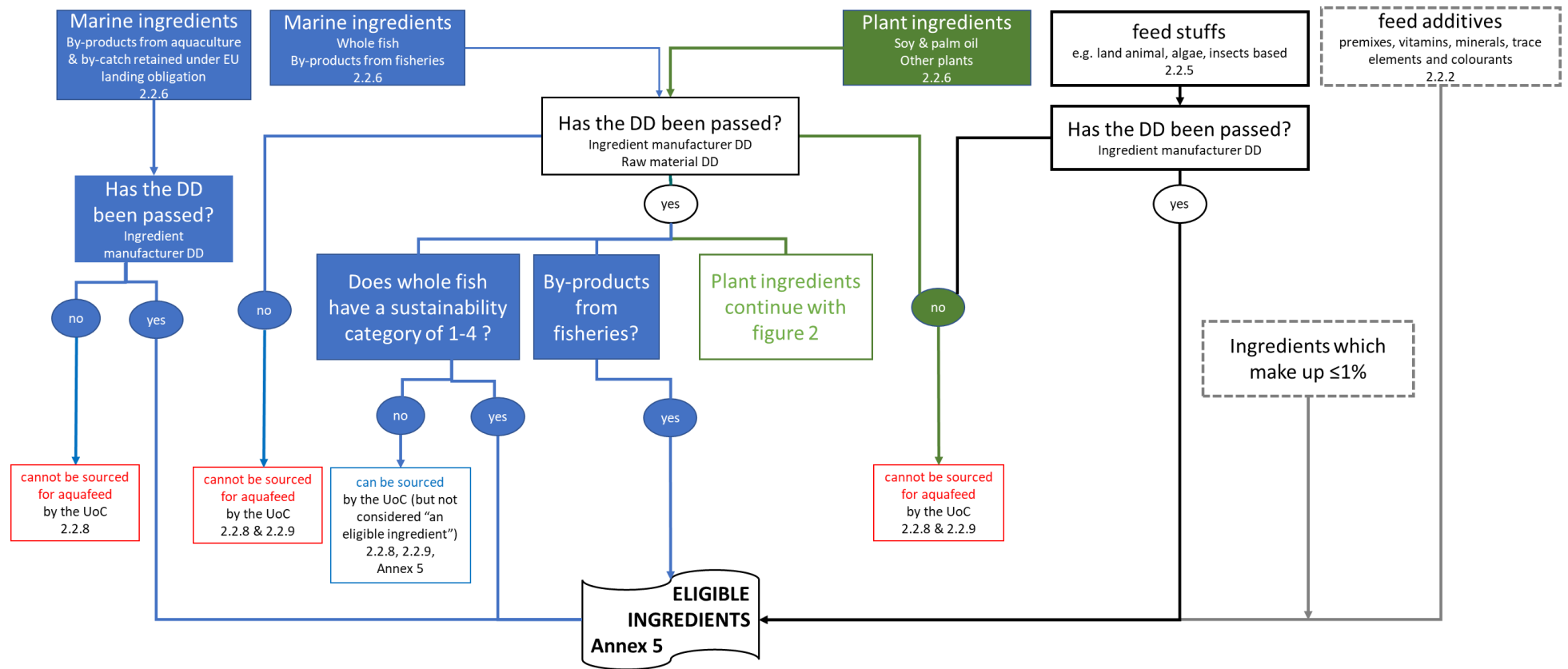
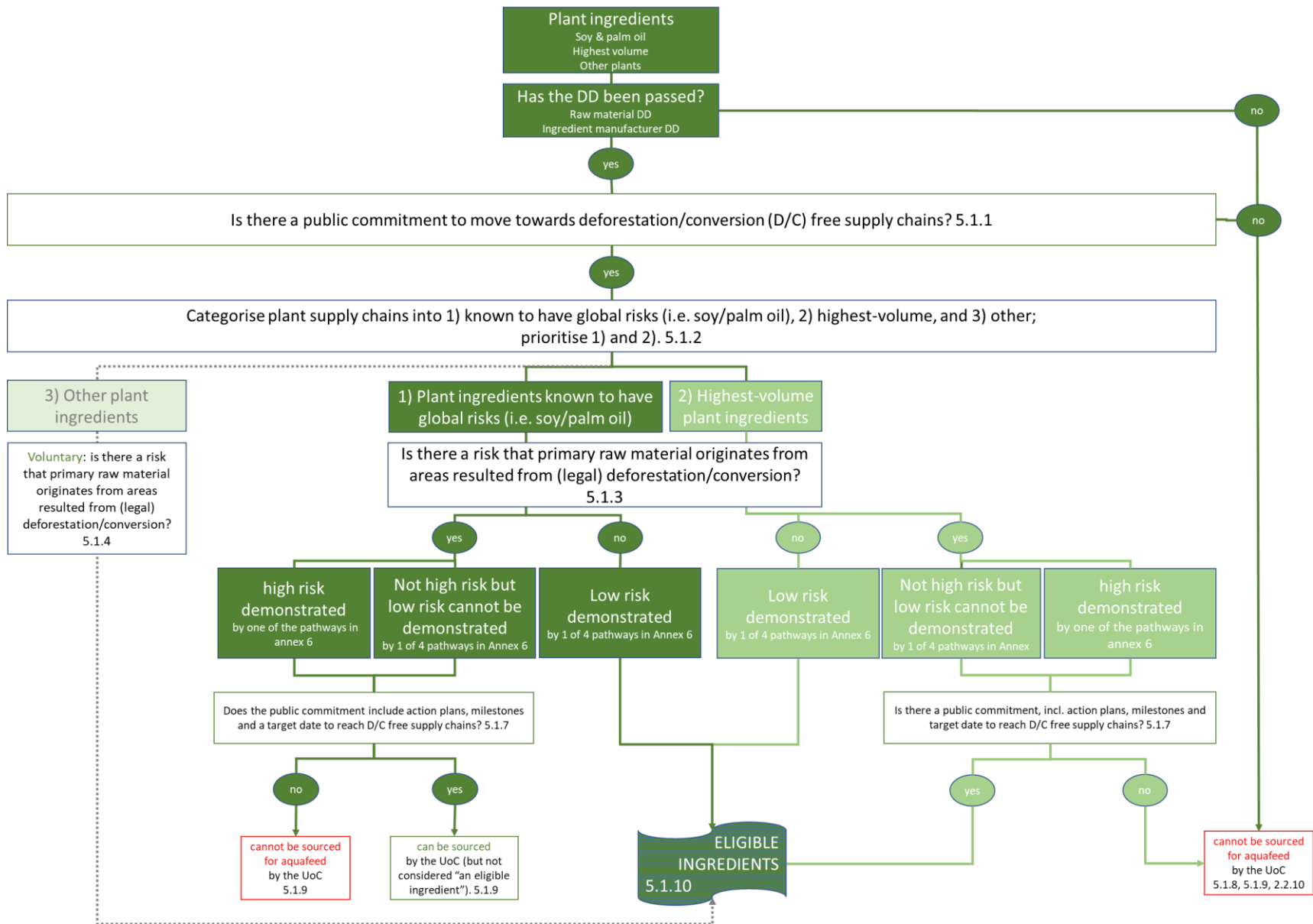


Figure 2: Determining eligible plant ingredients

Deforestation / conversion (D/C) risk assessment outcome and implications for the sourcing of plant-based ingredients. In this version of the standard, no distinct sourcing requirements apply to category 3) ingredients with a high risk or ingredients without demonstrated low risk in relation to deforestation or land conversion in plant-ingredient supply chains. This will be reviewed by ASC and could change in future versions of the standard.



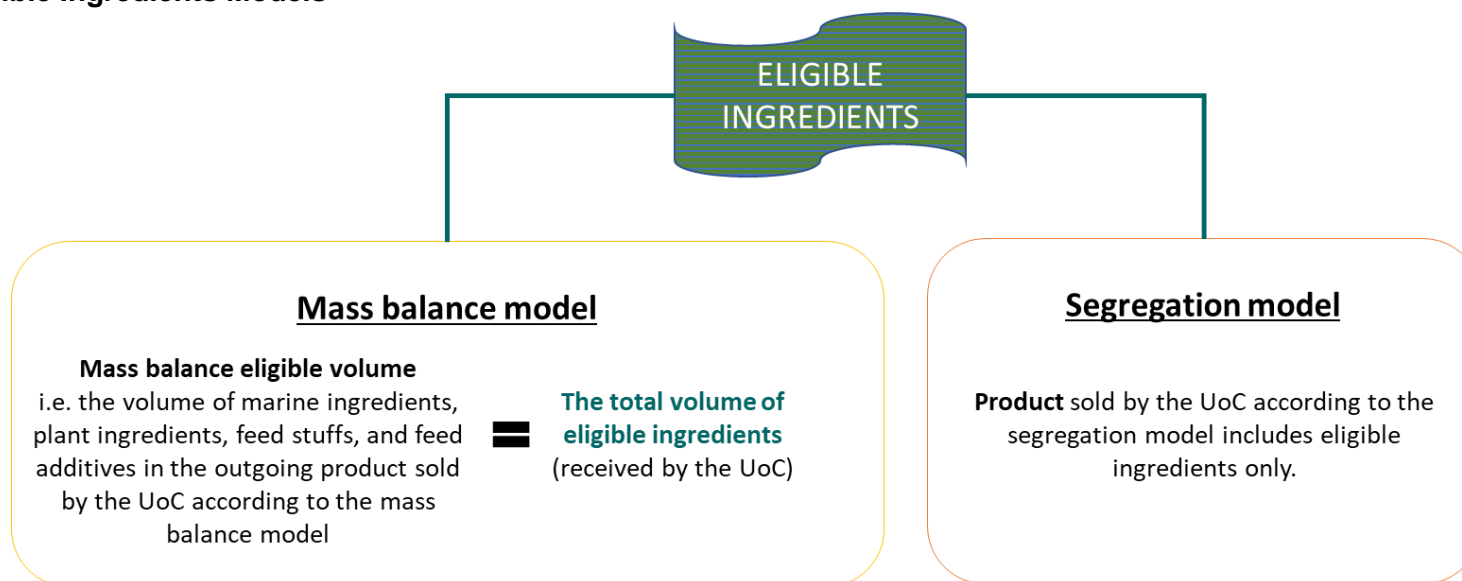
2. Calculating the Eligible Volume

Follow these four steps to calculate the mass balance eligible volume:

- 1) Sum volume (tonnes) of eligible marine ingredients
- 2) Sum volume (tonnes) of eligible plant ingredients
- 3) Sum volume (tonnes) of eligible feed stuffs
- 4) Sum volume (tonnes) feed additives.

The sum of the volumes of eligible ingredients 1) - 4) above equals the “mass balance eligible volume”.

Figure 3: Eligible Ingredients Models



Annex 6: Assurance Procedure for Deforestation / Conversion free Supply Chains

Plant-based ingredients used by the UoC need to be assessed for their level of risk for the Risk Factors listed in Table 3. This additional step is focused on risk related to (legal) deforestation and land conversion.

Table 3: Risk Factors for plant-based ingredients, and schemes to demonstrate low risk.

	Environmental
Risk factors for Plant-based primary raw material	The risk that primary raw material originates from areas resulted from legal deforestation / conversion.
Third-party schemes demonstrating low risk for plant based primary raw materials for the risk factors listed above ²⁰⁶	<i>See ASC website</i>

The UoC may choose one of four pathways to assess and determine risk related to deforestation and conversion.

Different pathways can be used to assess the risk factor deforestation / conversion. If a pathway does not result in low risk, another pathway shall be chosen. In the case of co-mingling (i.e. mixed) of ingredients, material with the highest risk classifies the blend.

The pathways are:

1. Country Score Card:

- a. ASC will provide a Country Risk Card on the ASC website that ranks the country risk level into low, medium and high risk, regarding the Risk Factor in Table 3. For countries scored low risk for the respective risk factor, no further risk assessment steps are required by the UoC. For any countries which do not yet have a Country Risk Card, a different pathway is required to determine low risk.

2. Sub-national/sectoral assessment:

- a. The UoC conducts an assessment of sub-national or sectoral level.
- b. Where low risk has been demonstrated, evidence shall include:
 - i. risk assessment or a summary thereof;
 - ii. risk assessment outcome i.e., risk level;

²⁰⁶ Other third-party certification schemes that address the risks in the table will be reviewed by ASC and could be accepted in future versions of the standard.

iii. implemented monitoring program.

3. Ingredient Manufacturer assessments²⁰⁷:

- a. The UoC works with the ingredient manufacturer to demonstrate that plant-based primary raw material has a low risk for the Risk Factor as listed in Table 3.
- b. Where low risk has been demonstrated, evidence shall include:
 - i. risk assessment or a summary thereof;
 - ii. risk assessment outcome i.e. risk level;
 - iii. measures taken and their effectiveness;
 - iv. implemented monitoring program.
- c. Where low risk has not yet been achieved, however, an action plan is under implementation to achieve the public commitment, evidence shall include:
 - i. analysis of traceability of the primary raw material
 - ii. risk assessment or a summary thereof;
 - iii. risk assessment outcome i.e., risk level per risk factor;
 - iv. measures taken and their effectiveness
 - v. Implemented monitoring program
 - vi. Status of progress in relation to quantitative and geographically-specific targets and milestones in the public action plan

4. Certification:

- a. ASC considers the schemes listed in Table 3 to address the Risk Factor to ensure low risk.

²⁰⁷ AFi has guidance on Supply Chain Engagement and Monitoring & Verification: <https://accountability-framework.org/contents-of-the-framework/monitoring-and-verification/>.

Annex 7: Flowcharts illustrating requirements for DD, D/C-free risk assessment and summary tables of permitted work types

Figure 4: General process outline for Risk Management Frameworks.

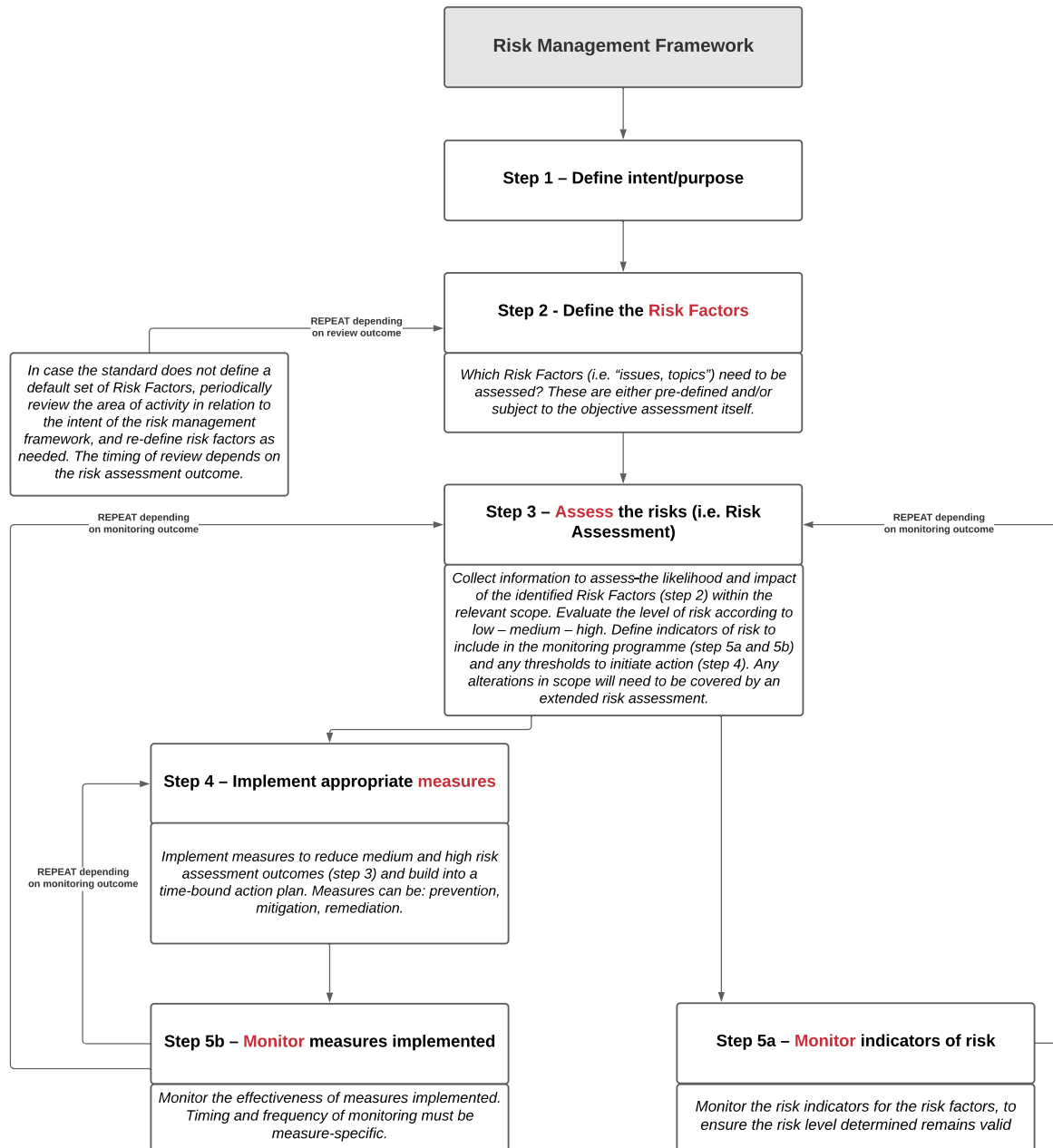


Figure 5: Illustration of the four different pathways which can be used for Due Diligence determination of low risk.

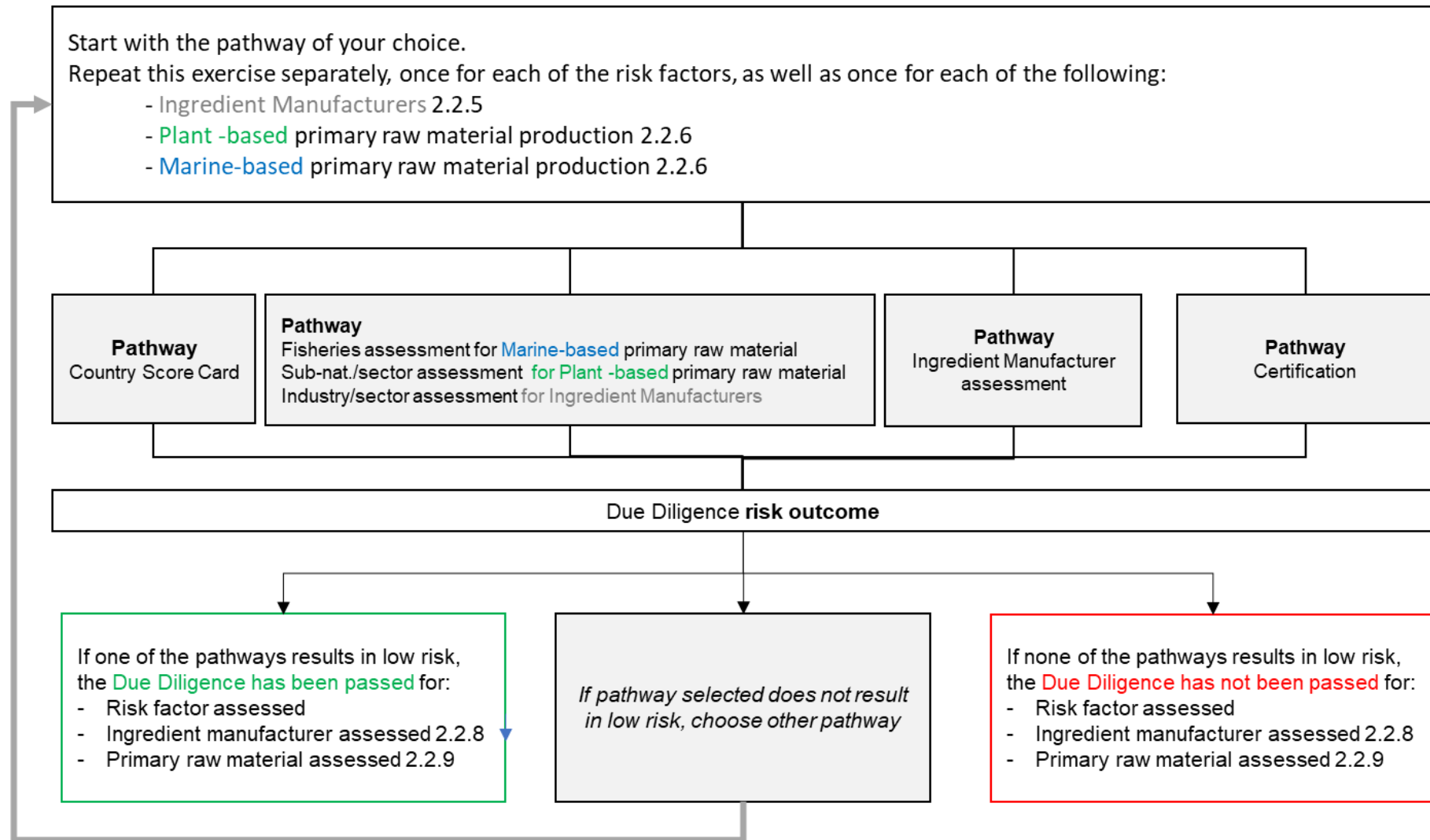


Table 4: Permitted type of work per age group. This table summarises the type of work allowed for each age group. The shaded cells indicate what is prohibited.

Age	≥ 18	15(14²⁰⁸) - 17	13(12²⁰⁹) - 14	< 13(12)
Type of Work	Adult	Young Employee, Child	Child	Child
All work; including hazardous work				
Non-hazardous work				
Light work				

²⁰⁸ ILO Convention 138 allows for 14 years as exception in certain developing countries. ASC follows ILO Convention 138 and equally allows employment from 14 years in these countries.

²⁰⁹ ILO Convention 138 allows for 12 years as exception in certain developing countries. ASC follows ILO Convention 138 and equally allows employment from 12 years in these countries.

Table 5: Permitted working hours and rest per age group

Age group		Working hours / rest						
Adult	≥18	8 h/day & 48 h/wk	12 h/wk must be exceptional & voluntary	1 h/ 8 h	11 h	24 h (1 day)	3 paid working wks	comply with laws & industry standards on premium rates, working hours, breaks, daily rest, weekly rest and health assessments for night work.
Young Employee, child	15(14 ²¹⁰) – 17	8 h/day & 40 h/wk		0.5 h/ 4.5 h	12 h	48 h (2 days)		not allowed to work between 10pm & 6am
Child	13(12 ²¹¹) - 14	3 h/day & 14 h/wk		0.5 h/ 3 h	14 h			not allowed to work between 8pm & 6am
		Working hours (maximum hours; excluding breaks)	Overtime (maximum hours per week)	Breaks (minimum hours per work shift)	Daily Rest (minimum consecutive hours per 24h)	Weekly Rest (minimum consecutive hours per 7 days)	Annual Leave (minimum per 1 year of full-time service)	Night Work

²¹⁰ ILO Convention 138 allows for 14 years as exception in certain developing countries. ASC follows ILO Convention 138 and equally allows employment from 14 years in these countries.

²¹¹ ILO Convention 138 allows for 12 years as exception in certain developing countries. ASC follows ILO Convention 138 and equally allows employment from 12 years in these countries.

Annex 8: UoC requirements on publishing information and reporting to ASC

Report Title	Make public	Report to ASC	Template	Indicator
Water Consumption Report	No	Yes	Yes	1.18.2
Water Conservation and Efficiency Plan	No	No	No	1.18.4
Waste Disposal Report	No	Yes	Yes	1.19.2
Waste Management Plan	No	No	No	1.19.3
Effluent Report	No	No	No	1.20.2
Effluent Management Plan	No	No	No	1.20.3
Energy Consumption Report	No	Yes	Yes	1.21.2
Energy Efficiency Plan	No	No	No	1.21.3
GHG Emissions Report	Yes	Yes	Yes	1.21.4
Ingredients and Primary Raw Material Report	Yes	No	Yes	2.2.3
				2.2.4
Due Diligence and Pathways Report	Yes	Yes	Yes	2.2.10
Sectoral/fishery Assessment or Ingredient Manufacturer Assessment Summary Report	Yes	Yes	Yes	2.2.11
Volume of Product Sold (Mass Balance) Report	No	Yes	Yes	3.2.4
Volume of Product Sold (Segregation) Report	No	Yes	Yes	3.2.5
Majority Sustainability Level Report	Yes	Yes	Yes	4.1.5
Volume of Marine Ingredients Report	Yes	Yes	Yes	4.1.6
Deforestation and Conversion Free Plant Ingredients Progress Report	Yes	No	No	5.1.11
Low Risk Plant Ingredients Report	Yes	Yes	Yes	5.1.12