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**DRAFT**

# Aquaculture Management Standard

# Version 2.0

## Marine Eco-Label Japan Council

**Introduction**

The Marine Eco-Label Japan (MEL) Council has developed the Aquaculture Management Standard (AMS) to promote sustainable and responsible aquaculture production by confirming such important aspects as protection of natural stocks, conservation of the environment, and improvement of consumer trust. Aquaculture farms must satisfy this standard to acquire MEL certification.

The standard was prepared based on existing documents such as the FAO (1995) Code of Conduct for Responsible Fisheries and FAO (2011) Technical Guidelines on Aquaculture Certification (TGAC). In addition to such documents, the diversity of aquaculture production in Japan is taken into consideration. Compatibility of this standard with other global standards for aquaculture certifications is also assured. The four principles specified below apply to the basic requirements of the AMS, while the fundamental principles listed from "a" to "m" in Article 17 of TGAC apply to the certification scheme in order to secure transparency and credibility of the scheme.

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| Principle 1 | Social responsibility in aquaculture operations<br>(To surely fulfil social responsibilities) |
| Principle 2 | Consideration for the health and welfare of aquatic animals<br>(To ensure the health and welfare of aquatic animals) |
| Principle 3 | Assurance of food security<br>(To carry out aquaculture activities properly for food safety) |
| Principle 4 | Consideration for environmental conservation<br>(To carry out aquaculture activities properly for the environment) |

The implementation of each standard shall be based on scientific evidence. However, if the scientific evidence about the impacts of aquaculture operation on human health and the environment is uncertain, or if no social institution has been established for executing adequate operations, farmers shall take precautionary approaches, which are applicable measures to prevent adverse effects on sustainable aquaculture operations. Although the standard is applicable to all aquaculture species and production systems, specific requirements are set for each species and production system.

Certification shall be handled by an independent third party (Certification Body) having the capacity and ability conforming to the ISO standard (ISO/IEC 17065:2012) and accredited by a member organization of the IAF (International Accreditation Forum).

The AMS both in Japanese and English shall be equally valid. The standard shall be reviewed more than once every five years and revised as necessary to maintain the validity of the standard. In addition,

when international guidelines or standards such as FAO TGAC as well as any relevant laws and regulations of the Japanese Government are revised, this document shall be reviewed and revised as necessary. In addition to AMS, specific requirements for the assessment of applicants are explained in the supplemental documents;

1) Guidelines for Auditors of the Aquaculture Management Standard,
2) Checklist for Auditors of the Aquaculture Management Standard, and
3) Requirements for Certification Bodies Certifying Aquaculture Management Standard.

**Revision of MEL Aquaculture Management Standard Version 2.0**

This revision corresponds to the world aquaculture trend and the change of the industrial environment surrounding the aquatic animals in Japan. And it is developed to conform to the GSSI (Global Sustainable Seafood Initiative) Global Benchmark Tool Version 2.0 revised in November, 2021.

In 2021, Japan Fisheries Agency formulated the "Comprehensive Strategy for Growth and Industrialization of Aquaculture," and the aquaculture industry is expected to play a role in promoting the revival of Japan's fishery industry. With the aim of shifting to a market-driven model and improving the added value of the entire value chain, the government will transform the aquaculture industry into the robust and competitive industry by creating new demand, exploring new markets and promoting sustainable aquaculture production and innovation.

For the expansion of aquaculture production, it is important to underpin the infrastructure of feed in addition to the measures against fish diseases and improvement of seed production technology. The development of safe and secure feed, efficient manufactured feed production system, and stable feed procurement are indispensable. In order to achieve this, it is important to continuously secure domestic forage fish stocks, to promote the development of low Fish-in and Fish-out ratio (FIFO) feed and alternative proteins, and to recycle processing residue derived from marine products. From the viewpoint of effective utilization of resources, the building food recycling to consume cultured fish raised with the manufactured feed using fish meal derived from traceable processing residue is a model of a recycling-oriented system which is unique to Japan that could be proud of in the world. It should also be remembered that the efficient use of energy and efforts to reduce greenhouse gas emissions in all processes of aquaculture production, as well as the production and supply of food, are social responsibilities required of aquaculture sector.

Through the MEL aquaculture certification system, we would like to support the aquaculture industry that takes the environment and ecosystem into consideration, contribute to the development of society

and industry, and communicate the value of Japan's unique social system to other countries in order to be able to gain their understanding and approval on such philosophy.

**References**

This standard was prepared in conformity with the following existing documents:

- FAO Code of Conduct for Responsible Fisheries
- FAO Technical Guidelines on Aquaculture Certification
- GSSI Global Benchmark Tool (Version 1)
- World Trade Organization (WTO) Technical Barriers to Trade (TBT) Agreement Annex 3 Code of Good Practice for the Preparation. Adoption and Application of Standards
- ISO/IEC Guide 59:1994 Code of Good Practice for Standardization
- ISO/IEC 17065:2012 Conformity Assessment – Requirements for Bodies Certifying Products, Processes and Services
- ISO/IEC 17067:2013 Conformity Assessment – Fundamentals of Product Certification and Guidelines for Product Certification Schemes

**Scope and Units of Certification**

The scope of certification shall encompass an aquaculture business licensed and operated under the relevant laws and regulations issued by national and local governments. The unit for certification is an aquaculture business producing specific target species and using a specific production method under the same management procedures. (Note: The aquatic products produced by a certified aquaculture industry are eligible for Chain-of-Custody (CoC) certification.)

**Terms and Definitions**

**Aquaculture:**

The producing and farming of aquatic organisms involving human intervention to increase the number and volume of those organisms for human consumption.

**Mariculture:**

Aquaculture operated in the public sea.

**Fresh water aquaculture:**

Aquaculture operated in public inland water.

**Land-based aquaculture:**

Aquaculture operated in private aquaculture facilities on land by using seawater or fresh water.

**Rearing unit:**

The minimum production unit of aquaculture species reared and managed under the same conditions, such as in a fish cage or pond. Normally, one rearing unit is treated as one lot.

**Seed:**

The eyed eggs, juvenile fish, shellfish and prawn, seed of seaweed attached to nets, etc. brought into aquaculture facilities and reared for a certain period to harvest for sale.

**Feed:**

All the kinds of feeds supplied to the farmed fish. Under this standard, “manufactured feed” is a term used for solid or powdery compound feed and “raw material feed” is a term used for the frozen or fresh fish, squid, krill, etc. supplied to the farmed fish.

**Aquatic animals and plants:**

Farmed animals and plants for human consumption.

**Aquatic life:**

All the organisms living in the sea, rivers, lakes, marshes and other aquatic environments surrounding the aquaculture site.

# Principles, Criteria, and Standard for Certification

**Principle 1**

**Social Responsibility for Aquaculture Operation**

(To surely fulfil social responsibilities)

**Criterion 1.1**

**The aquaculture operations shall be conducted in compliance with all the relevant laws, regulations and ordinances of national and local governments where the aquaculture site is located.**

(This criterion applies to all types of aquaculture business.)

**Standard Compliance Indicator(s)**

**1.1.1** Aquaculture farmers shall carry out production in compliance with all the relevant national and local laws and regulations, including but not limited to:

- Fishery Act (Act No.267 of 1949), Act on the Protection of Fishery Resources (Act No. 313 of 1951),
- Sustainable Aquaculture Production Assurance Act (Act No.51 of 1999),
- Act on Promotion of Inland Waters Fishery (Act No.103 of 2014),
- Act on Securing Quality, Efficacy and Safety of Pharmaceuticals, Medical Devices, Regenerative and Cellular Therapy Products, Gene Therapy Products, and Cosmetics (Act No. 145 of 1960),
- Act on Safety Assurance and Quality Improvement of Feeds (Act No.35 of 1953),
- Food Sanitation Act (Act No.233 of 1947) and Food Safety Basic Act (Act No.2003),
- The laws and regulations of local governments where the aquaculture site is located.

**1.1.2** Aquaculture farmers shall obtain the requisite licenses and permissions, and the aquaculture site and target species shall be in accordance with the licenses and permissions.

**1.1.3** Workers shall be treated fairly, with appropriate wages, welfare, and working conditions in accordance with the relevant laws and regulations. A proper health management and working environment shall be secured for them.

**1.1.4** The use of child labor or other illegal labor is strictly prohibited.

## Principle 2

## Consideration for the Health and Welfare of Aquatic Animals

(To ensure the health and welfare of aquatic animals)

(This principle applies to aquatic animals such as finfish, shellfish, and farmed shrimp.)

**Criterion 2.1**

**The aquatic animals shall be managed in a suitable environment to minimize stress on them, and precautionary measures against diseases shall be planned and executed.**

**Standard Compliance Indicator(s)**

**2.1.1** Aquaculture farmers shall use proper water in accordance with Water Quality Standards for Fisheries based on the type of target species and their life stage.

**2.1.2** Aquaculture farmers shall provide sufficient cage space and a suitable rearing density to maintain satisfactory environmental conditions at the growing site.

**2.1.3** Aquaculture farmers shall monitor the environmental conditions of the farming site by using proper indicators. Appropriate procedures shall be established for dealing with deteriorating conditions.

**2.1.4** Aquaculture farmers shall use suitable feed matched to the nutritional requirements of aquatic animals, with proper quantities for maintaining their healthy condition.

**Criterion 2.2**

**Aquatic animals shall be maintained under appropriate management to prevent disease outbreak and spread.**

**Standard Compliance Indicator(s)**

**2.2.1** Aquaculture farmers shall monitor the health condition of aquatic animals regularly with appropriate indicators.

**2.2.2** Aquaculture farmers shall establish a procedure for the collection and treatment of dead and moribund aquatic animals, and shall treat them properly in accordance with the decided procedure.

**2.2.3** Aquaculture farmers shall manage their facilities to prevent escape, and shall not release

diseased aquatic animals intentionally.

**2.2.4** Seed shall be certified free from specific or material pathogens before introduction to aquaculture sites.

**2.2.5** Aquaculture farmers shall manage the aquatic animals properly by effective preventive measures and vaccination throughout all the rearing stages.

**Criterion 2.3**

**In the case of disease outbreak, the aquatic animals shall be treated in accordance with the applicable laws and regulations.**

**Standard Compliance Indicator(s)**

**2.3.1** Aquaculture farmers shall establish and implement procedures for responding to disease.

**2.3.2** Aquaculture farmers shall treat diseases in accordance with the diagnosis and decision on treatment under the supervision of Fish Epidemic Prevention Officers.

**2.3.3** Aquaculture drugs shall be used in accordance with the Act on Securing Quality, Efficacy and Safety of Pharmaceuticals, Medical Devices, Regenerative and Cellular Therapy Products, Gene Therapy Products, and Cosmetics (Act No. 145 of 1960) and other relevant regulations. Aquaculture farmers shall establish procedures for drug usage to minimize any impact on the environment.

**2.3.4** Antimicrobial agents shall be used in accordance with the Principles for Responsible and Prudent Use of Antimicrobial Agents in Aquatic Animals of the OIE Aquatic Animal Health Code.

**2.3.5** Aquaculture workers shall be trained, educated, and competent to handle aquatic animals and equipment in hygienic, safe, and proper manner. Workers shall have high awareness of these matters and shall act responsibly.

**Principle 3** **Assurance of Food Security**

(To carry out aquaculture activities properly for food safety)

Criterion 3.1

**Aquaculture activities, environment, materials, and equipment shall be managed properly to minimize the risks to human health.**

(This criterion applies to all aquaculture species.)

**Standard Compliance Indicator(s)**

**3.1.1** The aquaculture site shall be selected in consideration of proper risk assessment of pollution at the site and the surrounding environment.

**3.1.2** Aquaculture farmers shall conduct hazardous substance monitoring at the aquaculture site to prevent hazards to human health.

**Criterion 3.2**

**Aquaculture medicines shall be managed properly in accordance with procedures for preventing drug residues.**

(This criterion applies to aquatic animals.)

**Standard Compliance Indicator(s)**

**3.2.1** Aquaculture medicine shall be used based on the expertise and accurate diagnosis of Fish Epidemic Prevention Officers to optimize its medical efficiency, and records of drug usage shall be kept.

**Criterion 3.3**

**Feed shall be properly managed to minimize any risk of contamination.**

(This criterion applies to feeding aquaculture.)

**Standard Compliance Indicator(s)**

**3.3.1** Feed, feed additives, and feed ingredients shall be used responsibly to prevent chemical contamination. Traceable records on feed used for each aquaculture unit shall be kept.

**Criterion 3.4**

**The landing of bivalves shall be performed in hygienic conditions and traceability shall be assured at all the rearing stages of the mollusks.**

(This criterion applies to aquaculture of bivalve mollusks.)

**Standard Compliance Indicator(s)**

**3.4.1** The growing areas of bivalves shall be monitored and managed to prevent microbiological contamination, hazardous chemicals, and shellfish poison.

**3.4.2** Bivalves shall be purified if necessary and the purification equipment shall be properly maintained.

**3.4.3** At the time of shipment, detailed information about the products such as the growing area, landing site, species, quantity, transportation method, the name of the farmer, etc. shall be confirmed and recorded. Identification marks shall be explained to the shipping destination to enable product identification.

**3.4.4** Equipment, machinery, and packing materials for shipment shall be maintained in hygienic conditions.

**3.4.5** The shipping process shall be decided and carried out in hygienic conditions to prevent deterioration of the products.

**Criterion 3.5**

**The landing of aquaculture products shall be performed in hygienic conditions and traceability shall be assured at all the rearing stages of the products.**

(This criterion applies to aquaculture animals other than bivalve mollusks.)

**Standard Compliance Indicator(s)**

**3.5.1** Cultured fish shall be managed per cage, and daily aquaculture activities shall be recorded.

**3.5.2** Detailed information about the cultured fish such as landing date, the number of fish landed, weight, shipping destination, etc. shall be recorded. Identification marks shall be explained to the shipping destination to enable product identification.

**3.5.3** Equipment, machinery, and packing materials for the shipment shall be maintained in hygienic conditions.

**3.5.4** Procedures for shipping shall be established and implemented.

**Principle 4**

**Consideration for Environmental Conservation**

(To carry out aquaculture activities properly for the environment)

**Criterion 4.1**

**Aquaculture activities shall be carried out in accordance with suitable operating procedures established to minimize environmental impact caused by aquaculture equipment and materials, excretions of aquatic animals, and feed residues.**

**Standard Compliance Indicator(s)**

**4.1.1** The aquaculture equipment, cages, and vessels shall be maintained regularly and coated with materials not containing heavy metals and hazardous chemicals, to prevent contamination of aquaculture facilities and surrounding areas.

**4.1.2** Water used for aquaculture shall be utilized in compliance with relevant laws and regulations. Salinization of fresh water and wastewater treatment shall be controlled to maintain water quality at the aquaculture sites and surrounding environment.

**4.1.3** The density of fish shall be controlled adequately, and organic matter shall be monitored to prevent increased sedimentation of organic matter and occurrence of de-oxygenated water.

**4.1.4** Waste disposal from aquaculture operated in closed water shall be managed properly to prevent negative impact on the benthic environment.

**Criterion 4.2**

**Feed shall be used properly to optimize the health of aquaculture animals as well as to minimize impact on natural resources.**

(This criterion applies to feeding aquaculture.)

**Standard Compliance Indicator(s)**

**4.2.1** Feed, feed additives, and feed ingredients shall be used in accordance with the Act on Safety Assurance and Quality Improvement of Feeds (Act No. 35 of 1953) and other relevant laws and regulations. Feed used for each aquaculture unit shall be recorded and traceable.

**4.2.2** The species and origin of fish used to produce fish meal and fish oil shall be traceable. The

fish oil and fish meal shall not originate from endangered species[1] or from Illegal, unregulated and unreported (IUU) fisheries.

**4.2.3** In principle, the unprocessed fish[2] such as whole fish caught, mollusks, crustaceans, etc., shall not be used as a direct feed source. The protein sources of feed shall mot be the same species and genus as the species being farmed.

**4.2.4** The amount of fish meal and fish oil in feed shall be reduced appropriately during the rearing stage of cultured fish.

**Criterion 4.3**

**Seed shall be used properly to minimize any impact on natural resources.**

(This criterion applies to aquaculture for aquatic animals.)

**Standard Compliance Indicator(s)**

**4.3.1** Hatchery-raised seed shall be used preferentially at the aquaculture site where the seed is available.

**4.3.2** The use of wild seeds shall be justifiable when the seeds were collected legally without negative impact on natural resources and the environment.

**4.3.3** Use of genetically modified organisms shall be prohibited without proper implementation of environmental assessment.

**Criterion 4.4**

**Aquaculture shall be operated properly to minimize any impacts on the aquaculture sites and surrounding environment.**

(This criterion applies to all the aquaculture animals.)

**Standard Compliance Indicator(s)**

**4.4.1** Aquaculture shall be operated in compliance with the relevant laws and regulations on habitat and biodiversity, and the result of environmental assessment. In case sensitive habitat is identified, recovery of resources shall be carried out.

**4.4.2** In case a hazardous organism belongs to an endangered species, the species shall be eliminated through non-lethal measures, except when there is concern about the safety of

[1] Endangered species are specified in the Act on Conservation of Endangered Species of Wild Fauna and Flora.
[2] Unprocessed fish means the fish with no processing such as heat, dry, etc. after caught.

workers or when priority is given to euthanasia of a moribund organism.

End

Notes

Date of Enactment: April 14, 2022
Date of Effect: xx xx, 2022

This standard shall come into effect as of xx xx, 2022.

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Any discrepancy between translations shall be resolved by reference to the definitive Japanese version.