



Group Policy

Sustainable Farming

FISH WELFARE OF SALMON AND CLEANER FISH

Policy owner: COOs
Approver: CEO

Valid from: 4 January 2021
Last updated: 17 September 2021

Fish welfare of salmon and cleaner fish

1 The purpose of this policy is

To set out Grieg Seafood's principles in ensuring that our salmon and cleaner fish have good fish welfare.

2 Policy statement

Grieg Seafood has an ethical responsibility to ensure good fish welfare for the animals in our care. Grieg Seafood is committed to good fish welfare for the entire life cycle of our fish.

Good fish welfare implies that the highest possible number of fish thrive, grow normally, and survive to the end of their lifecycle.

The fish welfare policy follows the guidelines of the World organization for Animal Health (OIE).

Every region has to implement and fulfill the national fish welfare legislation.

3 Our principles

Grieg Seafood seeks to fulfill "The five freedoms for animals under human control"*:

- Freedom from hunger, thirst, and malnutrition
- Freedom from fear and distress
- Freedom from discomfort
- Freedom from pain, injury, and disease
- Freedom to express normal patterns of behavior

by

- Minimizing any discomfort to the fish during its lifetime at our farms:
 - Regular risk-based water monitoring for early detection of risk factors and rapid implementation of measures.
 - Careful handling of any live fish during treatments, grading, transport, etc.
 - Monitoring welfare indicators during treatments in sea water for early detection of physical damages and rapid implementation of measures.
 - Regular fish health checks for early detection of diseases and rapid implementation of measures.
- Ensuring that all live fish are anesthetized¹ prior to killing:
 - Access to necessary drugs and equipment at all production sites to anesthetize and kill fish.
 - Performing training course in anesthesia, control of reflexes and culling minimum every fifth year for all staff involved in fish production.

- Attendance at a training course in anesthesia, reflex checks and bleeding procedures at least every fifth year for all staff involved in production and killing at harvest plants.

¹Anesthesia may be delivered through stunning, electrical current, or pharmaceutical agents.

4 Definitions

There is no universal definition of animal welfare, but we accept that every fish is an individual with a perception of life and we use the definition.

Fish welfare = the quality of life as perceived by the animal itself. **

Daily feeding = average daily feeding last seven days.

Monthly mortality % = number of dead fish /number of live fish in the start of the period.

Survival in seawater = (total number of mortalities at sea in the last 12 months – total number of culled fish due to illness or similar and not included in the harvested number)/(closing number of fish at sea the last month + total number of mortalities at sea the last 12 months + total number of harvested fish the last 12 months + total number of culled fish (due to illness or similar and not included in the harvested number)) X 100.

As per the Global Salmon Initiative standard.

5 Tracking, reporting and key performance indicator

Fish welfare is measured in terms of survival and appetite, both in freshwater and seawater.

Mortality, culling and feeding are registered continuously at pen level in our production system. Mortality will vary throughout the production, and our goal is to achieve a high survival rate and avoid peaks of mortality. Appetite is evaluated in relation to estimated feeding. Periods with feed withdrawal to improve robustness in stress situations are not part of appetite evaluation. Additional information about behavior, disease detections and other, is registered, however a standardized system to utilize this data properly has not been developed or implemented yet.

Eggs and yolk sac fry are not fed and therefore considered as not yet developed to feel pain.

Mortality is not used as a welfare indicator in these stages ***.

In some situations, we need to cull cleaner fish, such as when salmon is harvested, if the cleaner fish have physical damages and prior to treatment. Culled fish is not included in mortality numbers.

Cleaner fish has access to feed although appetite is difficult to monitor.

Key Performance Indicator in freshwater salmon production

KPI 2020 - 2022	Eyed eggs - first feeding	First feeding - 0.5 gram	0.5 gram - sea transfer
Within target	below 5 % mortality	below 5 % mortality	below 0.75 % monthly mortality
Some concerns, assess measures	below 7 % mortality	below 7 % mortality	below 1.5 % monthly mortality
Unsatisfactory result	above 7 % mortality	above 7 % mortality	above 1.5 % monthly mortality

KPI 2023 - 2025	Eyed eggs - first feeding	First feeding - 0.5 gram	0.5 gram - sea transfer
Within target	below 5 % mortality	below 5 % mortality	below 0.6 % monthly mortality
Some concerns, assess measures	below 7 % mortality	below 7 % mortality	below 1.2 % monthly mortality
Unsatisfactory result	above 7 % mortality	above 7 % mortality	above 1.2 % monthly mortality

Key Performance Indicator in seawater salmon production

KPI 2020 - 2022	Seawater
Within target	below 0.75 % monthly mortality / above 93 % survival rate GSI standard
Some concerns, assess measures	below 1.5 % monthly mortality / 90-93 % survival rate GSI standard
Unsatisfactory result	above 1.5 % monthly mortality / below 90 % survival rate GSI standard

KPI 2023- 2025	Seawater
Within target	below 0.6 % monthly mortality / above 95 % survival rate GSI standard
Some concerns, assess measures	below 1.2 % monthly mortality / 93-95 % survival rate GSI standard
Unsatisfactory result	above 1.2 % monthly mortality / below 93 % survival rate GSI standard

Key Performance Indicator in monthly feeding of salmon

KPI 2020 - 2025	Seawater
Within target	within 20 % of estimated feed (above 80% of estimated feed/month)
Some concerns, assess measures	below 20 % of estimated feed (60-80% of estimated feed/month)
Unsatisfactory result	below 40 % of estimated feed (below 60% of estimated feed/month)

We are not satisfied with the present welfare indicators and are working to implement additional and more precise welfare indicators in our production.

6 Responsibility for implementing and adhering to this policy

Board of Directors

- Monitors compliance with the policy and results of the KPIs, as this policy is an integrated part of our business strategy

CEO & Global Management Team

- CEO approves this policy
- Championing the policy

COOs

- Reviewing and updating the policy
- Communicating policy organizationally
- Advising and assisting regional directors, managers and supervisors in addressing issues
- Responsible for results of the KPIs and corrective actions

Regional Directors, Managers & Supervisors

- Communicating policy to all staff
- Adhering to policy
- Addressing issues
- Providing regular fish welfare training programs
- Responsible for results of the KPIs and corrective actions

All staff

- Adhering to policy
- Attending regular training/awareness programs
- Responsible for results of the KPIs and corrective actions

7 Related documents or references

This policy is implemented in conjunction with OIE -World Organisation for Animal Health Article 7.1.1, <https://www.oie.int/> and the Global salmon Initiative protocols.

*Brambell, F. W. Rogers al, Dec 1965: Report of the Technical Committee to Enquire into the Welfare of Animals kept under Intensive Livestock Husbandry Systems. Presented to Parliament by the Secretary of State of Scotland and the Minister of Agriculture, Fisheries and Food by command of Her Majesty.

**Noble C. et al 2018: Welfare Indicators for farmed Atlantic salmon: tools for assessing fish welfare <https://nofima.no/en/fishwell/>

*** Norwegian Regulation on the Use of Animals in Research §2, <https://lovdata.no/dokument/SF/forskrift/2015-06-18-761>