



# Group Policy

## Sustainable Farming

**FISH HEALTH OF SALMON AND CLEANER FISH**

Policy owner: COOs  
Approver: CEO

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

# Fish health 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 health.

## 2 Policy Statement

---

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

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

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

Every region has implemented measures to fully comply with national fish health legislation. Every region has a specific plan for preventive measures and treatments to secure fish health.

## 3 Our principles

---

- Minimize the pathogens entry (harmful micro-organisms) entering our farms
  - Intake of healthy and robust roe and fish
  - Strict hygienic control of boats, feed, people or any equipment taken into the farms
- Minimize the pathogen multiplying within the farm environment
  - Daily removal of sick or dead fish
  - Feed program targeted for each fish species and stage of the life cycle
  - Intake of fish with the physiology to thrive in the farm
  - Intake of fish vaccinated with available and effective vaccines relevant for the area
  - Continuous health monitoring and rapid implementation of necessary measures during disease outbreaks
- Minimize any environmental health risk to the fish
  - Regular monitoring of water quality with respect to temperature, oxygenation, and salinity, based on local risk
  - Monitoring of algae and jellyfish blooms in periods of risk
  - Monitoring the seabed regularly to avoid sedimentary loading

## 4 Definitions

---

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 health is measured in terms of survival and appetite both in freshwater and seawater. Mortality and culling 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.

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
<b>Within target</b>	below 5 % mortality	below 5 % mortality	below 0.75 % monthly mortality
<b>Some concerns, assess measures</b>	below 7 % mortality	below 7 % mortality	below 1.5 % monthly mortality
<b>Unsatisfactory result</b>	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
<b>Within target</b>	below 5 % mortality	below 5 % mortality	below 0.6 % monthly mortality
<b>Some concerns, assess measures</b>	below 7 % mortality	below 7 % mortality	below 1.2 % monthly mortality
<b>Unsatisfactory result</b>	above 7 % mortality	above 7 % mortality	above 1.2 % monthly mortality

### Key Performance Indicator in seawater salmon production

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

## 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 health 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 the OIE guidelines, <https://www.oie.int/> and the Global salmon Initiative protocols.