SUSTAINABILITY REPORT

2022

Icelandic Salmon

SUSTAINABLE SALMON FROM ARNARLAX

Icelandic Salmon AS
Industriveien 51
7266 Kverva - Norway

SUSTAINABILITY AND SOCIAL RESPONSIBILITY

THE LEADER IN ICELANDIC AQUACULTURE

Icelandic Salmon has been at the forefront of the industry for several years. The company is working with neighbouring farmers, local governments, and regulators on improving operations and reducing environmental footprint.

Innovative aquaculture

Icelandic Salmon was the first farming company in Iceland to use lumpfish to reduce lice levels. It was also the first farming company to use 200m cages in Iceland in year 2022. Along with these innovations the company started early to use Aqualine Midgard system in cages on farm sites. The feeding station (OPC), located in the main office building in Bildudalur, has a modern set-up for good control of feeding the fish and cooperate with a company named Spill-free which has a system which helps to optimize the feeding process.

In early year 2022 the Group signed up for 2 hybrid feedbarges that will arrive into operations in year 2023. This technology will decrease oil consumption up to 80.000-100.000 litres a year. In the year 2022 the Group also received a grant from the Energy Fund of Iceland on electricity supply from land and hybrid technology for the feed barges, which will be paid out when the project is completed.

Another project is hybrid technology of the work boats, a project has started with Blámi which is a collaborative project between Landsvirkjun, Orkubúið and Vestfjarðarstofa. The main objective of Blámi is to support and promote innovation and development of energy exchange projects by increasing the share of environmentally friendly fuels, hydrogen and electric fuels in transport and industry.

Innovative part within education is our educational arena, Arnarlax Academy, which is for all employees, held once a year. The company was also the first salmon farming company to offer vocational training for its employees.

Internal control system

Departments of Freshwater, Seawater, Harvest plant and Sales have dedicated teams which monitors daily quality registrations. As follow-up to these daily registrations, the company conducts an internal audit plan throughout the year for these departments. In addition to all daily checks and internal audits, external authorities inspect the operations by scheduled audit plan throughout the year. In addition, risk assessments towards environment, health and safety, and fish welfare are carried out in departments of Freshwater, Seawater and Harvest plant to ensure that the company takes a precautionary approach.

Certified value chain

The total harvested volume in 2022 was ASC (Aquaculture Stewardship Council) certified. By choosing ASC-certified salmon, consumers can be assured that they are buying salmon from a responsible farmer.

ASC is one of the best-known environmental and social responsible certifications in the world of aquaculture and certified producers must satisfy comprehensive environmental and social standards, involving over 400 auditing criteria within eight categories. The ASC Standard is difficult to achieve and to retain. It demands substantial resources in respect of documentation and reporting, before, during and after certification. Furthermore, the company is certified in accordance with the ASC's Chain of Custody scheme.

In the year 2021 the company's harvest plant got BRCGS certified. BRCGS certification is approved by the Global Food Safety Initiative (GFSI), which means that processes in the harvest plant meet quality and food safety requirements internationally. Customers can rest assured that here the salmon is processed in the best way possible with quality and food safety at the forefront from the time salmon enters processing until it arrives to the customer. The certification enhances image and confidence in us as a manufacturer. In December 2022 the company was re-audited and went up from grade B to grade A.

Education programmes

The Group recognizes the importance and value of education and has been among pioneers in educational programmes related to fish farming in Iceland. Together with several educational institutions, the company

has participated in developing education program in co-operation with Icelandic College of Fisheries (Fisktækniskólinn) and is also one of the members of University Centre of the Westfjords (Háskólasetur Vestfjarða). The company runs a trainee programme to recruit young, well-educated people to the company and the industry. In addition, employees who wish to undertake further education, are supported economically by the company .

Contributing to science and research

The Group is the biggest contributor to a State-controlled Environmental Fund, through a fee paid for each kg harvested. The fund aims to reduce the potential impact of salmon farming on nature. The fund has contributed to various projects in recent years.

Working with agencies and government

The company is in active discussions with government agencies and authorities on how to lessen the environmental impact of its farming operations, improve fish health, and improve other aspects of the industry. Latest project is working with authorities and aquaculture companies on how the industry in Iceland can achieve 55 per cent reduction in GHG emissions by year 2030 where the goal will be to set phased emission targets.

Dialogue with stakeholders in transparent way

Transparency is a key element to build trust and inspire an honest dialog between all stakeholders. Lice count numbers are publicly available on the Group's website within a week from lice counting. Monthly production reports are submitted for all active farm sites to the Icelandic Food and Veterinary Authority (MAST) with information regarding harvesting, culling, feeding, biomass, mortality, lice numbers and treatments among other. The company has meetings with local officials to strengthen the relationship and understanding. By being transparent, open about the challenges and respectful towards critics, the company can come across solutions that might be beneficial for all stakeholders.

Open and transparent reporting of our performance increases our stakeholders' trust in us. In 2022, the Group continued its efforts to report through a greater variety of channels. In furtherance of this, The Group has also chosen to commission third-party verification of its sustainability KPIs. The table below shows the many ways the company reports on sustainability-related matters.

Table 1. Stakeholders of the Group.

The company stakeholders

Icelandic Salmon Stakeholders			
Internal influence	**Business associates**	**Customer groups**	**External influence**
Employees	Partners	External customers	Government / regulatory authorities
Shareholders/investors	Suppliers	New customers	Industry associations
Board and Group Management	Service providers	International customers	Discussion partners
		National customers	NGOs
			Research establishments
			Local communities
			Media

Table 2. Reporting within the Group

Reporting in Icelandic Salmon

Reporting method	Comment
Annual report	Integrated report, combining sustainability and financial reporting.
Quarterly reports	Quarterly update of financial and operational results.
Half year reporting	Half year financial operational results
Emission accounting	A separate annual information of emissions from the operations submitted to the Environmental Agency of Iceland (UST)
Green accounting	A separate annual report submitted to the Environmental Agency of Iceland (UST).
ASC reports	Audit reports from our ASC-certified sites are available at www.asc-aqua.org
MAST & UST reports	Audit reports from the Food and Veterinary Authority (MAST) www.mast.is and the Environment Agency of Iceland www.ust.is
www.arnarlax.is	The website is updated regularly. Here you will find relevant information.

SECRET OF SALMON FARMING

Iceland offers some key factors when it comes to salmon farming. The temperature is in the lower end of optimal conditions for the salmon, long fjords create shelter, while the wind, waves and tidal current ensure that movement of water is sufficient to give the salmon access to oxygen-rich seawater. Icelandic waters are free of several harmful viruses affecting other farming nations. Iceland´s access to clean geothermal water additionally provides very favourable conditions to raising smolt.

It all starts with a premium egg that comes from Iceland. All fry's are grown into smolts, nurtured, and vaccinated in the Group's hatcheries. The time in the hatcheries is usually around 12 months. When the smolts reach 50-100g, they go through smoltification, which is a physiological process that prepares them for leaving the freshwater of the tanks and entering seawater, the same natural process undergone by wild salmon.

Since the sea temperature in Iceland falls below 2ºC during the coldest winter months, smolts are put out in sea cages in the summer/autumn months when the temperature is optimal. The low winter temperatures result in slower growth, and low levels of lice.

The Group has a comprehensive quality system, monitoring every aspect of operations. Meaning that improvements and adjustments to improve safety and quality are regularly implemented. Harvesting is one of the most important factors when it comes to product quality of the salmon. Super-chill cooling technique is used after harvest to optimise freshness and the quality of the salmon. This allows the Group to deliver fresh salmon to customers in Europe, North America or Asia without compromising quality.

ICELANDIC SALMON MAIN EVENTS 2022

January

» MAST surveillance audit in Fjallalax smoltstation.

February

» Approved 900 tons license for maximum allowed biomass of salmon in smolt facility at Laxabraut 5

March

» The Group signed new contract for 2 new hybrid barges, one steel 900 tons barge and one concrete barge 900 tons for delivery in 2023.

» Awareness month of men cancer – socks given to all male employees to support the awareness month.

April

» First-aid course was held for all employees in all departments.

» HACCP1 food safery course for all employees in harvest plant.

» Icelandic Food and Veterinary Authority (MAST) surveillance audit in harvest plant.

» MOM-B sampling was done at the site Hringsdalur after ending fallowing period.

May

» The Group gives children's life vests to all harbours in Vesturbyggð and Tálknafjörður.

» Green books and emission accounting submitted to UST (Environment agency of Iceland)

» Acquisition of the smolt plant Ísþór in Þorlákshöfn.

» Started to use 200m cages on Hringsdalur farm site.

» Approval of the site Vatneyri in the 12,200 tons license for Patreksfjörður and Tálknafjörður.

» Signed contract for building 4 new apartments in Bíldudalur in cooperation with Vesturbyggð and Hrafnshóll. In total 10 apartments will be built in the project.

» Graduation of 5 candidates for vocational course in Aquaculture from the Icelandic College of Fisheries.

» Summit 25 - Arnarlax academy for the management team of the Group.

» Total 8 employees taking license for operating 15m boats.

» Icelandic Food and Veterinary Authority (MAST) surveillance audit in Gileyri smoltstation.

» Icelandic Food and Veterinary Authority (MAST) surveillance audit for all three licenses in sea.

June

» Participation in North Atlantic Seafood Forum in Bergen, Norway, where Icelandic Salmon was presenting.

» Arnarlax golf tournament in Bíldudalur.

» Haganes and Fossfjörður MOM-B max biomass benthic monitoring.

» ASC surveillance audit for farm sites Eyri, Laugardalur, Tjaldanes and Foss.

July

» Laugardalur MOM-B post fallow benthic monitoring.

August

» Environment Agency (UST) surveillance audit in Gileyri smoltstation.

» Approved renewal of the Fossfjordur license for 1,500 tons MAB.

» Golf school funded for nearby community.

» Arnarlax youth soccer tournament arranged.

» Launch of IceFjord brand in the US in cooperation with one of the Group's good customer.

September

» Icelandic Food and Veterinary Authority (MAST) surveillance audit in Fjallalax smoltstation and Arnarfjörður license.

» Environment Agency (UST) surveillance audit in Fjallalax smoltstation and all licenses in seawater.

October

» Arnarlax Academy held for all employees of the Group. An educational field within the company where staff gather to build company culture, learn about the operations and the future ahead.

» Pink October in Iceland – All employees got the 2022 pink ribbon pin where female cancer association was funded.

» Annual party held for all employees and their spouses.

» Implementation of BluePlantAcademy an e-learning field tailor-made for the aquaculture industry.

» Environment Agency (UST) surveillance audit in Ísþór smoltstation.

» Icelandic Food and Veterinary Authority (MAST) surveillance audit for license in Patreks- and Tálknafjörður.

» articipation in Lagarlíf aquaculture conference in Iceland where the Group's operations were presented.

November

» Free influenza vaccination and health check for all employees.

» Eyri MOM-B max biomass benthic monitoring.

December

» Equal Pay re-certified.

» The harvest plant was BRC re-certified with upgrade to grade A.

» The Group had 100 per cent ASC certification on harvested fish in 2022.

» New hybrid service boat, Fosnafjord, preparing its travel from Norway to Bildudalur from contractor Abyss. The role of the vessel will be installing farm equipment on farm sites.

IMPORTANCE OF REGULATORY BODIES

MAST - Matvælastofnun - the Icelandic Food and Veterinary Authority

Surveillance

The authority audits each issued license at least once a year for freshwater stations, seawater farm sites and harvest plant. Farming equipment, fish welfare, biomass in cages and food safety is audited. All audit reports and licenses can be seen on the website of MAST www.mast.is

Sample taking

At least once a year the authority takes samples from salmon and feed to analyse following:

- Antibiotics
- Avermectins
- Benzimidazoles
- Chloramphenicol
- Heavy metals
- Malachite green, crystal violet
- Mycotoxins
- Nitrofurans
- Pesticides
- Steroids, Stilbenes, resorcylic acid lactones

Monthly production reports are submitted to MAST where production info from all sites and all cages is reported. This info is used for aquaculture dashboard presented on MAST website.

Delousing treatments

MAST oversees approving applications for delousing treatments. In fall 2021 the authorities set limits for mature female lice.

Escapes

In case of an escape or a suspicion of an escape a contingency plan is activated within the Group and MAST is informed immediately along with the Directorate of Fisheries (Fiskistofa). Inspectors from the authorities arrive to the farm soon after being informed.

Escape episode 2021

On 29th August 2021 a hole on cage 11 at farm site Haganes was discovered. Contingency plan of the Group was activated. Fiskistofa and MAST were informed the same day. Inspectors arrived the day after. At this moment it was not known how many fishes had escaped. After harvest from the cage in October 2022 it was discovered that 81,564 fishes were missing. After this event the Group took a decision to withdraw the site from ASC certification. It will then be an evaluation of the CAB (e. certification body) when Haganes site can undergo ASC re-certification again.

UST – Umhverfisstofnun – the Environment Agency of Iceland

Surveillance

The authority audit each license at least once a year for freshwater stations and seawater farm sites. All audit reports and licenses can be found on the website www.ust.is. The authority have surveillance with all wildlife near and around farm sites, go through benthic monitoring reports for sites, waste handling, chemical usage and allowed biomass at each site. The authority also handle external complaints of our operations. Green books and emission accounting are submitted to UST before May 1st each year.

BENTHIC MONITORING AND SITE CERTIFICATES

Benthic monitoring

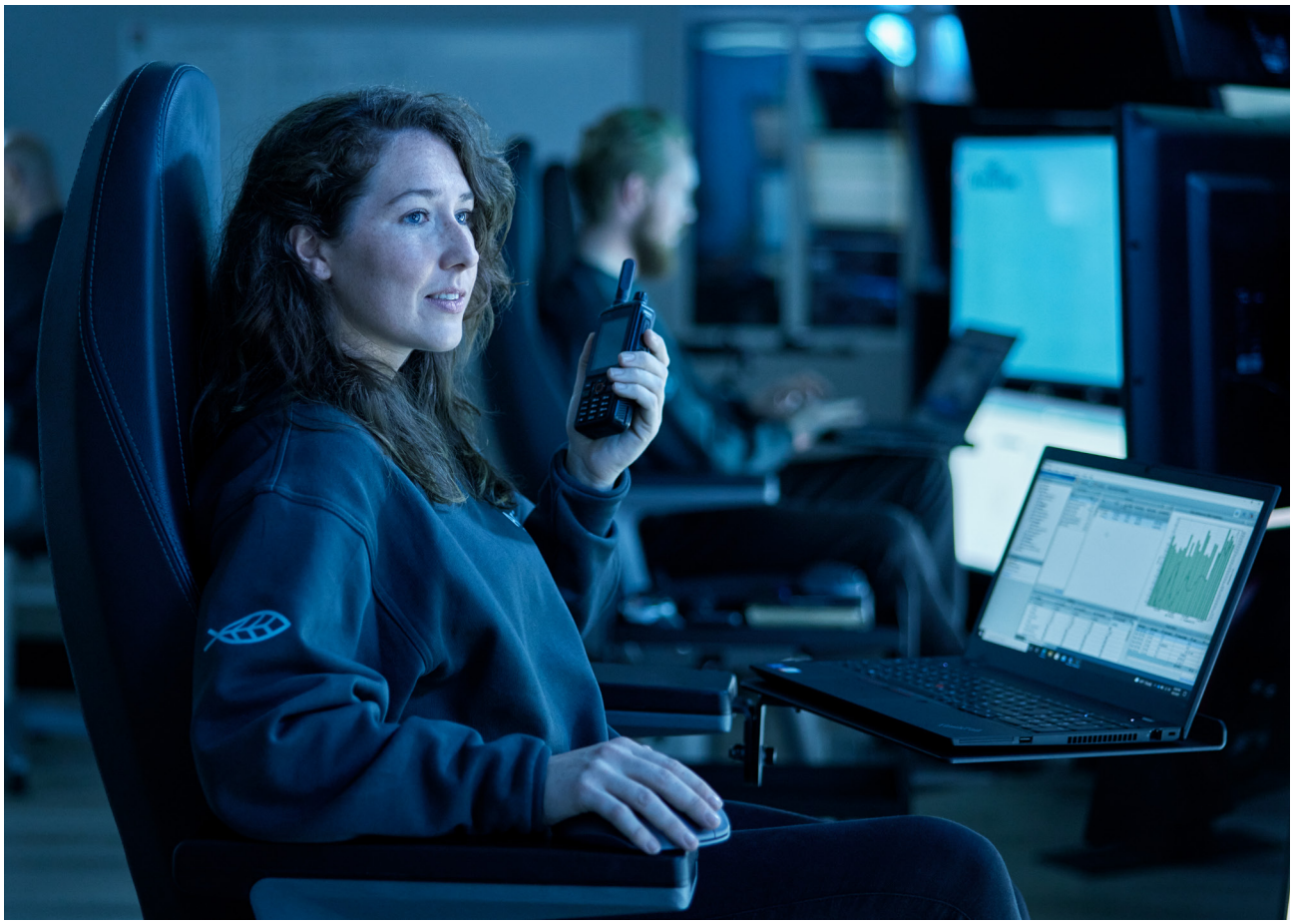
After a site has been fallowed and then at max biomass a benthic monitoring is conducted by a third-party. The monitoring is done according to guidelines of the Norwegian standard NS9410:2016 which includes evaluation of sediment, faunal investigation, and bottom topography. Two types of surveys are conducted MOM-B and MOM-C. The primary objective of a B-survey is to fulfil the requirements regarding bottom survey in the local impact zone at fallow period as they are defined in NS9410:2016. The primary objective of a C-survey carried out at max biomass is to fulfil requirements by ASC standard and in accordance with chapter 5.0 in the Norwegian standard NS9410:2016 which outlines the methodology for a C-study. The survey includes pH/redox measurements, hydrography, and geochemical and bottom fauna analyses adjacent to the fish farming site.

In year 2022 both sites, Laugardalur and Hringsdalur, that had a new output of fish generations were restored to best conditions for both MOM-B and MOM-C after fallowing, with score of 1 = Very good.

Site certificates

A site certificate is issued for each farm site where inspection of farm equipment installation has been inspected according to requirements of Norwegian standard 9415:2019 – ***Marine fish farms – Requirements for site survey, risk analyses, design, dimensioning, production, installation and operation.*** On the issued site certificate, the installation configuration can be seen for the site. Each certificate is valid for 5 years if no changes are made on the equipment

MOM-B and **MOM-C** with **score of 1 = Very good**



SUSTAINABILITY – IT´S IN OUR NATURE

'Sustainability - it´s in our nature' is our vision and the foundation of all the Group's operations. It is the way it operates as a company and how it behave in the areas surrounding its operations. This includes taking care of its customers, employees, the salmon, and the environment, while developing the industry and moving society in a more sustainable direction.

In year 2013 Bíldudalur started in the project *Fragile communities* in 2013 under the name *Bíldudalur - a conversation about the future* with the Icelandic Regional Development Institute (Byggðastofnun).

The project was formally completed at the end of 2016, and it was a joint decision by residents, municipalities and the Regional Development Institute that it was no longer needed due to positive developments in the area, not least because of the boom in the economy.[1]

This year, the Group presents its sustainability section for the third time. The numbers stated in this section have undergone third-party verification.

The bulk of this section is divided into the three central pillars on which the Group rests its thinking about sustainability throughout the value chain.

Table 3. Icelandic Salmon sustainability focus summarized.

Fish

Good fish welfare is the foundation of the Group's business.

We work systematically to create an environment in which the salmon thrives and remains healthy.

Environment and technology

The Group believes in preserving the seas for future generations.

We minimize our footprint with measures and routines throughout the entire value chain.

People and society

The Group acts as a responsible corporate citizen.

We believe in creating local value and safe workplaces and support the local communities where we operate.

1 https://www.byggdastofnun.is/is/verkefni/brothaettar-byggdir/bildudalur

FISH

The Group's goal is to produce sustainable and healthy protein for a growing global population. Sustainable salmon farming therefore takes place on the fish's terms where its tried to not exceed 13kg/m^3 during winter and 19kg/m^3 during summer to make sure that the fish has enough space. This means that the salmon must come first in all aspects of the Group's work.

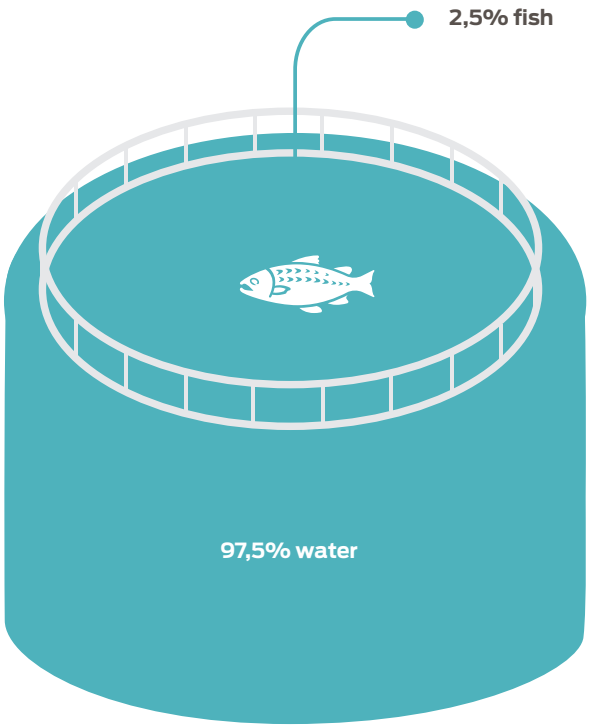
The Group is working systematically on initiatives and procedures relating to fish welfare. At the same time, its known that every single decision made relating to fish health also has a financial, social- and environmental impact throughout the value chain.

Fish - KPI's

Table 4. Biological KPI´s

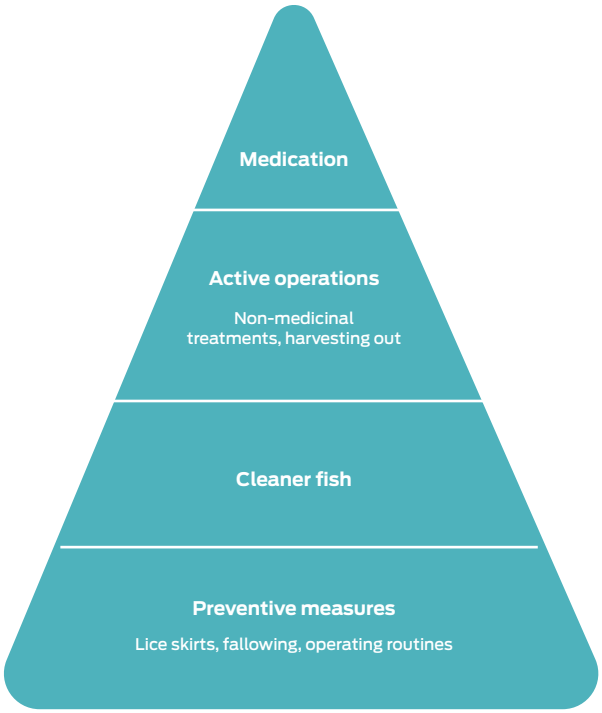
The Group's KPIs		Target	2022	2021	2020
Survival	12-month rolling survival rate[2]	>95%	89.7%	93,3%	90.5%
Antibiotics	Grams of active pharmaceutical ingredients (API) per tonne produced	0	0	0	0
Lice treatments	Total number of treatments. In 2022, 4 sites were treated, 1x treatment on each site	# of treatments in year:	4	3	2
		<3 per cycle[3]	Compliant	Compliant	Compliant
Interaction with wildlife[4]	Birds – Accidental mortality	0	0.43	0.17	0.71
	Birds – Euthanised	0	0	0	0.29
	Marine mammals – Accidental mortality	0	0	0	0
	Marine mammals – Euthanised	0	0	0	0
Fish escapes	No of incidents	0	0	1	0
	No of escaped fish	0	0	81,564[5]	0
Feed	Certification of marine ingredients in fish feed[6]	100%	100%	98.2%	99%
	Certification of soya ingredients in fish feed[7]	100%	100%	100%	100%
	FFDR (fishmeal)	<1.2[8]	0.56	0.32	0.63
	FFDR (fish oil)	<2.52[9]	1.29	1.56	1.98
	Economic feed conversion ratio	<1.19	1.34	1.30	1.43
Certification	Share of active certified sites[10]	100%	100%	83%	86%

2 12-month rolling mortality measured in accordance with the Global Salmon Initiative methodology.
3 Target in accordance with ASC certification requirements.
4 Number of wildlife incidents distributed over number of active sites.
5 Confirmed in October 2022.
6 Fish meal, certified in accordance with Marintrust, MSC or equivalent.
7 Certified in accordance with ProTerra RS or equivalent.
8 Target in accordance with ASC certification requirements.
9 Target in accordance with ASC certification requirements.
10 Active sites in 2022 certified in accordance with ASC.



Fish welfare

Good fish welfare requires systematic efforts to ensure that fish welfare is safeguarded by providing the fish with optimal conditions throughout their lifecycle.



How Icelandic Salmon promotes fish welfare

- Dedicated fish health personnel; visits by Fish health coordinator on monthly basis and by veterinarians according to visiting schedule
- Close follow-up and monitoring of fish welfare indicators
- Use of sites affording optimal biological conditions
- All smolt vaccinated before transfer to seawater farms
- Systematic efforts as regards smolt quality at the hatcheries, by focusing on stable supplies of good quality water, a good tank environment for the fish, optimal oxygenation, good grading and vaccination procedures, temperature control and general fish health
- All delousing treatments carried out, by the Group's crew members, with a risk assessment performed before each operation
- Strict routines for transport between different sites to ensure bio-security
- Keeping numbers of sea lice down
- Density in the cages is below requirement from the government to secure good fish welfare
- Zero use of antibiotics
- Non-GMO

Keeping numbers of salmon lice down

Salmon lice are a natural seawater parasite. As fish farmers, the task is to make sure that the salmon can coexist with the lice. Salmon lice can impair the quality of the salmon's flesh and can, in the worst cases, lead to disease and death. The Group therefore works preventively to keep lice numbers down.

Lice numbers increased between years 2021 and 2022 in all categories but were on average within the national limit set at 0.5. (Table 5).

The Group received an approval from ASC after applying for Variance Request from clause 3.1.7 within the ASC standard v1.3 as a national limit at 0.5 has been set by the Icelandic Food and Veterinary Authorities (MAST) during the sensitive period when wild smolts migrate to sea (April to June). All lice numbers are reported to the Food and Veterinary Authorities in Iceland (MAST) and published on the Group's website within a week from lice counting.

As regards delousing treatments, the Group follows the Global Level set in the ASC standard, which allows three lice treatments per each production cycle on a site (Table 6). This has never been fully utilized. In 2022, 4 sites in operation were deliced one time each. The main strategy for reducing the number of chemical treatments is to take preventive measures, such as lice skirts, fallowing and use of lumpfish.

Table 5. Average level of different stages of lice in years 2020 - 2022 on all active sites

Year	Juveniles	Movables	Adult females	Caligus
2022	0.33	0.33	0.41	2.17
2021	0.19	0.19	0.19	1.61
2020	0.35	0.39	0.19	3.09

Table 6. Number of treatments allowed per cycle in different countries according to the ASC standard.

Number of treatments allowed per cycle in different countries according to the ASC standard

Region	Entry Level (WNMT)	Global Level (WNMT)
Canada (BC)	1	3*
Chile	9	
Faeroes	6	
Ireland	3	
Norway	5	
Scotland	9	

Lumpfish

The Group was the first farming company in Iceland to begin the use of lumpfish to reduce lice levels on sea farms. The lumpfish is born at supplying company in Iceland where it lives before arrival to the farms. Each fish is manually inspected and vaccinated before arrival to ensure their quality and welfare in the sea cages.

Good care is taken of the lumpfish when they are out in sea; they are fed special feed and they have artificial kelp out on the cages where they can go for a rest.

In year 2022 total of 425,000 lumpfish were put out in our cages on 4 sites.

Sustainable feed

As a measure of feed sustainability, we use the Fish Forage Dependency Ratio (FFDR). This quantifies our dependence on wild fish stocks as raw materials in our feed. This is done by assessing the volume of live fish from small pelagic fisheries that is required to make the amount of fish meal or fish oil needed to produce one unit of farmed salmon.

The lower the FFDR we can achieve, the more salmon we can produce on the basis of a globally limited supply of marine raw materials.

According to the ASC standard, feed is deemed to be sustainable if its FFDR (fish meal) is <1.2 and its FFDR (fish oil) is <2.52. In 2022, the company achieved values well below this level.

The company uses an all-round feed that optimises production and promotes good fish health – in other words, a high-value salmon feed that ensures good growth and meets the fishes' nutritional needs. In 2022, approx. 26,200 tonnes of feed were used in the operations.

Feed facts

- All fish feed used is certified.
- All fish feed used is deforestation-free, not genetically modified, and not dependent on endangered fish stocks.
- Dedicated personnel who work with feeding the fish.
- Strategic partnership maintained with the Group's feed suppliers, with whom it work to include sustainable ingredients in the feed it uses.

Certified ingredients used

- All feed is Marine Trust certified.
- 100 per cent of the marine ingredients comes from certified fish stocks.
- ProTerra certified soya is used, which is the strictest certification scheme used to promote the sustainable farming of soya.

Safe and healthy food

It is the Group's responsibility to ensure its customers safety when they eat its salmon and know that it has a healthy nutritional content and has been processed after good food safety measures. For this reason, the Group is certified in accordance with the strictest requirements and guidelines for sustainable aquaculture, including the Aquaculture Stewardship Council (ASC) and BRCGS which emphasizes on food safety.

Icelandic salmon is good nutrition

In 2022 our harvested fish[11] had:

- Omega 3 level on average of 2.45 g/100g product
- Omega 6 level on average of 2.6g/100g product
- EPA/DHA level of 0.9g/100g product
- Protein on average of 20.8g/100g product
- Total fat of 18.3 per cent on average

11 Fish harvested from our farm sites Steinanes, Haganes, Foss and Eyri analysed in accredited laboratory.

How we provide safe and healthy food to all our customers

- Local harvesting makes it possible for the Group to offer first-class, fresh super-chilled products right after harvest.
- Good fish welfare is ensured and the correct nutritional content in the fish feed used, which provides healthy food for human consumption.
- The value chain is certified.
- Training in routines and procedures within all departments is important to maintain the high quality of the Group's salmon.
- Regular sample takings are performed from the harvested fish for fatty acid analysis to check the nutrition of the salmon. Internal audits are also performed along with audits and inspections by regulatory authorities, certification agencies and customers.

ENVIRONMENT – SUSTAINABILITY - IT´S IN OUR NATURE

Growing salmon is one of the most sustainable ways of producing protein, in terms of carbon emissions, water, land use, etc. However, production comes with several challenges, as for all commercial food production. Icelandic Salmon is aware of those challenges and is constantly working on minimising the impacts, using innovative solutions, environmental certifications, and strategic monitoring.

Environmental policy

The Group has an active environmental policy. There is good cooperation between companies within the same industry and farm sites in joint fjords. This cooperation is known as ABM (Area Based Management) and aims to share information regarding: 1) diseases and handling of fish, 2) output plans, 3) fallowing periods, 4) monitoring in relation to diseases, and 5) lice monitoring.

The main objectives of the environmental policy are:

- Full compliance with regulations and standards
- Zero escapes
- Optimal feed ratios, reducing organic load on the seabed
- Full openness to using alternative products that may be more environmentally friendly
- Increasing the share of waste that goes to recycling

Genetic risk assessment

Iceland has taken a somewhat unique approach to genetic mixing between farmed and wild salmon. Iceland has legally enacted the use of a unique genetic risk assessment that estimates the potential risk of genetic mixing between farmed and wild salmon and limited the permitted production of farmed salmon based on the outcome of that model.

A large portion of the coastline is also closed off for fish farming. The result is that all of Iceland's major salmon rivers are far away from fish-farming activities.

It is safe to say that the Icelandic authorities are taking a conservative approach when it comes to fish farming and the possible effect on the wild salmon stock. The risk assessment is up for evaluation every third year. Next evaluation is in 2023.

Carrying capacity

Before fish farming is allowed in Iceland, the Icelandic Marine and Freshwater Research Institute conducts a carrying-capacity assessment estimating how much biomass there may be in each farming fjord. This is done to minimize the risk of organic waste accumulating at the bottom of the fjords to affect the total situation in each fjord. The Institute is monitoring the fjords to ensure that production does not excess the carrying capacity.

Environmental assessment

All of the company's farming activity has been through an environmental assessment process. That process includes stakeholder participation and involvement of the Environment Agency of Iceland (UST), the Food and Veterinary Authority (MAST), the Planning Agency and the Marine and Freshwater Research Institute, among other agencies. The outcome is an extensive environment report describing the impact of the farming activity, mitigating measurements, and how the environment should be monitored.

Certifications

As mentioned above, the Group's production of salmon was 100 per cent ASC (Aquaculture Stewardship Council) certified in year 2022. The Group also holds BRC food safety certification and went through re-auditing in December 2022 where the grade went up from B to A.

Green disclosure requirements

Each year, the company submits a green accounting report and emission report to the Environment Agency of Iceland (UST), including information on power usage and usage of oil, water and seawater. The report also covers all chemicals, recycling of waste categories, medicine usage and emissions involved in the company's operations.

Monitoring of the farm sites

After the farming has started, all sites are monitored from the bottom and up. Oxygen levels are monitored daily, and a third-party monitors oxygen in the threshold fjord Arnarfjordur up to three times a year. Benthic samples are conducted by a third-party from the seabed under the cages twice for each generation to see if organic materials are accumulating under the cages. The Food and Veterinary Authority (MAST) also takes fish and feed samples twice a year from the farm sites to sample for heavy metals and dioxins, pesticide residues, antibiotics, etc. MAST also conducts audits once a year for each farming license and so does Environment Agency of Iceland (UST).

GREENHOUSE GAS EMISSIONS

Below is an overview of the Group's greenhouse gas (GHG) emissions. Carbon accounting is a fundamental tool in identifying tangible measures to reduce GHG emissions. The annual carbon accounting report enables the organisation to benchmark performance indicators and evaluate progress over time.

The input data is based on consumption data from internal and external sources, which are converted into tonnes CO2-equivalents (tCO2e). The carbon footprint analysis is based on the international standard; A Corporate Accounting and Reporting Standard, developed by the Greenhouse Gas Protocol Initiative (GHG Protocol). The GHG Protocol is the most widely used and recognized international standard for measuring greenhouse gas emissions and is the basis for the ISO standard 14064-I.

The carbon inventory is divided into three main scopes of direct and indirect emissions:

Scope 1 includes all direct emission sources. This includes all use of fossil fuels for stationary combustion or transportation, in owned and, depending on the consolidation approach selected, leased, or rented assets. It also includes any process emissions, from e.g. chemical processes, industrial gases, direct methane emissions etc.

Scope 2 includes indirect emissions related to purchased energy; electricity and heating/cooling where the organisation has operational control.

Scope 3 includes indirect emissions resulting from value chain activities. The scope 3 emissions are a result of the company's upstream and downstream activities, which are not controlled by the company, i.e. they are indirect. Examples are business travel, goods transportation, waste handling, consumption of products like feed etc.

Table 7. Greenhouse gas emissions

	Target	Status vs. target	2022	2021	2020
Energy consumption (TJ)					
Scope 1 - Fossil fuels			30	32	15
Scope 2 - Electricity			42	22	18
Scope 1+2 (GHG tCO_2e)			**72**	**55**	**33**
Greenhouse gas emissions (GHG tCO_2e)					
Scope 1 - Fossil fuels	42% reduction from 2020-2030	+99 %	2,054	2,185	1,033
Scope 2 - Electricity			0	0	0
Scope 3		+6 %	68,729	66,824	64,637
Total (Scope 1+2+3)		**+8%**	**70,783**	**69,010**	**65,670**
Intensity[12]					
Energy intensity (GJ/tons produced)	42% reduction from 2020-2030		3.5	3.2	2.4
Intensity of GHG emissions ($kgCO_2e$/tons produced) - Scopes 1+2		+30%	99	128	76
Intensity of GHG emissions ($kgCO_2e$/tons produced) – Scope 3		-31%	3,297	3,923	4,757
Intensity of GHG emissions ($kgCO_2e$/tons produced) - Scopes 1+2+3		-30%	3,396	4,052	4,833

The operations consumed 800,037 liters of fossil fuel (30 TJ) and 11,551 MWh of electricity (42 TJ) in 2022. All electricity used by our operations is from renewable sources.

12 All intensities are calculated with tons produced biomass, gross growth in sea.

Freshwater consumption

Aquaculture generally has a low freshwater requirement compared with other types of food production. The fish live a large part of their lives in the sea and do not depend on supplies of freshwater. Freshwater consumption of the company derives largely from its onshore hatcheries and its harvesting plant.

Freshwater consumption for hatcheries is based on calculations from each site manager. Other freshwater usage is community water used in processing plant for cleaning and for consumption on feed barges. No community freshwater is used in hatcheries.

Fresh water useage only from low-risk areas

In large parts of the world, access to fresh water is a challenge. Icelandic Salmon uses fresh water only from areas where the risk of water shortages, or the risk of poor water quality, is low. The water risk map produced by the World Resource Institute[13] provides a good overview of the water risk in various areas. All the areas in which the company operates are defined as low risk.

Waste management

Waste is a resource which we must take care of, and which can be reused to make new products.
We help to reduce marine pollution

- We ensure that obsolete plastic equipment is recycled by delivering it to established return schemes and collecting other waste for delivery to municipal waste handling systems.
- We contribute to beach cleaning/collection of plastic waste through funding, as well as participating ourselves.

We exploit every part of the salmon

By-products are exploited to the full. All by-products from the harvest plant are sent for further processing, resulting in 100 per cent of the raw materials being utilized. All material is sent to third party production site through closed pipeline from our harvesting plant.

All mortality from seawater production and smolt plants is processed on site by the Group and delivered to a company that use them as ingredients for the biogas-, compost and soil industry.

Project for the sludge from hatcheries is in process where open discussion with the farmers union in the areas of hatcheries is ongoing for how to utilize the sludge as a fertilizer on fields. The overall, long term goal, for the project is to exchange all import of artificial fertilizer to Iceland with reuse of by-products from several industries, including aquaculture.

Treatment of outlet water from harvest plant

All water from the harvest plant is rinsed and disinfected in the water treatment system before being released into the ocean to ensure biosecurity.

Table 8. Fresh water usage.

Consumption of freshwater	2022	2021	2020
Consumption (megalitres)	16.2[14]	5.5	5.5
Intensity (litres per kg gross growth in sea)	779	325	405

13 https://www.wri.org/aqueduct

14 With one new hatchery in year 2022 the water consumption increased.

PEOPLE AND SOCIETY

One of the company values is “We Care”. We who work at the company care about our colleagues, our partners, and the local communities in which we operate. For us, it is important to behave as a responsible corporate citizen because we believe that this has a positive impact on our own operations and society at large.

With total of 177 employees, in 2022, in five communities the Group is a major employer and an important member of society. This position gives rise to multiple responsibilities to people, society, and industry. Ethical business practice is a key value for the Group. We aim to operate in an honest, proper, and trustworthy manner, and take pride in showing off what we do.

Table 9. People and society

		Target	2022	2021	2020
Employees	No. of full-time equivalents (FTE)		154.4	132.6	110
	Ratio of women		26%	23%	24%
Safety & sickness absence	No. of fatalities	0	0	0	0
	LTI's[15]	0	9	7	9
	H-factor[16]	<6	5.8	5.5	7.8
	Sickness absence	<4.5%	4.1%	4.1%	4.3%
Regulatory compliance	No. of violations	0	1[17]	0	0
	Fines in ISK	0	0	0	0

Working with local communities

The Group recognizes the importance of a good and meaningful relationship with the local community and understands its role and responsibility as one of the biggest companies in the region. The company participates in various community projects and is for example a proud sponsor of public transport, culture events, volunteering activities, schools, local sports teams, and clubs.

When buying items, it is looked at whether items can be bought that are being contributed to good causes along the way. In this case we can for example mention items bought where the proceeds went to a good cause. The company is always seeking ways to give something back with its purchases.

Workforce

The company has been blessed with skilled and capable people from all over the world working on the common goal of delivering world-class salmon in harmony with nature. Employees' ideas and innovative thinking are a crucial driver of the company's performance, and the company welcomes forward-thinking and honest dialogue. The safety of our people is a top priority and active measures are taken to reduce accidents by using a dynamic quality system and functioning Health & Safety committee.

Freedom of Association and Collective Bargaining

All employees of the company are free and can bargain collectively for their rights. The workers have access to trade unions and choose a union representative by themselves without managerial interference.

Child labour is not accepted, forced, bonded or compulsory labour and the company does not hire any persons under the age of 16. Persons between the age of 16 and 18 years of age will not be exposed to hazardous health and safety conditions and are under strict supervision during their work.

Discrimination

The company has an anti-discrimination policy, ethical guidelines, and ethics gateway.

Anti-discrimination policy

The policy of the company and its subsidiaries is that bullying, sexual harassment, gender-based harassment, violence and any form of inappropriate conduct is not tolerated. Every measure should be taken to prevent this from occurring and to resolve any case as successfully as possible.

15 LTI: Lost time injury. If a worker does not show up at work the day after an incident, it is counted as an LTI.
16 H-factor: Total LTI's over the year * 200,000 work hours / accumulated work hrs over the year.
17 This case has been appealed and final decision is not made.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A workplace should emphasise boosting employees' awareness of the importance of positive communications and make them a highlight of the workplace, such as with education on equal rights.

Ethical guidelines
Ethical Guidelines were first issued in year 2020 within the company. The purpose of the guidelines is to ensure a healthy corporate culture and safeguard the Company's integrity by helping employees to comply with standards for good business practice. Furthermore, the guidelines are intended to act as a tool for self-assessment and for the further development of the Company's corporate identity.

Ethics Gateway - Whistleblowing
A professional and safe venue, implemented in 2021, for employees to whistle blow or report undesirable conduct in the workplace or emotional distress at work. The Ethics Gateway team has specialists in human resources and accredited service providers in health and safety in workplaces. The consultancy company Hagvangur ehf. operates Ethics Gateway.

Equal Pay certification
In December 2021 the company completed its Equal Pay certification process in accordance with standard ÍST85 equal pay standard. The equal wage policy is an inseparable part of the wage policy and is valid for all the organizations employees. The policy is that all employees shall be receiving equal pay and enjoy equal terms of employment and rights for the same jobs or jobs of equal value, so that there is no gender-based pay gap within the company. The Group was re-certified for the equal pay certification at end of year 2022.

All employees of the company receive payment above basic needs wage.

Education and training
The company has an education policy where the company emphasize on education for its work force. The education is in all forms, university studies, courses, diploma, and smaller courses etc.

An ongoing agreement is in place with the Iceland College of Fisheries with educational program in Aquaculture. In May 2022 total of 5 employees graduated from the college. Furthermore, more employees are studying alongside work withing the company in different educational institutions in Iceland where the company supports their study.

Occupational Health and Safety

Health and safety committee
Within the company an health and safety committee is present. On board the committee there are two members from the management group and 4 general employees from different departments. The committee meets at least 4 times a year according to Icelandic law. The committee oversees the health and safety matters within the company along with work environment conditions of the employees. On board the committee there are highly trained employees with various skills and education.

Employees can report issues regarding health and safety in general, food safety or other matters anonymously to the committee. Monitoring is also done via the EQS[18] system where incidents are registered. If the incident is an LTI (e. lost time injury) it is reported to appropriate authority. All documents are kept on file for each case.

Food safety

Sample taking
Quality monitoring is present within the harvest plant where samples are taken and sent regularly to accredited laboratory for analysing bacteria dangerous for the consumer health. An HACCP plan is also followed parallel to the process flow chart where critical points are monitored.

As stated under the chapter of *Importance of regulatory bodies* the Icelandic Food and Veterinary authority conducts sample taking at least once a year from raw material and feed for various analysis.

Non-compliance
Any deviation regarding food safety impacts of the product itself within the hatcheries, seawater farm sites and harvest plant is registered into EQS and acted on.

Emergency recall team
An emergency recall team is present in the company consisting of 5 members from management, In emergency cases the team meets up where case is evaluated, and actions taken. The company has never recalled a product batch.

18 Electronic Quality System

THE UN GOALS FOR SUSTAINABILITY

The United Nation Sustainable Development Goals are a collection of 17 global goals designed to serve as guidance towards a more sustainable future for all. Farming salmon in a sustainable way contributes to many of these goals and eight of them are closely linked to the company's operations.

3. Good health and wellbeing
Salmon is a nutritious food, packed with quality protein and essential fatty acids such as Omega 3.

4. Quality education
The company has an education policy and encourages its staff to seek education.

5. Gender equality
The company has a gender equality policy and is Equal Pay certified.

8. Decent work and economic growth
The company is growing economically and has increased its number of staff between years.

11. Sustainable cities and communities
The company is one of the major sponsor of public transport within the area and sponsors various community projects. Bildudalur was once categorized as a fragile community. With good economic growth Bildudalur was out of the project in 2016.

12. Responsible consumption and production
Farming salmon in sea cages is one of the most sustainable ways of producing animal protein for human consumption, in terms of feed and water usage. ASC and BRCGS certified.

13. Climate Action
A large part of the world's greenhouse gas emissions is caused by food production. Farming salmon stands out from other animal protein production for its low level of carbon emissions and usage of water.

14. Life below water
The company aims to utilize the sea areas in which it operates in a sustainable manner and to contribute to reducing marine debris and discharges, by reducing and handling its waste properly and by engaging in all the local coastal communities of which it is a part of.

2023