



SUPERIOR  
QUALITY  
**SALMON**



## ***Bakkafrost presentation NASF 2022***

*A world-class company in the salmon industry*

# ***Investing in Sustainable Growth***

Bergen 23.06.2022

**REGIN JACOBSEN, CEO**

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# THE VALUE CHAIN

DIFFERENTIATION

INVESTMENT PLAN 2026

SCOTLAND

APPENDIX

# BAKKAFROST – A COMPETITIVE BUSINESS MODEL

## THREE FOLDS MARINE EDIBLE YIELD



**Employees**  
~1,700

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**Revenue 2021 (DKK)**  
~5.6bn

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**Op.EBIT 2021 (DKK)**  
~0.8bn

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**Market cap**  
~37bn (NOK)

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**Harvest volume 2022E**  
103,000t

### Converting low food value proteins into high volume & value healthy protein


Low-value marine raw materials



750 tonnes (edible yield)


➔

Fish oil and meal



➔


Salmon feed



➔


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Broodstock and hatcheries




➔

Salmon farms



➔

Processing



2,200 tonnes (edible yield)

**FCR**  
~1.05  
in the Faroes

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**100% ASC**  
certified in the Faroes

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Scope 1,2 & 3  
emission **50% reduced**  
by 2030

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**Net Zero**  
by 2050





### BAKKAFROST

Salmon, packaging, fishmeal, fish oil and fish feed producer

**Location:** Faroe Islands

**Headquarters:** Glyvrrar, Eysturoy

**Production and business-to-business sale:** salmon, fishmeal, fish oil and fish feed

**Longest integrated value chain in the industry**

**Listed on:** Oslo Børs with ticker code BAKKA



### FAROE ISLANDS

- Headquarters, Sales
- Fishmeal, Fish oil & Fish feed
- Broodstock, Hatcheries & Farming
- Harvest & Processing
- Farming Service Vessels, Packaging & Biogas

### SCOTLAND

- Administration, Sales
- Broodstock, Hatcheries & Farming
- Harvest & Processing
- Farming Service Vessels

### DENMARK

- Administration, Sales
- Processing

### ENGLAND

- Sales

### UNITED STATES OF AMERICA

- Sales
- Processing

### LEGEND TO MAP SYMBOLS

	FISHMEAL		BROODSTOCK		HARVESTING		FSV (FARMING SERVICE VESSELS)
	FISH OIL		HATCHERIES		PROCESSING		PACKAGING
	FISH FEED		FARMING		SALES		BIOGAS

# Facilities and locations

## FAROE ISLANDS

## SCOTLAND

### LEGEND TO MAP SYMBOLS

- ▲ FISHMEAL/OIL & FEED FACTORY
- HATCHERIES
- FARMING SITES
- ◆ BROODSTOCK
- HARVEST FACTORIES
- ◆ PROCESSING PLANT
- PACKAGING FACTORY
- ◇ HEADQUARTERS
- ◇ SALES OFFICES
- ▲ BIOGAS
- OPERATIONS UNDER CONSTRUCTION



# FARMED SALMON – LOW CARBON FOOTPRINT

## EFFICIENT USE OF NATURAL RESOURCES



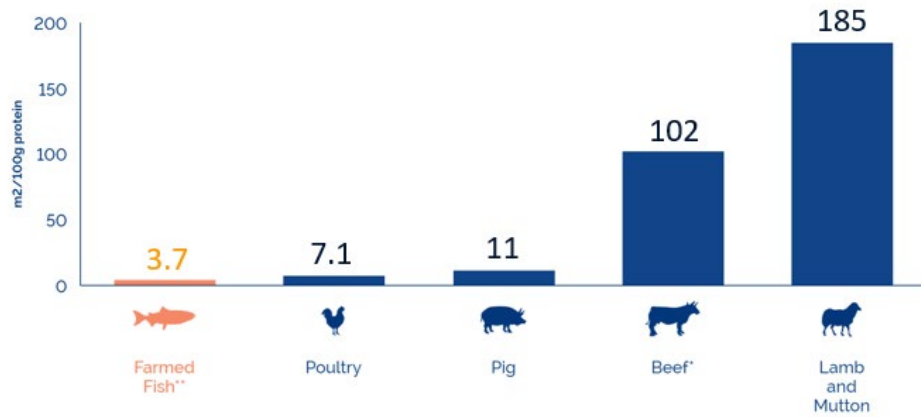
Note: CO2e is calculated by multiplying the emissions of each of the six greenhouse gases (CO2, CH4, N2O, HFCs, PFCs and SF6) by its 100-year global warming potential (GWP)

Source: Unilever Food Solutions & Global Salmon Initiative

# FARMED SALMON – LOW LAND AND FEED CONVERSION RATIO

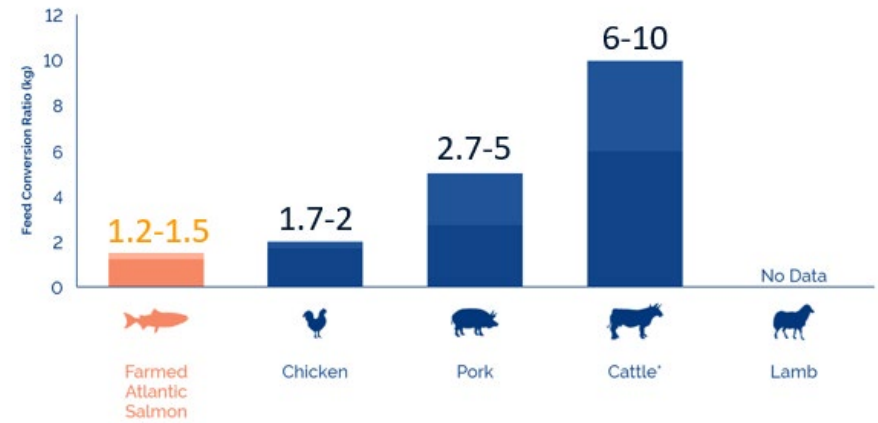
## EFFICIENT USE OF NATURAL RESOURCES

### Land area needed to produce 100g of edible protein



Source: GSI

### Feed Conversion Ratio (FCR)



Note: Feed conversion ratio (FCR) measures the productivity of different protein production methods. It demonstrates the kg in feed need to increase the animal's bodyweight by 1kg.

Source: GSI



**Edible meat pr kg feed**



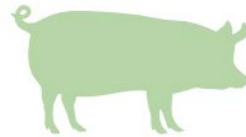
**68%**

**Farmed Atlantic  
Salmon**



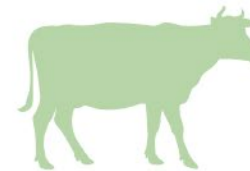
**46%**

**Chicken**



**52%**

**Pork**



No data

**Beef**



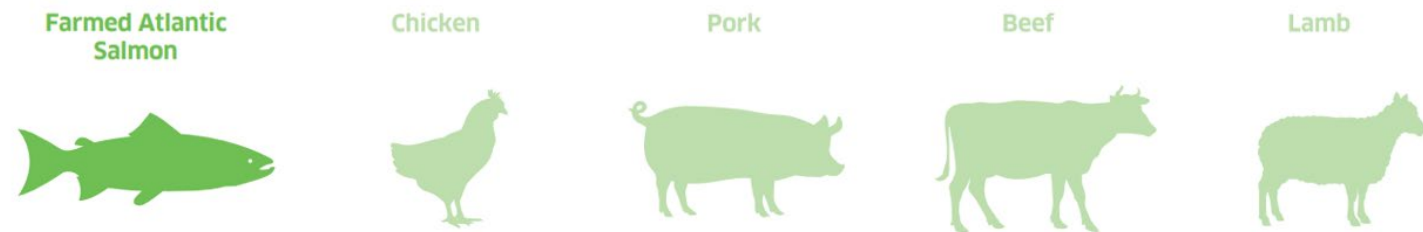
**38%**

**Lamb**

Calculated with avg. FCR of 1.3  
Bakkafrost FCR (2020) was 1.08

These calculations take into account differences in FCR, edible yields and the cost of progeny.  
Source: Global Salmon Initiative, Bakkafrost

# FARMED SALMON IS A VERY RESSOURCE EFFICIENT SOURCE OF HEALTHY PROTEINS



Carbon Footprint	Lowest
Land Use	Lowest
Feed Conversion	Highest
Water Footprint	Lowest
Edible Yield	Highest
Protein	2nd highest
Omega 3	Highest
Vitamin D	Highest

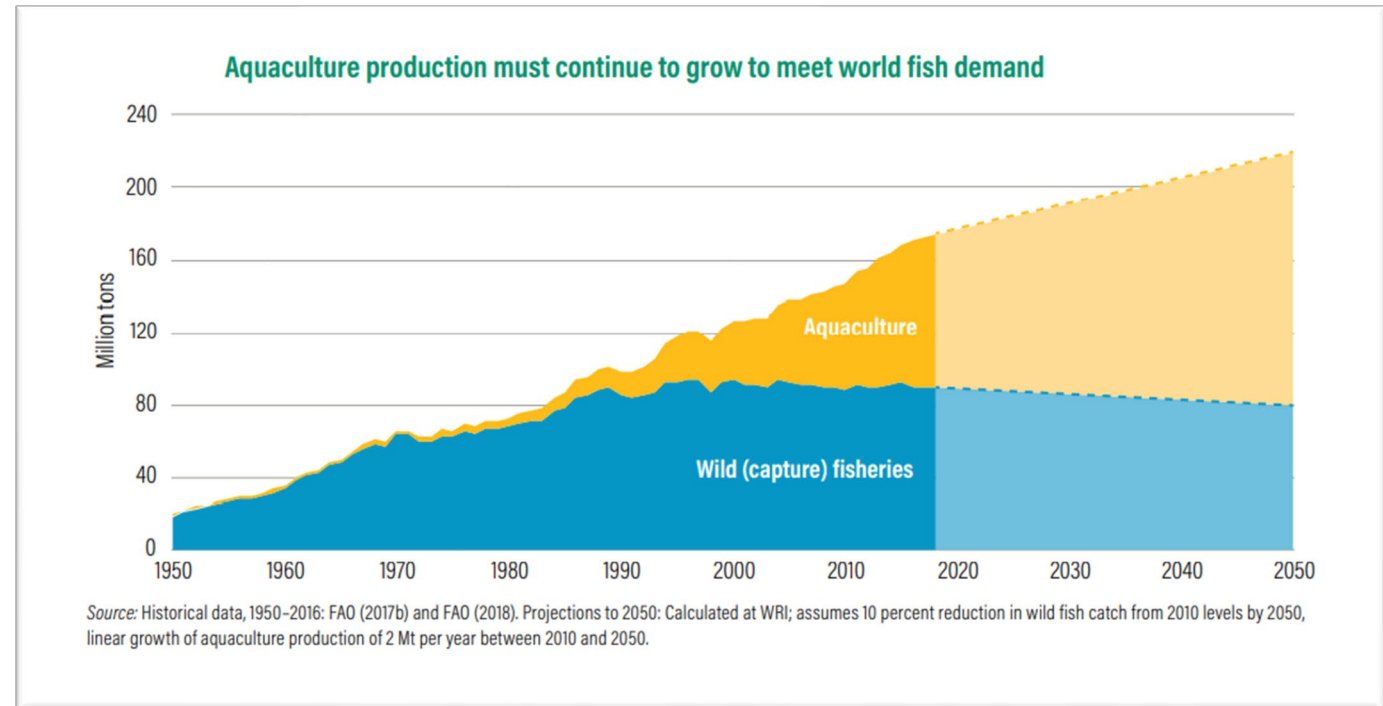
Highest

# SUSTAINABILITY CHALLENGES – IMPORTANCE OF AQUACULTURE

## AQUACULTURE PRODUCTION MUST CONTINUE TO GROW TO MEET WORLD FISH DEMAND



**Growth in world fish supply since the 1990s has come from aquaculture.**



**Aquaculture production would need to more than double between 2010 and 2050 to meet projected fish demand in our baseline**

Source: World Resources Institute, CREATING A SUSTAINABLE FOOD FUTURE



**Bakkafrost HQ**



**Building the green way**  
Energy efficiency is a design criteria when we construct new plants.

**Strond Hatchery**



**Applecross Hatchery**



<b>Waste</b> 90% reduction	<b>Energy</b> 100% sustainable power	<b>Water</b> 90% reduction
↓	↓	↓



**Recycling**  
Recycle or repurpose old farming nets and chains.  
Repair and reuse cables and pipes



**Sustainable Growth**  
**FÖRKA - Bakkafrost**  
biogas plant produces renewable energy from bioorganic waste from Bakkafrost hatcheries



### **Electrification**

- The majority of Bakkafrost feeding barges in the Faroe Islands are powered by electrical sea cables from land
- **Building new pure electrical work boat**



### **Full utilization of resources – minimise waste**

- **100% utilisation of the salmon**
- **By-products sold for human or animal consumption**



### **Building for the future**

**Energy vessel efficiency (Bakkafoss, electrical work boat, fuel consumption)**



### **Reducing scope 3 emission**

**Own airline to reduce carbon air freight emission by 40-50%**





THE VALUE CHAIN

**DIFFERENTIATION**

INVESTMENT PLAN 2026

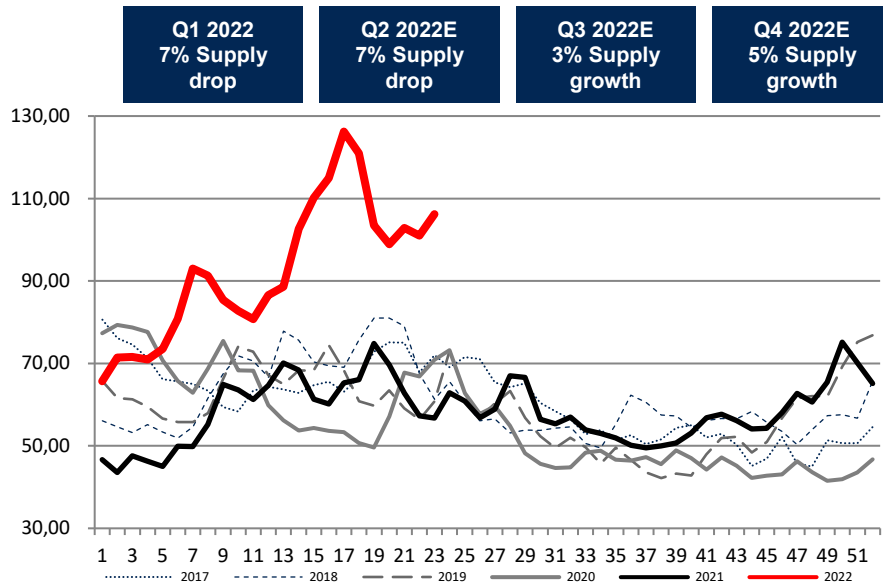
SCOTLAND

APPENDIX

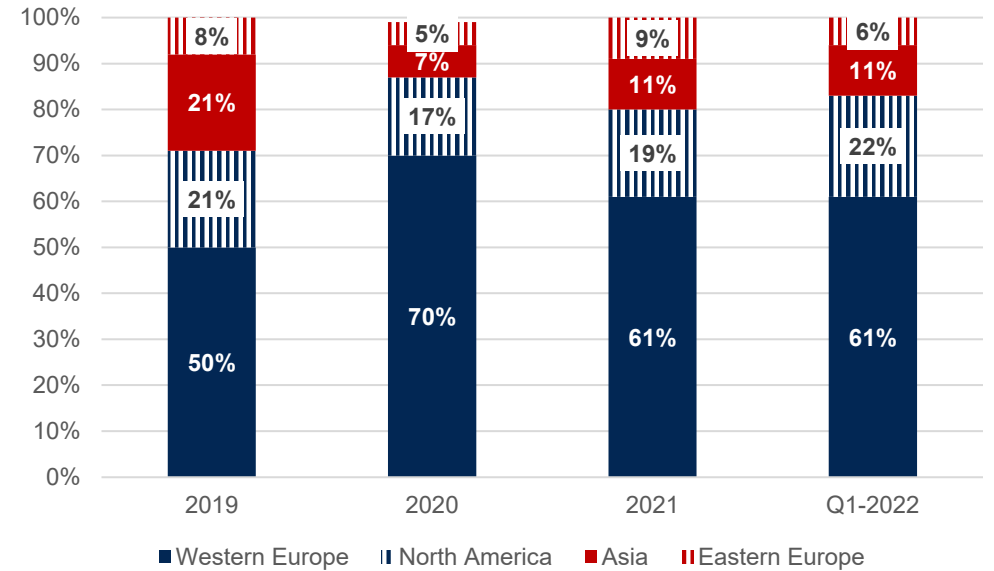


# MARKET SEGMENTATION AND PRICE DEVELOPMENT

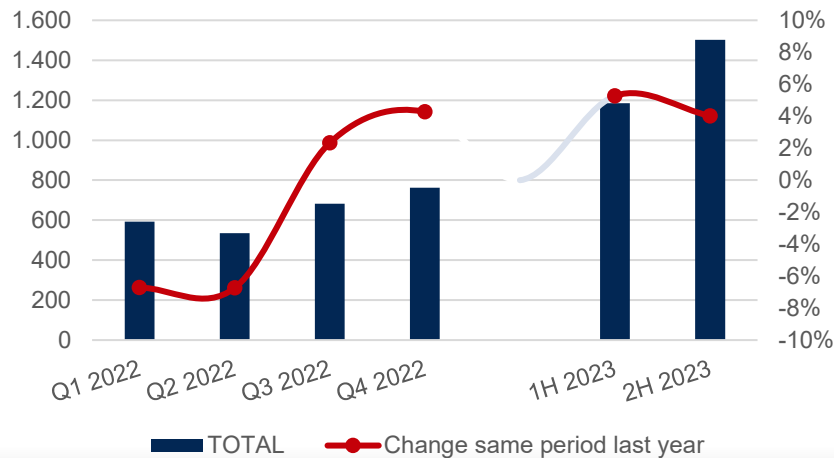
Spot prices (NASDAQ) on superior 4-5 [NOK/kg HOG]



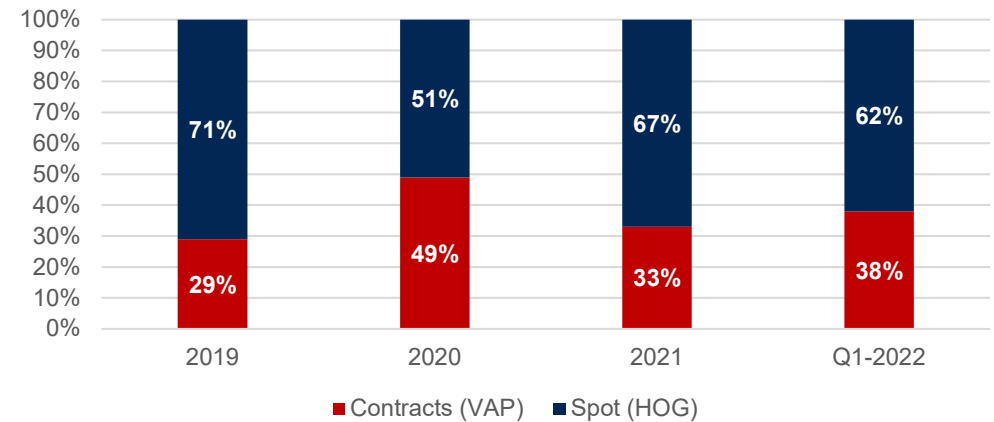
BAKKA total sales by market



Global salmon market supply development



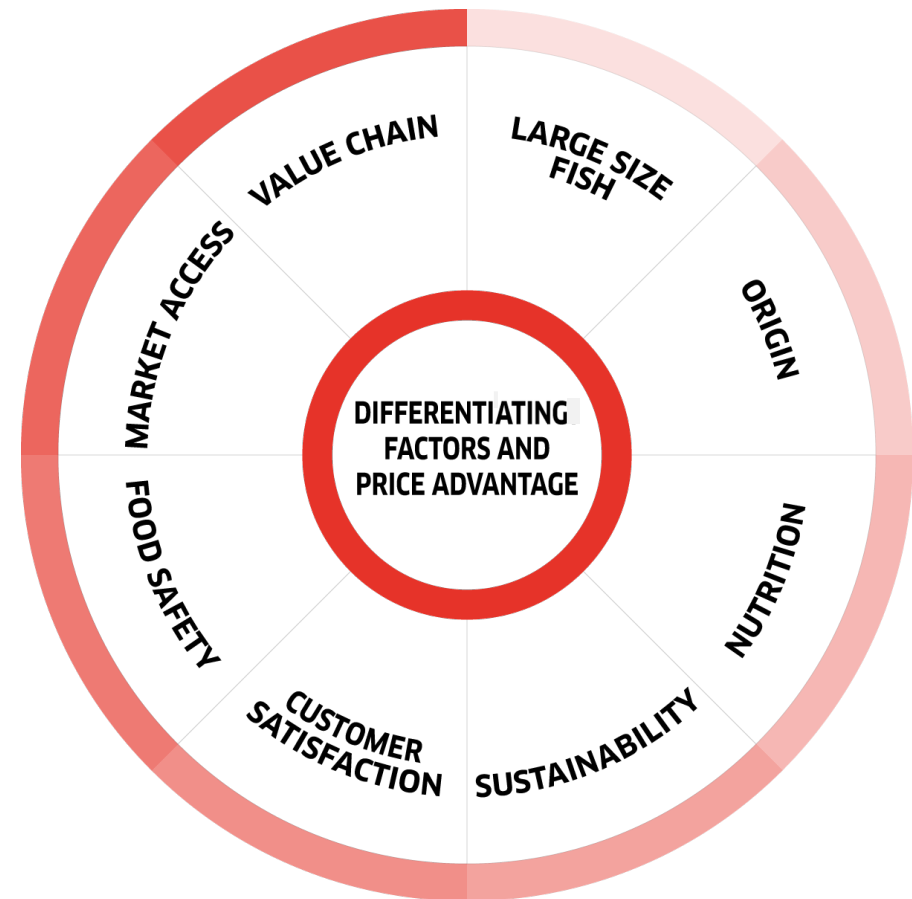
BAKKA Contract/spot sales share



# WE DIFFERENTIATE OURSELVES IN THE MARKET

## NUMEROUS FACTORS

- Large sized fish short in supply
- Faroes and Scotland preferred niche origins
- Natural diet - healthy salmon - healthy products
- Alignment between sustainability and healthy salmon
  - High control of value chain
  - Control of food safety standards and traceability
- ESG certifications entry card to high end segments
  - Aquaculture stewardship council (ASC)
  - Best Aquaculture Practices (BAP)



***Healthy salmon appreciated by the high end market!***

Bakkafrost owns the Intellectual Rights of two origin-based salmon strains:



*Broodstock programme and historical data since 1978*



*Broodstock programme **initially based** on wild salmon in outer Hebrides*

### Benefits

- Better control and more predictable
- Select salmon families better adapted to the local environment and resistance to **disease**
- Shorter learning cycles and rapid advancements due to **integrated** broodstock programme
- Avoid reliance on a **consolidated** group of **third party** suppliers

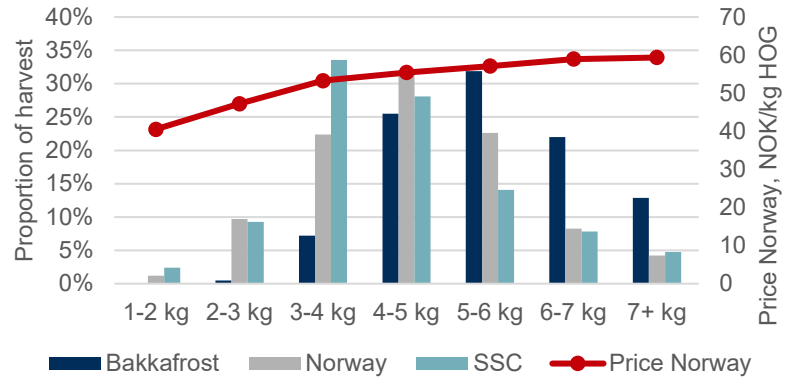
**Part of investment programme is to be self-sufficient with own eggs**



# OUR SALMON IS LARGE, HEALTHY AND OF SUPERIOR QUALITY

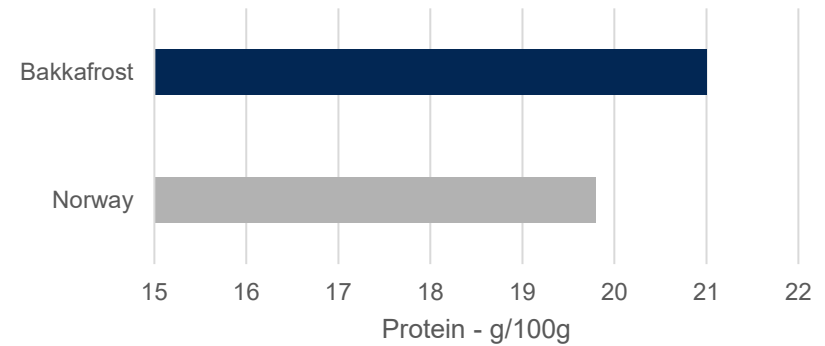
## FED WITH FEED WITH HIGH MARINE CONTENT (CLOSER TO IT'S NATURAL DIET)

### Larger fish (= higher prices)



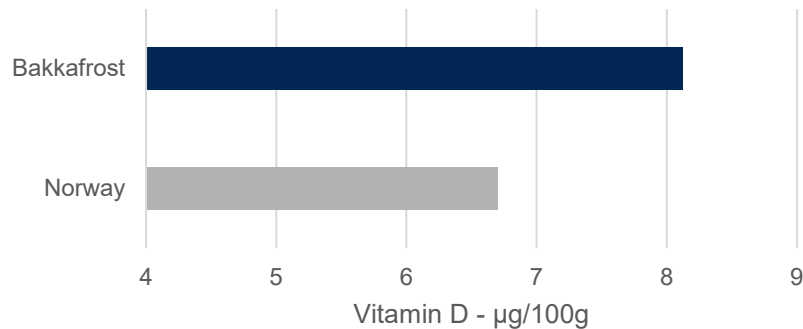
Source: Kontali, Bakkafrøst

### High on protein (2020\*)



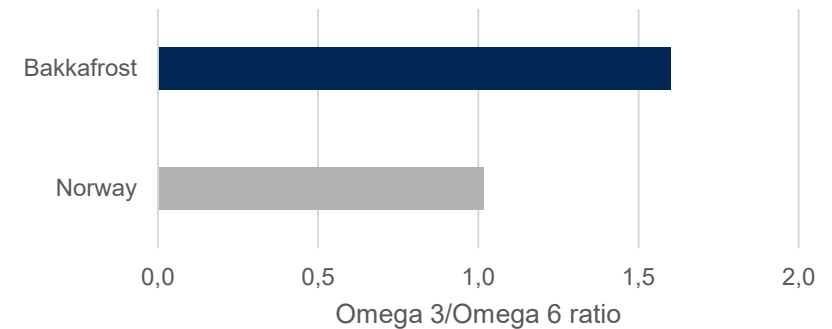
Source: Sjømatdatabasen, Bakkafrøst  
\*Norway is for 2019

### High vitamin D (2020)



Source: Sjømatdatabasen, Bakkafrøst

### High Omega 3/Omega 6 ratio (consumer portion 2020)



Source: Sjømatdatabasen, Bakkafrøst

Salmon farming is about being in control of biology in a difficult environment

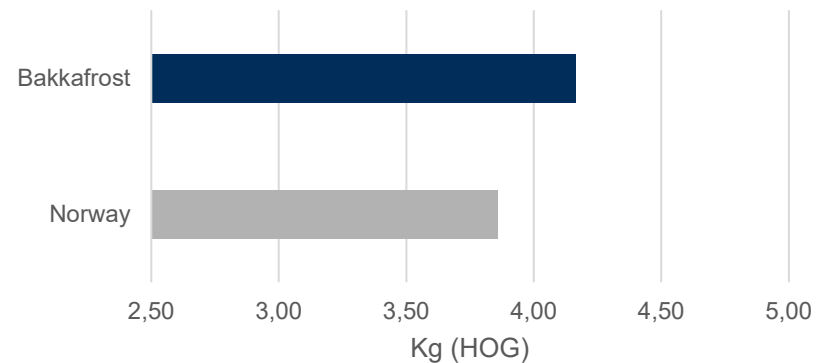
### Key success factors

- A sustainable, well organised, value chain
- Management of external risks through trust and cooperation

Bakkafrost has an excellent track record in the Faroes

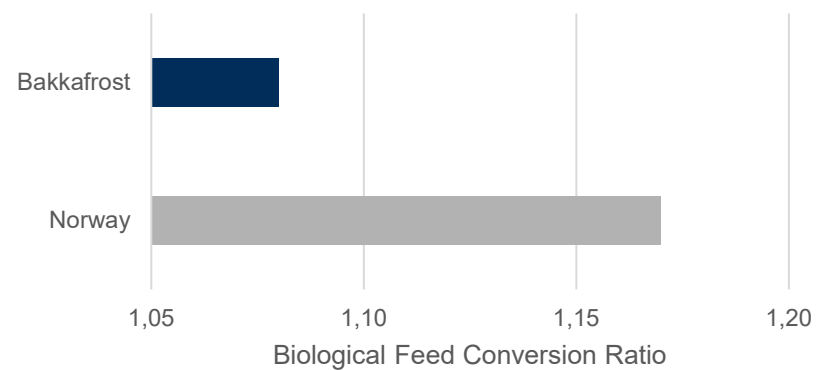
Embarked on a journey to structurally strengthen Scotland

### Yield per smolt (2020)



Source: Kontali, Bakkafrost

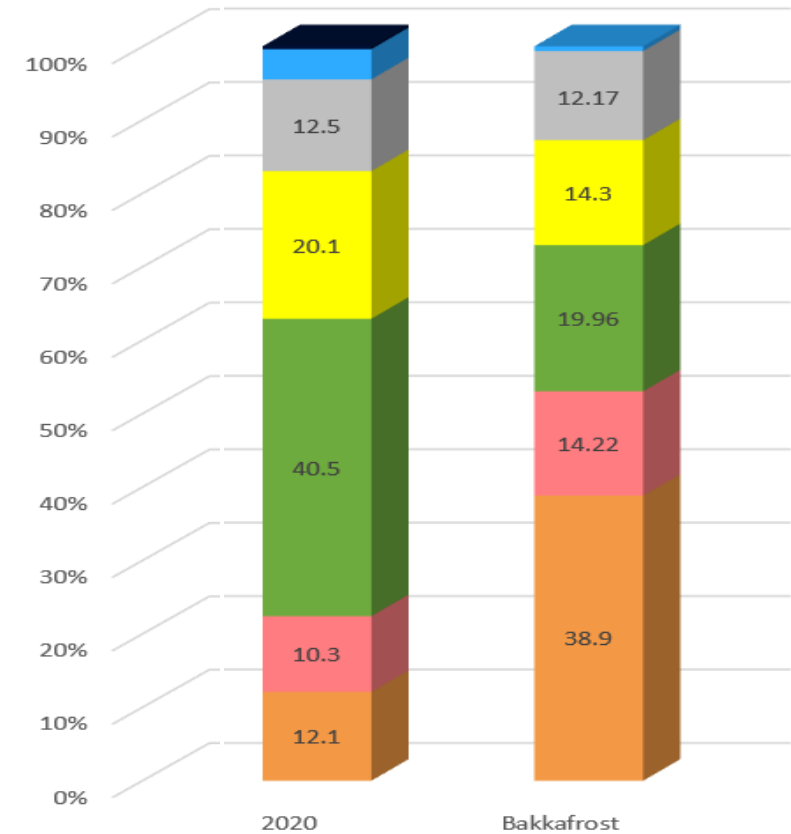
### bFCR (2020)



Source: Kontali, Bakkafrost

# NORWEGIAN SALMON DIETS VS BAKKAFROST SALMON DIETS (NOFIMA)

	Bakkafrost feed	Plant-based feed
CO <sub>2</sub>	✓	÷
Water	✓	÷
Land	✓	÷
Deforestation	✓	÷
Biodiversity (sourcing)	✓	÷
FCR	✓	÷
Fish welfare -mort.	✓	÷
Product Quality	✓	÷
Local Biodiversity Risk	✓	÷
Growth rate	✓	÷
Feed price/ (kg feed)	÷	✓
Feed cost / (kg salmon)	✓	÷



■ Marine protein   
 ■ Marine oil   
 ■ Veg. protein   
 ■ Veg. oil   
 ■ Carbohydrats   
 ■ Micro ingrediens   
 ■ Other

THE VALUE CHAIN

DIFFERENTIATION

## **INVESTMENT PLAN 2026**

SCOTLAND

APPENDIX

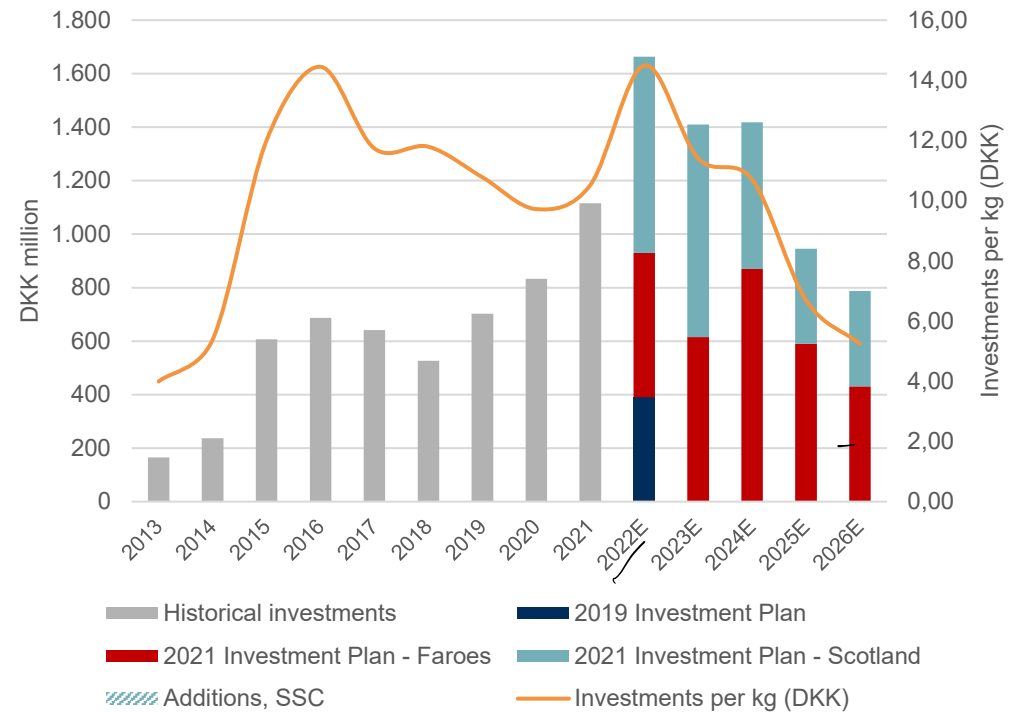


# INVESTING IN SUSTAINABLE GROWTH

150,000 TONNES HARVEST IN 2026, FAROE ISLANDS AND SCOTLAND COMBINED

	Faroe Islands	Scotland
2021	67,217t	29,672t
2022	68,000t	35,000t
2026	100,000t	50,000t

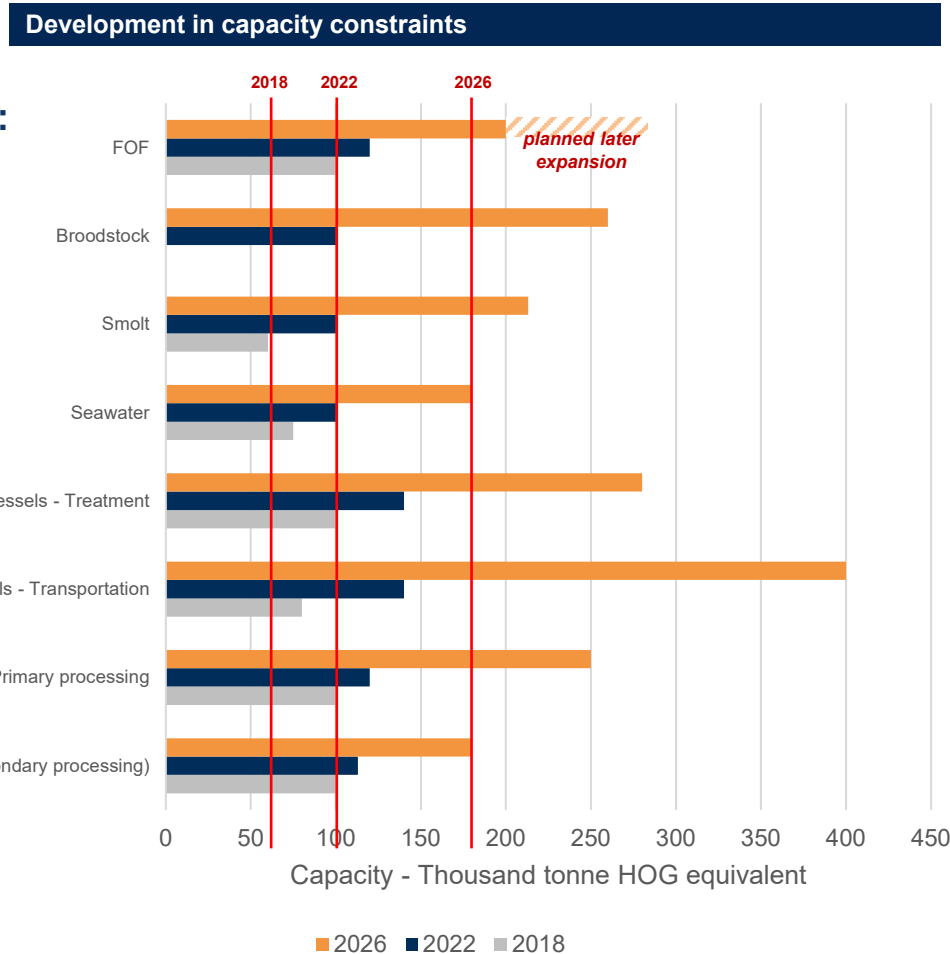
2022-2026 Capex of DKK 6.2 bn builds 180,000t capacity by 2026



# PLANNED INVESTMENTS ENSURE SIGNIFICANT UPLIFT IN CAPACITY

## VALUE CHAIN SYNCHRONISED AT 180KT HOG HARVEST CAPACITY IN 2026

- Value chain synchronised at 180kt capacity in 2026
- Extra capacity as “insurance” & flexibility and for growth:
  - Broodstock *(flexibility and future growth)*
  - Smolt *(flexibility and future growth)*
  - Treatment *(improved ability to deal with biological issues)*
  - Vessel transportation *(flexibility and future growth)*
  - Primary processing *(market flexibility)*
  - Transportation *(flexibility and future growth)*

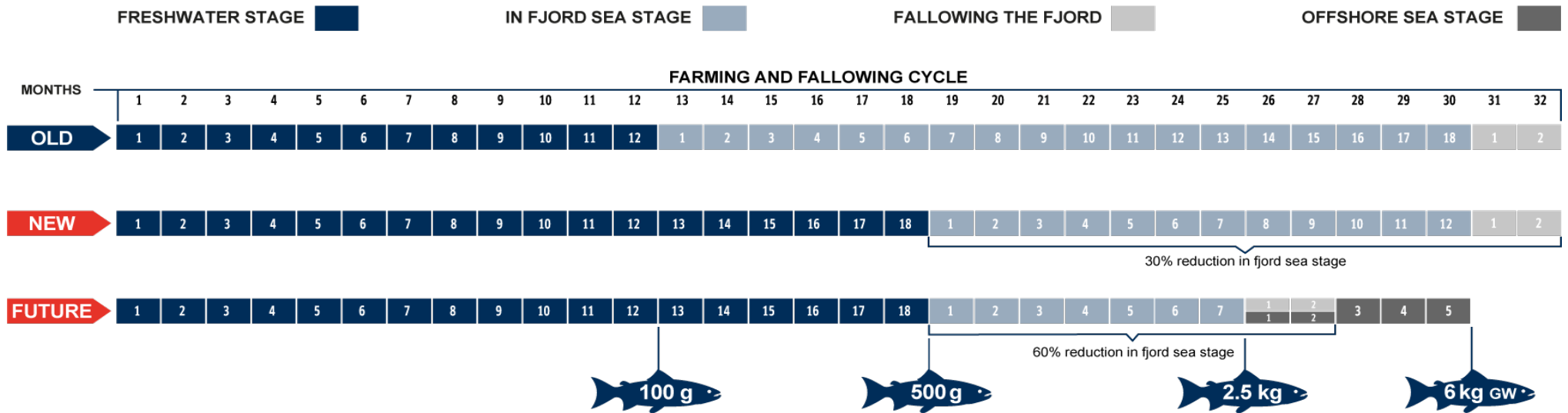
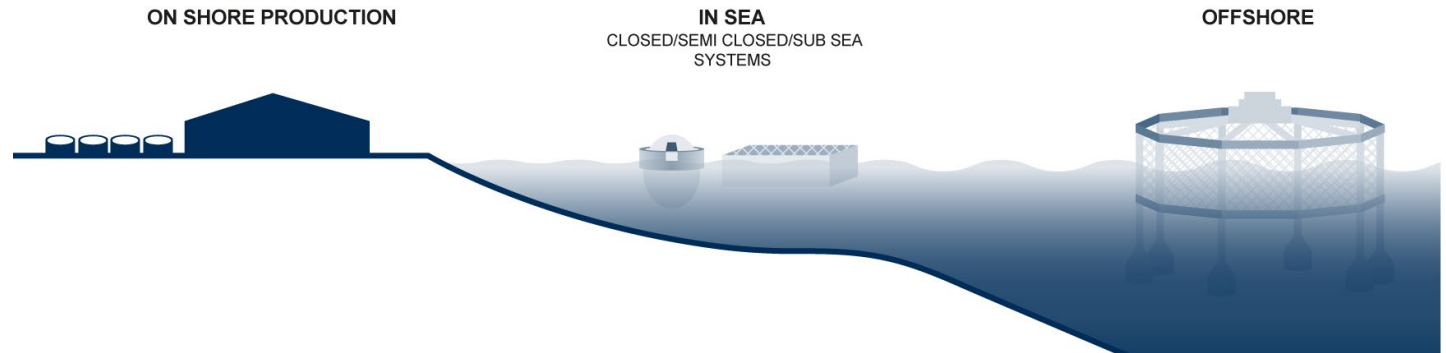


# PURSUING ORGANIC GROWTH IN THE FAROE ISLANDS AND SCOTLAND

ENABLED BY LARGE SMOLT – LATER BY OFFSHORE FARMING

## Large Smolt Strategy

- Reduced biological risk
- Increased production efficiency
- Enables growth





*THANK YOU!*