



Marine bioscience laboratories with an excellent access to the oceans

by

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at the

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Content of presentation

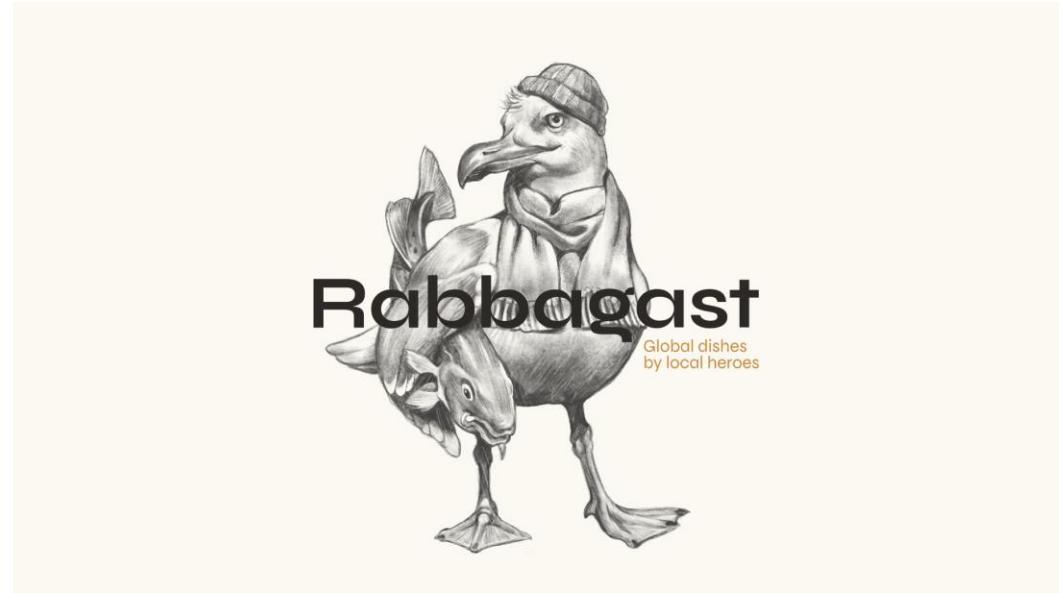
- Who we are
- History of EMR in brief (established December 2022)
- Our owners, the Ervik group
- The people of EMR
- Business plan overview for EMR
- Ongoing projects in brief
- External partners
- What we can do for EBP-Nor
- Possible “spin offs” from the sea voyages



The Phoenix bird flew from the ashes!



<https://www.swarthmore.edu>



Reklamekonsept for Rabbagast restaurant, Flesland Airport
Designer: Stine Strand, Grid Branding; www.Grid.no

Biomarine research by and on the ocean

www.emresearch.no

Background for the establishment

- The aftermath of the bankruptcy of *Måløy Marine Ressurssenter (MMR)*
 - A foundation with a vision but without a clear direction was formed in Måløy in the autumn of 2018
 - Dedicated scientist were employed, two of which thankfully endured till the end!
 - Equipment had been purchased but no dedicated laboratory facility had been established
- The day after the receivers had been called “some resourceful people spoke together”
- It was decided to establish EMR under the following conditions:
 - The two remaining MMR scientists both joined EMR
 - The new EMR CEO promised to remain in the seat for a few years
 - The president of the board of EMR would also stay on
 - The receivership from MMR would be purchased and the hardware added to the EMR assets
- EMR was established in December 2022, operational from January 2023
- Located at Måløy-terminalen, a large Ervik operated cold store at the harbour of Måløy
- One of Norway's and Europe's largest fishing harbours in terms of value and volume
- Operational laboratory (photos to the right) from the autumn of 2023
- Some activities were continued from MMR
- **Entirely owned by Ervik Havfiske AS, a part of the Ervik Group**



ERVIK HAVFISKE HOLDING

An industry leader and community builder





ABOUT



ERVIK HAVFISKE GROUP

- Since the **beginning in 1987** - with a small fishing vessel - Kjell Magne and Stig Ervik have built **one of the world's largest longline fishing group companies**.
- Ervik Havfiske is today **Norway's largest longline fishing company**, operating 13 autoline vessels and 2 snow crab vessels, a testament to their industry leadership and stability.
- They have built a supporting ecosystem around their main business, and with over **30 companies and 650 employees**, the group is on a trajectory for robust growth.
- Through over **35 years in the industry**, Ervik Havfiske has unrivalled experience within the segment and knowledge about **how to run a deep-sea fishing company efficiently**.
- Demonstrating commitment to growth, **the group has invested nearly 2 billion NOK in new vessels over the last 8-10 years**, ensuring modern, efficient, and environmentally friendly operations.



ERVIK'S HISTORY IN BRIEF



- **Stad, 1987**

Stig and Kjell, second cousins, bought an old longline vessel and named and named it "Frøyanes" after their grandfathers' fishing boat. The initial company was named Ervik Havfiske AS and is founded upon founded upon long traditions and the proud heritage of fearless fearless fishermen sailing the rough seas outside Stad.

- **Global presence, 2023**

Over 30 years later, Ervik Havfiske Holding has successfully expanded expanded to become one of the world's largest longline fishing groups, fishing groups, with a modern and technologically advanced fleet. fleet. Adding to it are highly technological and innovative vessels in vessels in 2021 and 2023, with a clear direction towards the future. future.

Even with a global presence, Ervik stays true to the values of its its ancestors; sustainability and respect for the oceans are at the heart the heart of everything that is done.

The next generation of the Ervik family represented by Robert Ervik, Robert Ervik, the current CEO of Ervik Havfiske AS to the bottom left. bottom left.

**Strategically placed
“decentralised” offices:**

- Stadlandet, HQ
- Reading, England
- Gibraltar
- New Zealand
- Falkland Islands
- Uruguay



A COMMUNITY BUILDER



- **Stad Hotel**

Stad Hotel is part of the Ervik Havfiske group, which was founded by two young fishermen, the second cousins Stig Ervik and Kjell Magne Ervik with their first boat - MS Frøyanes - in 1987. MS Frøyanes was named after the fishing boat owned by their grandfathers, Jetmund and Julius, in the 1950s. The name Frøyanes can be seen in several places inside the hotel.

- **Restaurant Longline**

Restaurant Longline, a restored venue originally from 1911, is a part of Stad Hotel, and provides a good offering to both tourists and the local community.

- **Westmek**

Westmek produces equipment for processing fish on board ocean-going fishing vessels. The company designs, draws, and mounts installations in stainless steel, acid-resistant steel, and aluminum all over the Northwest region.

- **Ervik Supply**

Ervik Supply is a comprehensive supplier of equipment and consolidates everything a customer needs to various destinations both domestically and in containers to the broader international market. Through this, we have acquired very favorable freight agreements that will also benefit our customers.

- **Joker Stadlandet**

Vestkapp Handel is much more than a grocery store. It is an important local business with traditional retail linked to the Joker group and is the local store.

The store takes care of and organizes the provisioning to the vessel group, either directly from their own store or through agreements with other suppliers around Norway where the boats may be for delivering catches.

- **Educating the next generation**

To Ervik Havfiske Holding it is important to provide the next generations with a bright future, and we engage with the youth to give them the tools and competency to further develop both Ervik and the world around us.



Renate Rimstad Bøe, researcher

- MSc in Ocean Resources from NTNU
- Aquaculture, emphasis on new species , ecology and technology
- Experience from bio-marine innovation and entrepreneurship
- Master thesis: *Investigation of important steps in Palmaria palmata cultivation*

Julie Trollebø Kvalheim, researcher

- MSc in the Biology of the Fisheries and Management of bi-catch from UiB
- Knowhow within water acoustics, fish behaviour and physiology
- Experience from laboratory and field studies at sea
- Special interests: Species specific fisheries, biodiversity and ecology
- Master thesis: *Analyses of catch rates of important bycatch species in the Norwegian Coastal Survey north of Stad (62°N) 2003-2017: Do catch statistics and scientific surveys tell the same story?*



Fredrik Håkonsholm, researcher

- BSc in general laboratory science from the University college in Bergen
- MSc in microbiology from UiB
- PhD microbiology, IMR and UiB/Artic University Tromsø
- Experience from IMR at Björn Tore Lunestad's group
- Several scientific papers
- PhD thesis: *Klebsiella pneumoniae in the marine environment*



Nadiia Murzina, apprentice

- From Ukraine
- Lived in Måløy since 2022
- Education within ecology and laboratory practices
- Long and varied experience from her home country
- Part time artist and photographer



Kenneth Brandal, president of the board

- Biologist by education
- VP Business Development, Ervik Group
- Long experience from management of aquaculture and seafood
- Based at Stadlandet



Hogne Bleie, CEO and Research Manager

- Education:
 - Veterinary surgeon (BVMS), Glasgow, UK 1994
 - MSc, aquaculture og pathology, Stirling, UK, 1995
 - Partly completed PhD, UiB (2001-2005), molecular biology and epidemiology
 - Subjects within management and economy
 - Publications within prophylaxis, pathology and epidemiology
- Experience:
 - National veterinary Institute Bergen: Pathologist (1996-2005)
 - Pan Fish og Marine Harvest: Head Veterinarian and QCO, (2005-2008)
 - Atlantic Cod Farms, COO (2008-2012)
 - FHF/Mattilsynet: National manager of epidemiology project (2012-2014)
 - MSD Animal Health: Regional manager (2014-2019)
 - Mallard AS, freelancer trough a family company (2019-)



Business idea: Bio-marine research by and on the sea

Two year business plan:

1. Provide services for companies within the Ervik group:
 - a) Seafood quality improvement and documentation
 - b) Catch enhancement with focus on ecology and general ESG
 - c) Resource utilisation, bi-products

2. Utilise our comparative advantages with the proximity to the sea and access to the oceans
 - a) Knowledge inhouse, vast network within academia and business
 - b) Access to most of the Atlantic ocean, including the Antarctic region
 - c) Long term projects with the “heavy weights” within bio-science:
 - i. Norwegian and European academia
 - ii. Private bio-tech in Norway
 - d) Exploit diverse inhouse experience with our combined entrepreneurial skills



Catch Welfare Platform: Part of ESG-involvement by the Ervik-group

Welfare at catch and slaughter, adapted from terrestrial animals and aquaculture
Initiative from Michelle Boonstra and Dr. Bjørn Roth (pictured) amongst others

<https://catchwelfareplatform.com>

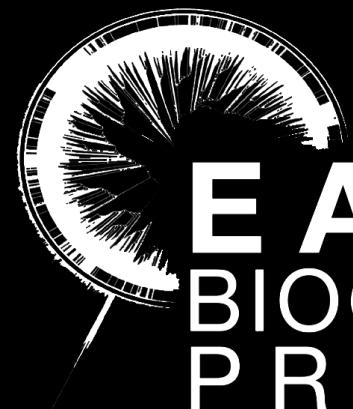


KvaliKrab: Sustainable snow crab fisheries 2024-2027

- Partners: Nofima and Institute of Marine Research (IMR)
- AP 1 – Developing bait from by-products (Nofima)
- AP 2 – Optimising snow crab fishing pots (IMR)
- AP 3 – Field and catch data analysis (EMR)
- AP 4 – Quality enhancement(Nofima)
- MNOK 10,0 from the Research Council



Dr. Bjørn Tore Rotabakk at Nofima Stavanger



EARTH
BIOGENOME
PROJECT
NORWAY
EBP-Nor



Ocean Lab

- Frøyanes, a 70 meters hyper modern fishing vessel
- Arrived at Måløy harbour from delivery January 2024
- Combined snow crab and shrimping vessel
- New technology: Moonpool and latest in electronics
- Laboratories om bord (wet and dry lab)
- Biobank with -80 °C facility onboard
- Video via satellite link from lab e.g. for taxonomy
- Dedicated cabins and offices for scientists

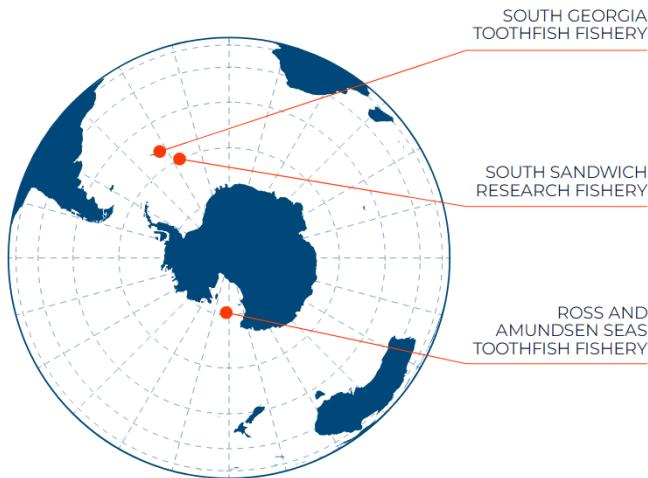


EMR will contribute to EBP-Nor in the North Atlantic Ocean

Ervik-group with presence in:

- Barents Sea
- North Sea
- Denmark Straight
- Off the Newfoundland coast
- South Atlantic
 - Licenced of CCAMLR





Antarctic region

- World leaders in tooth fish fisheries
- 6 vessels Ross Sea & Sør- Georgia
- Laboratory on all vessels
- Might get possible to rent capacity here
- Independent inspectors on every vessel
- <https://youtu.be/XLQMiHPtFRc>

INTERNATIONAL FLEET



Argos Helena



Nordic Prince

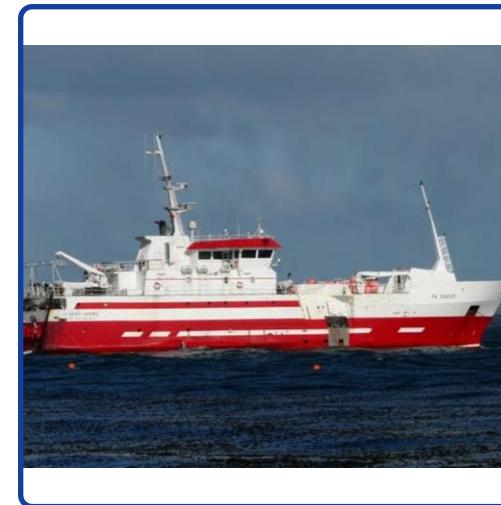


Argos Georgia

INTERNATIONAL FLEET



Polar Bay

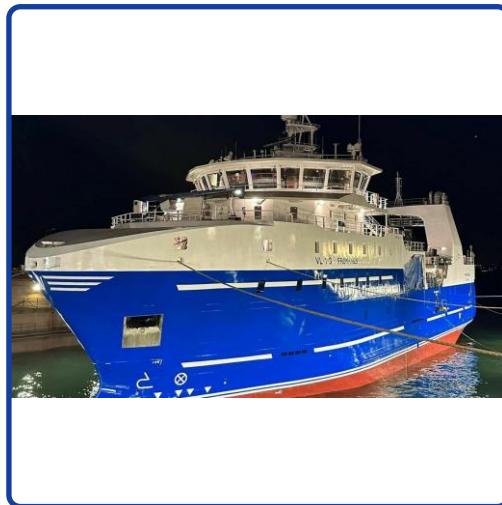


Le Saint Andre

NORWEGIAN FLEET



Frøyanes Junior



Frøyanes



Bergholm

NORWEGIAN FLEET



Bjørnhaug



Vestkapp

NORWEGIAN FLEET



Lyngholm



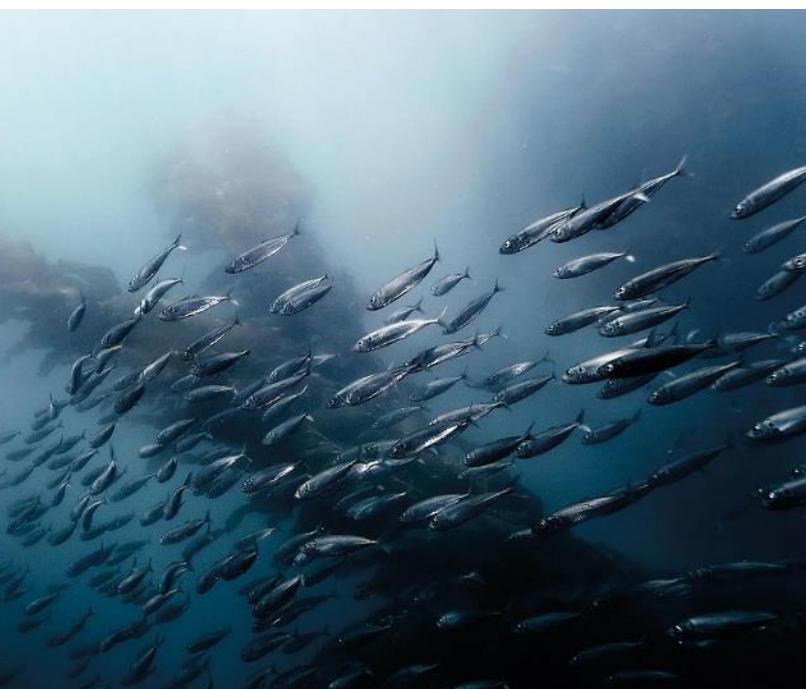
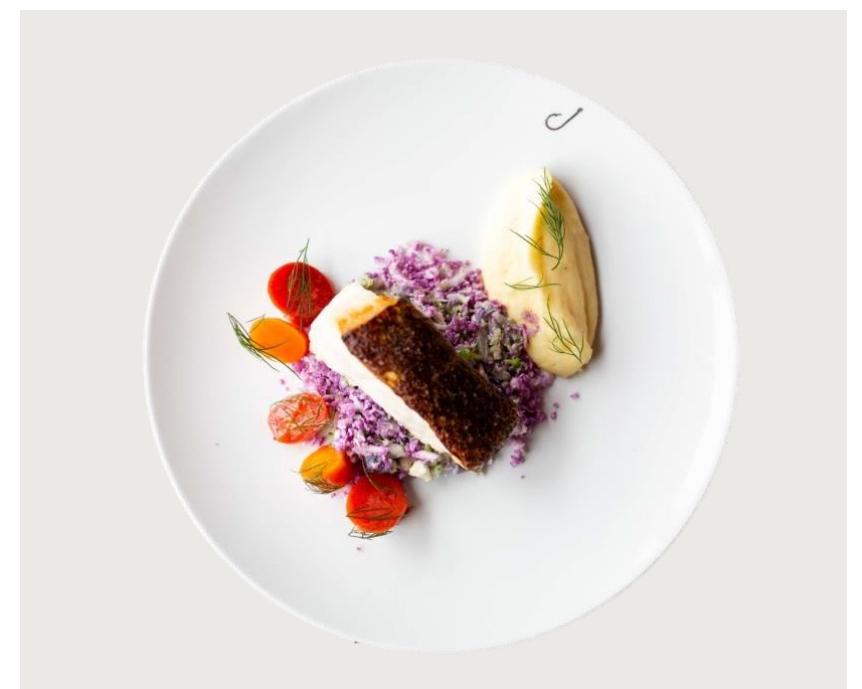
Vestfisk



Vestliner



Rolf Asbjørn



Some of several *spin-off possibilities*:

- In dialog with possible partners in the field of bio-prospecting
 - Micro algae are particularly interesting
 - Estimated that only 25% of the algal species from the seas are identified
 - Development of methods for preserving chitin form snow crab



Thanks for listening!

