



Veterinærinstituttet  
Norwegian Veterinary Institute

# NVI - Activities on Aquatic Animal Diseases

WOAH Focal Point meeting  
3-5 September 2025  
Ålesund, Norway

Edgar Brun

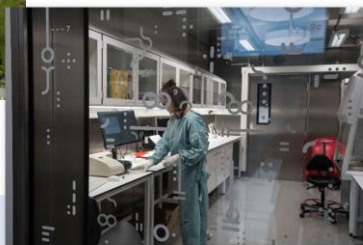
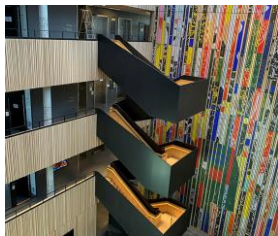




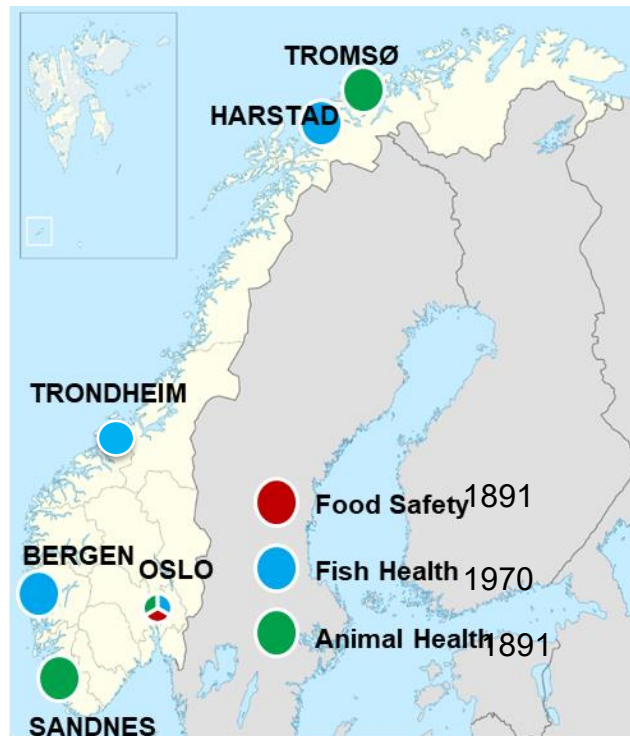
1891/1914

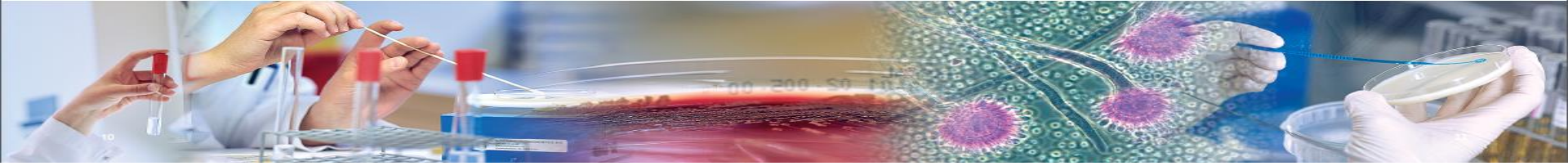


2021



- Own by Ministry of Food and Agriculture
- 50 % basic funding by MFA, MTIF, NRC
- 50 % from research projects, assignments
- 330 employees





## Our mission...

The Norwegian Veterinary Institute is a biomedical research institute providing independent research-based knowledge on national preparedness in animal health and welfare, in feed and food safety to support **the authorities** and the animal food production **industry**.



### Four ministries;

Food and Agriculture  
Fisheries  
Climate and Environment  
Health and Care Services

### Four directorates

Norwegian Food Safety Authority  
Directorate of Fisheries  
Environment Agency  
Directorate of Health





# 1. Research in fish health and welfare

Knowledge and tools for  
disease prevention and  
better welfare



Research for early detection,  
disease investigation, prevent  
outbreaks, spreading, tracing

Disease prevention - welfare - early detection - contingency



Healthy



Sick



Dead



Immune  
response and  
cell models

Biosecurity,  
spreading and  
tracing

Epidemiology  
Mortality  
categorization

Disease  
pathogenesis -  
histopathology -  
ML

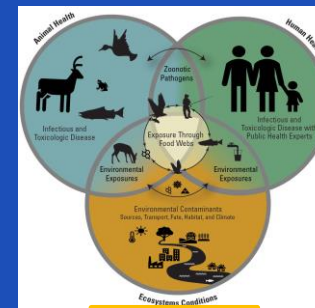
Welfare



Circularity



Safe  
food/feed



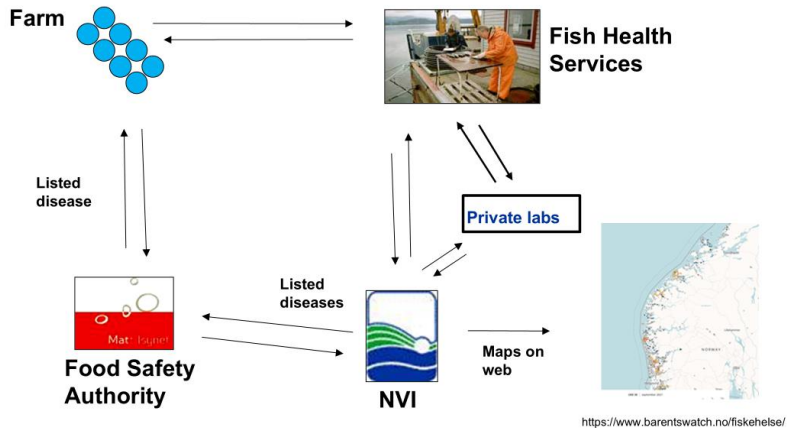
One  
health

Health  
economics



## 2. Diagnostics

### Diagnostic collaboration



- Routine diagnostics
- Emergency response
- National reference laboratory function
  - Diagnostic method development, approval
  - Validate diagnosis for listed diseases
  - Collaboration/support to private labs
  - ML/AI
  - Keeping biobank – reference isolates
  - Diagnostic independency and transparency

### WOAH reference laboratory functions;

- Infections with Infectious Salmon Anemia (ISA)
- Infections with Salmonid alphavirus (SAV/PD)
- Infections with *Gyrodactylus salaris*



# Preparedness and Scientific Advice

Healthy and resilient (aquatic) organisms, good farming practices, disease prevention, high welfare standards and long-term biosecurity management, are fundamental to sustainable aquaculture animal food production





## 3a. Preparedness and Scientific Advice

- Data collection, collaboration and epidemiological/economical analyses
- Inputs/consultations on regulations made by the Authorities
- Active partner in disease outbreaks investigation and prevention strategies
- Design and execute surveillance programs (annual reports)
- Biosecurity standards (industry, authorities)

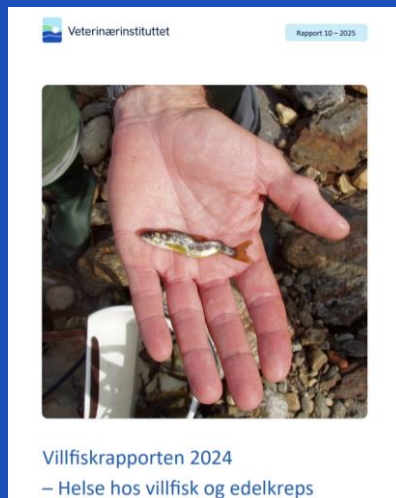


## 3b. Preparedness and Scientific Advice

- Interaction with WOAHA
  - Reference laboratories
  - **Collaborating centers**
    - Economics of Animal Health (international collaboration through the concept of GBADs)
    - Epidemiology and Risk Assessment for Aquatic Animal Diseases
      - Regional meetings, projects, collaboration, competence building
    - Aquatic Animal Health Standard Commission
- Interaction with FAO



# Annual Fish Health Report on aquatic animal health and welfare status





# Collaboration on Data sources

## Public data sources:



Directorate of Fisheries  
FISKERIDIREKTORATET



Norwegian Food Safety Authority  
**Mattilsynet**



Veterinærinstituttet  
Norwegian Veterinary Institute

## Private data sources:



**PATOGEN**®

WE INSPIRE ACTIONS  
FOR HEALTHIER FISH

**PHARMAQ**

**Analytiq**



**AquaCloud**

By NCE Seafood Innovation



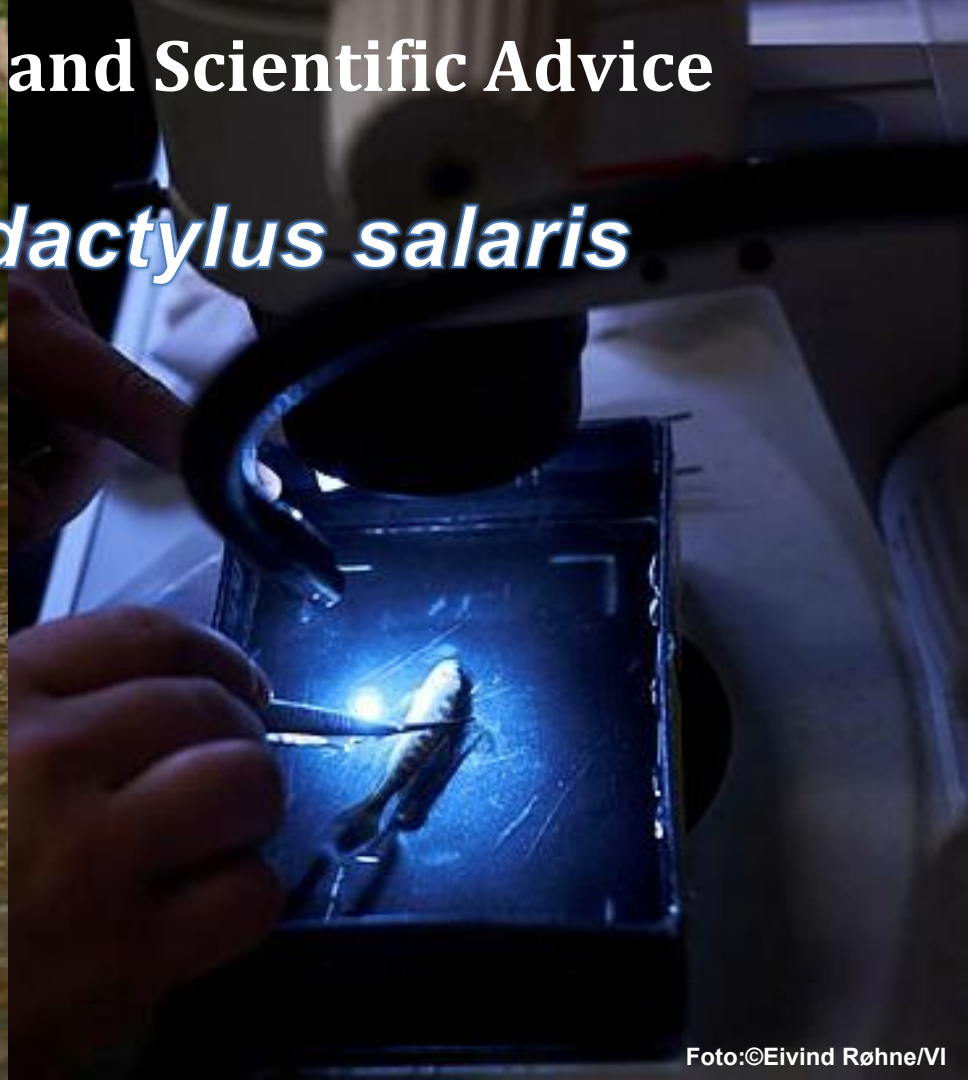
Farming Companies

Fish Health Personnel



## 3c. Preparedness and Scientific Advice

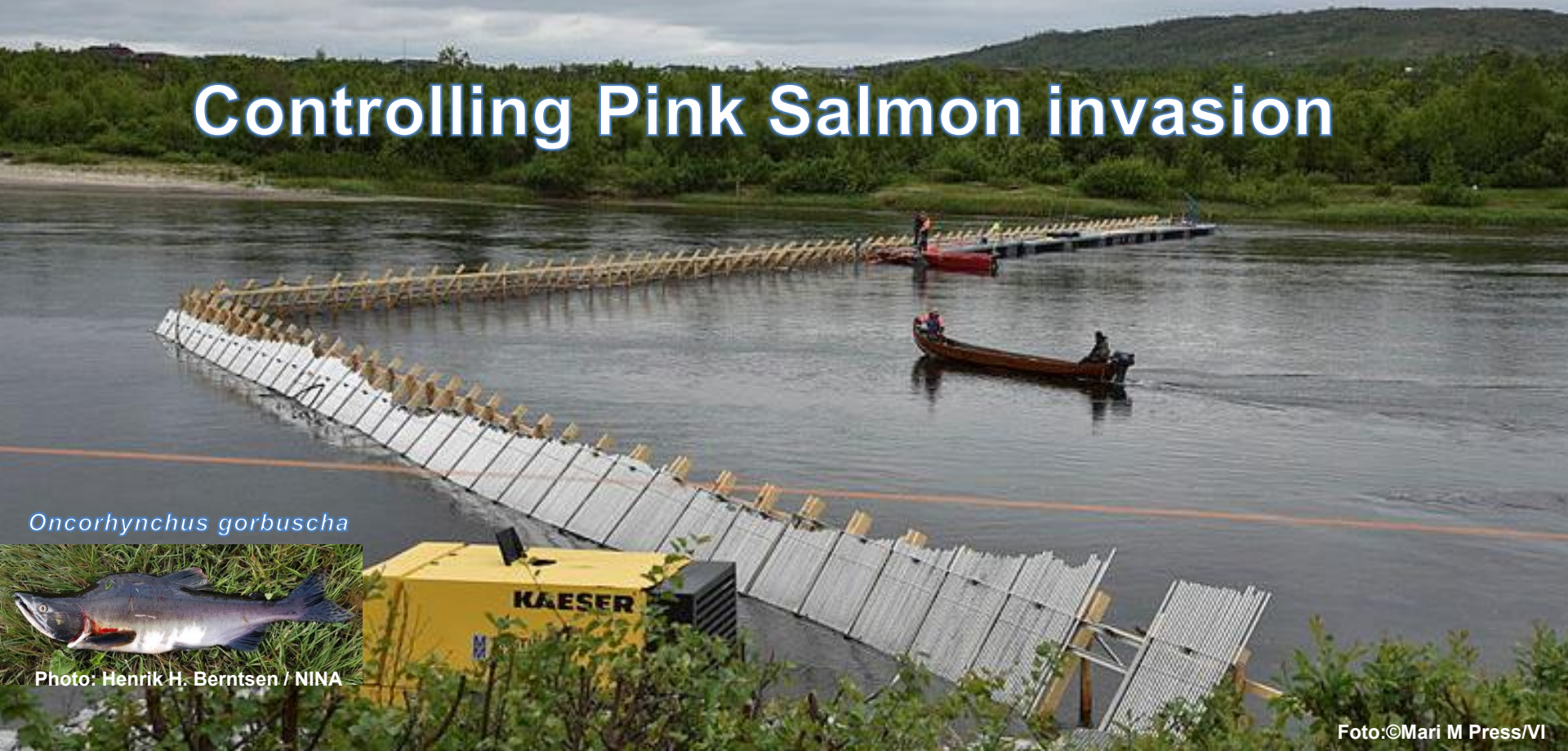
### Wild Fish – *Gyrodactylus salaris*







## Controlling Pink Salmon invasion

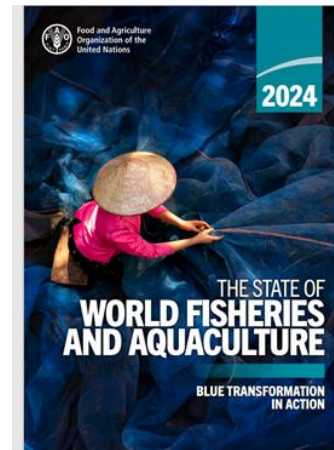
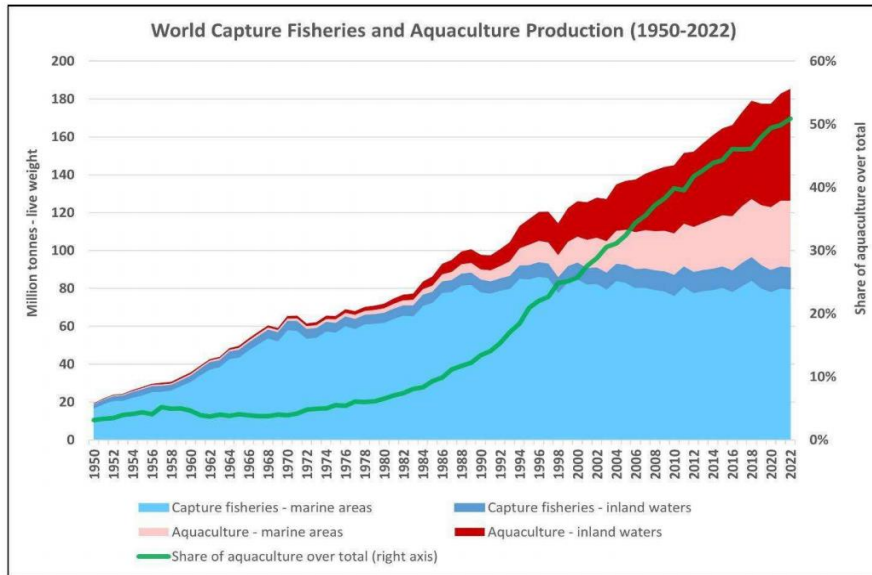


*Oncorhynchus gorbuscha*



Photo: Henrik H. Berntsen / NINA

# International development collaboration



Affordable farmed aquaculture products –  
produced in a sustainable way -  
for everyone

Sixty per cent of global marine fish populations are fully exploited- 30 per cent are over-exploited.  
Less than 10 per cent of marine fish resources remain unexploited.





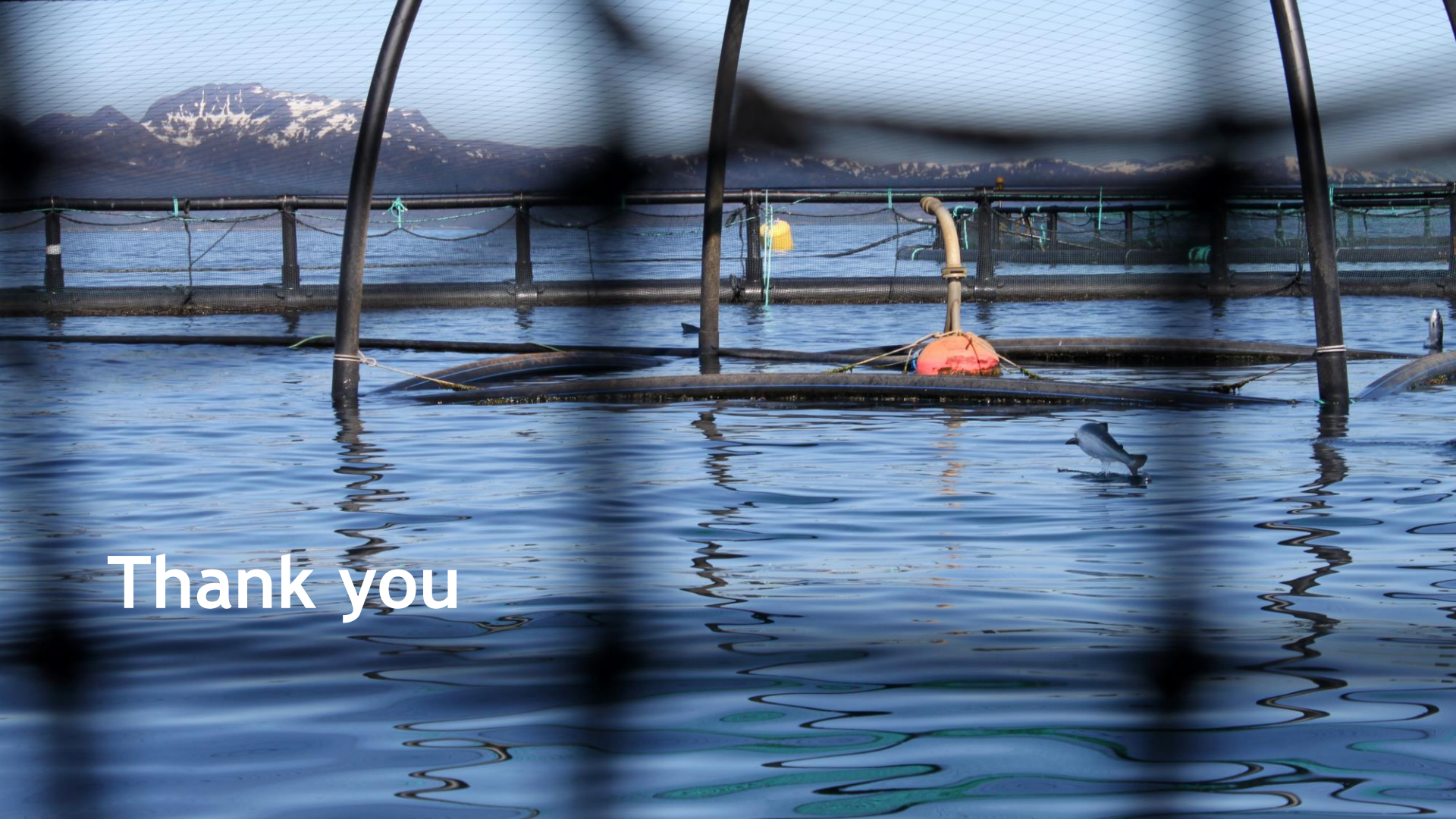
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# International development cooperation



Foto: Jacob Zornu





Thank you