



# **Sustainability and competitiveness – can we have both?**

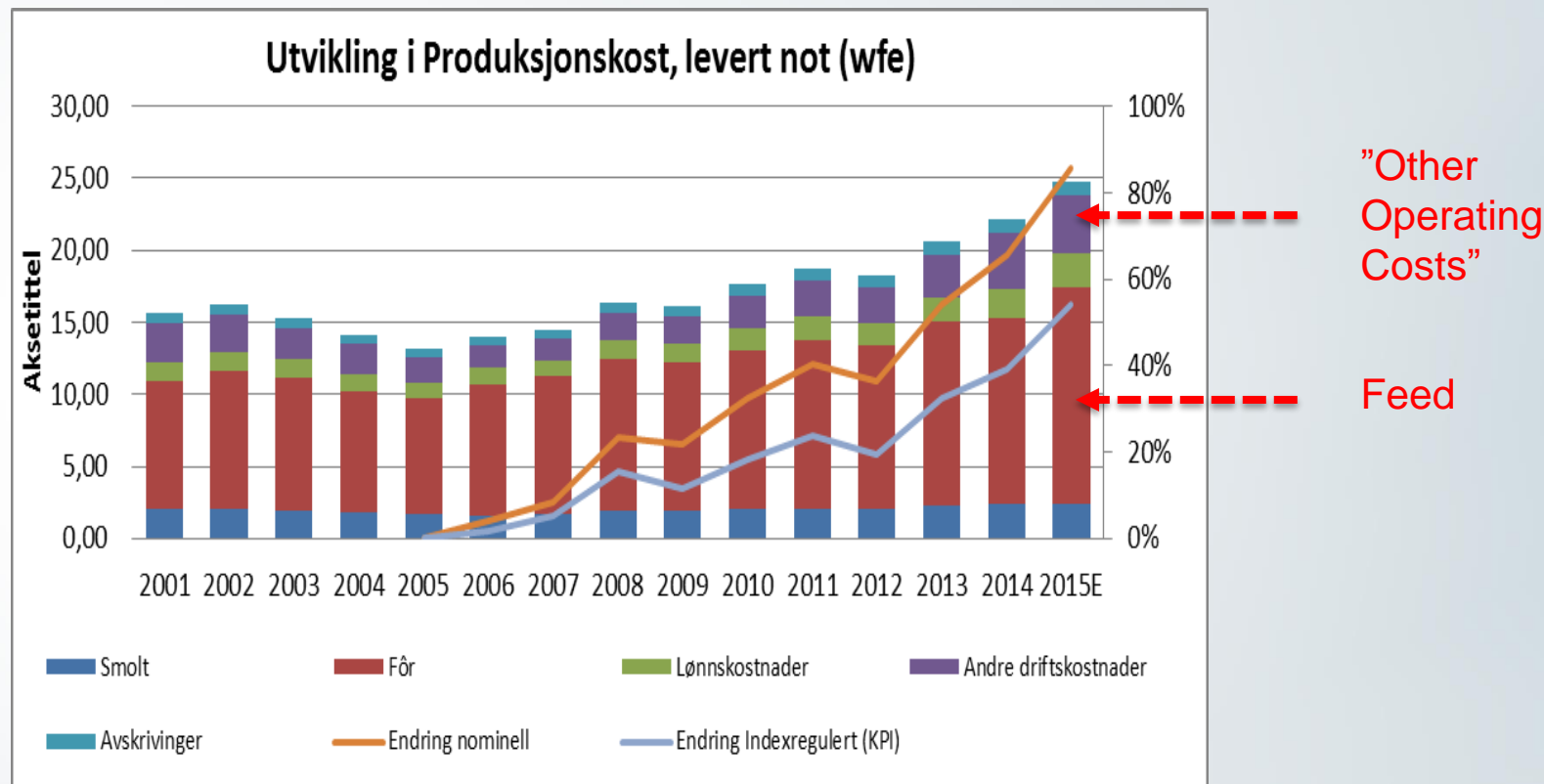
**Presentation for Aquaculture Conference, St. Johns, November 10th 2016**

Audun Iversen and Øystein Hermansen, Nofima

Ruth Kongsvik Brandvik, Anders Marthinussen and Ragnar Nystøyl, Kontali Analyse AS

# Production cost 2001-2015

(Nominal values)



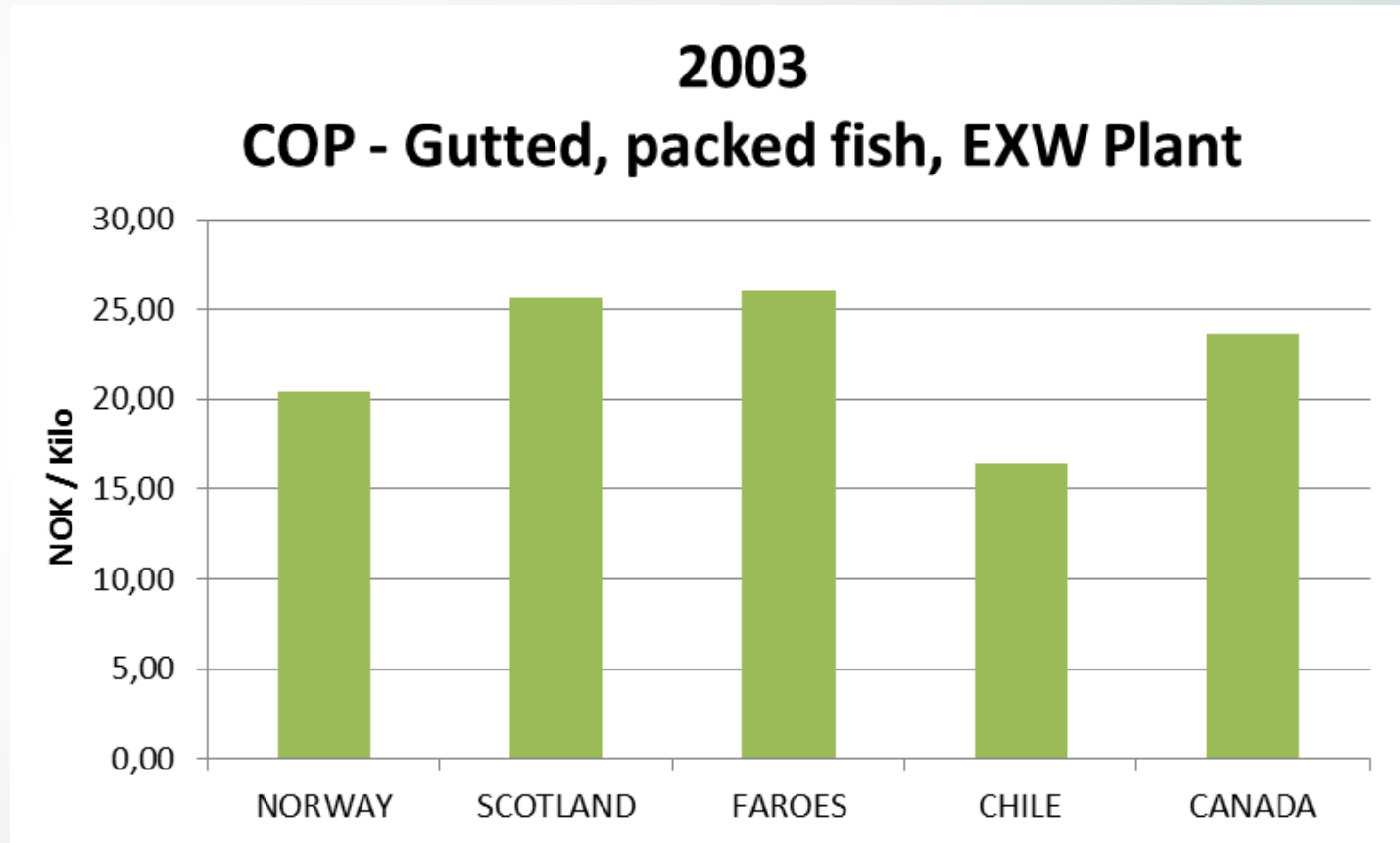
Kilde: Kontali analyse as

# Sustainability and competitiveness

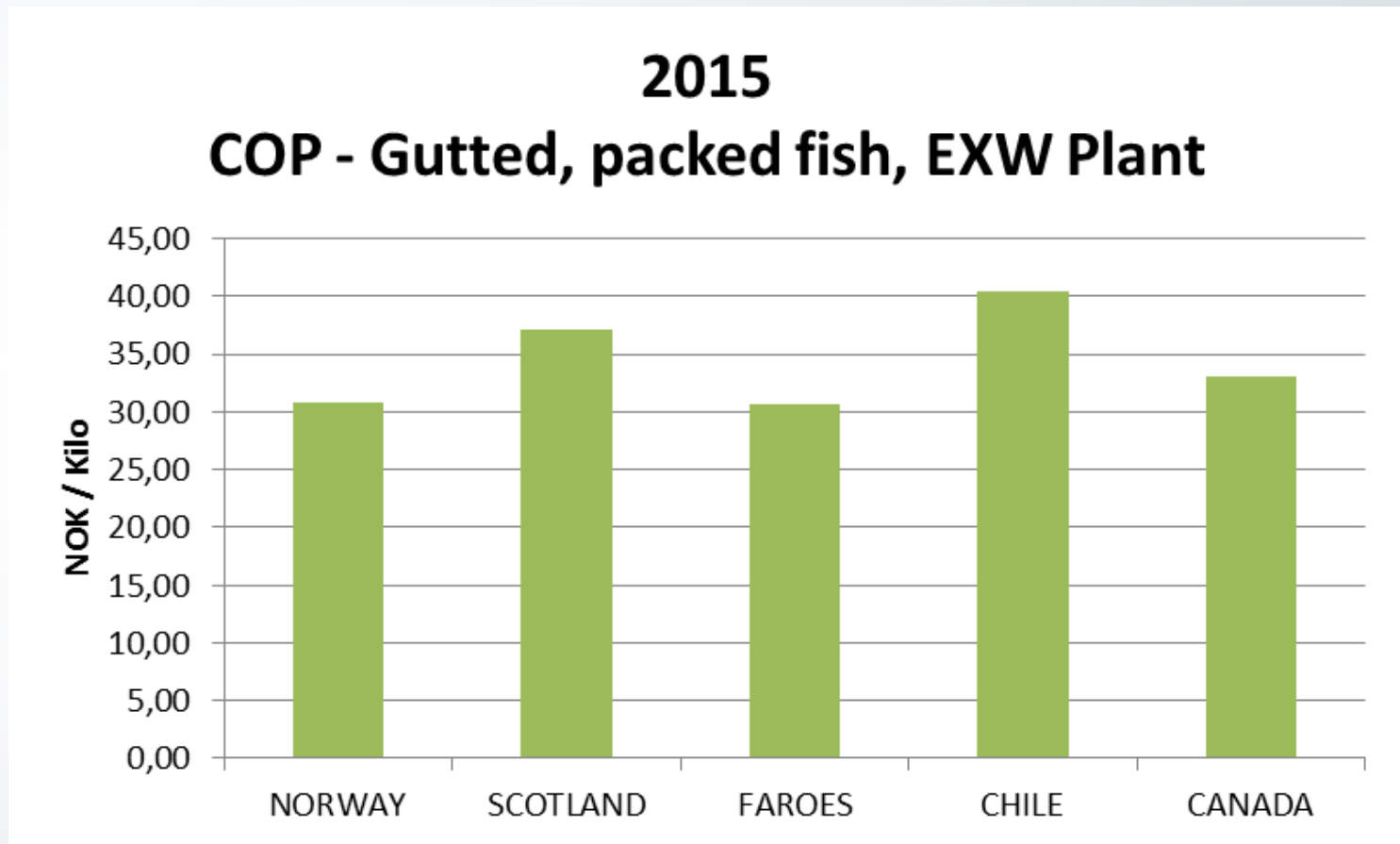
– is there a conflict?



# Cost position in 2003



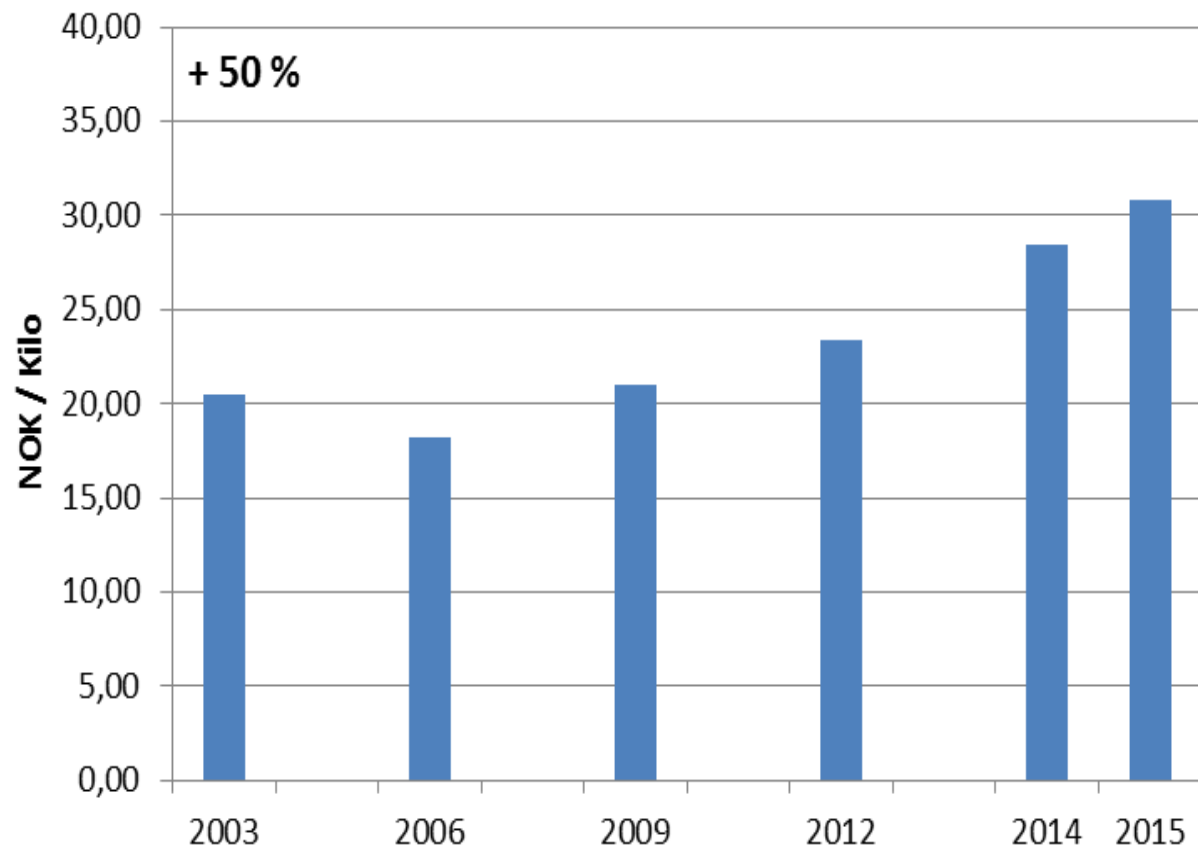
# Today's cost position



# Norway

## - Cost development in NOK

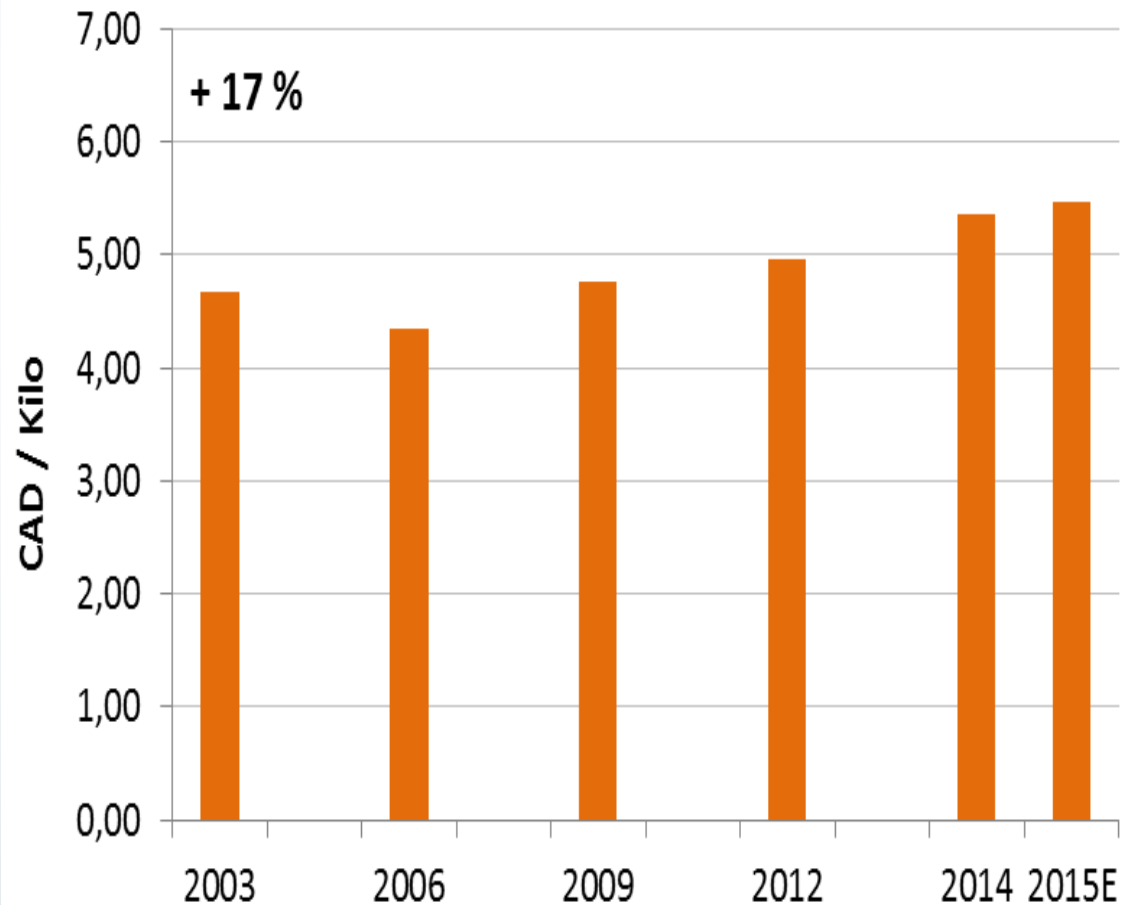
- Feed
- Sea lice
- But all costs increase



# Canada

## - Cost development in CAD

- Moderate cost increase
- Increased feed cost
- Good biological results
- Increased volume in 2015
- Favourable currency development
- Small sites, less efficient operations
- Difference between east and west
  - Natural conditions
  - Scale and technology
  - Growth potential



# Chile

## Cost development in USD

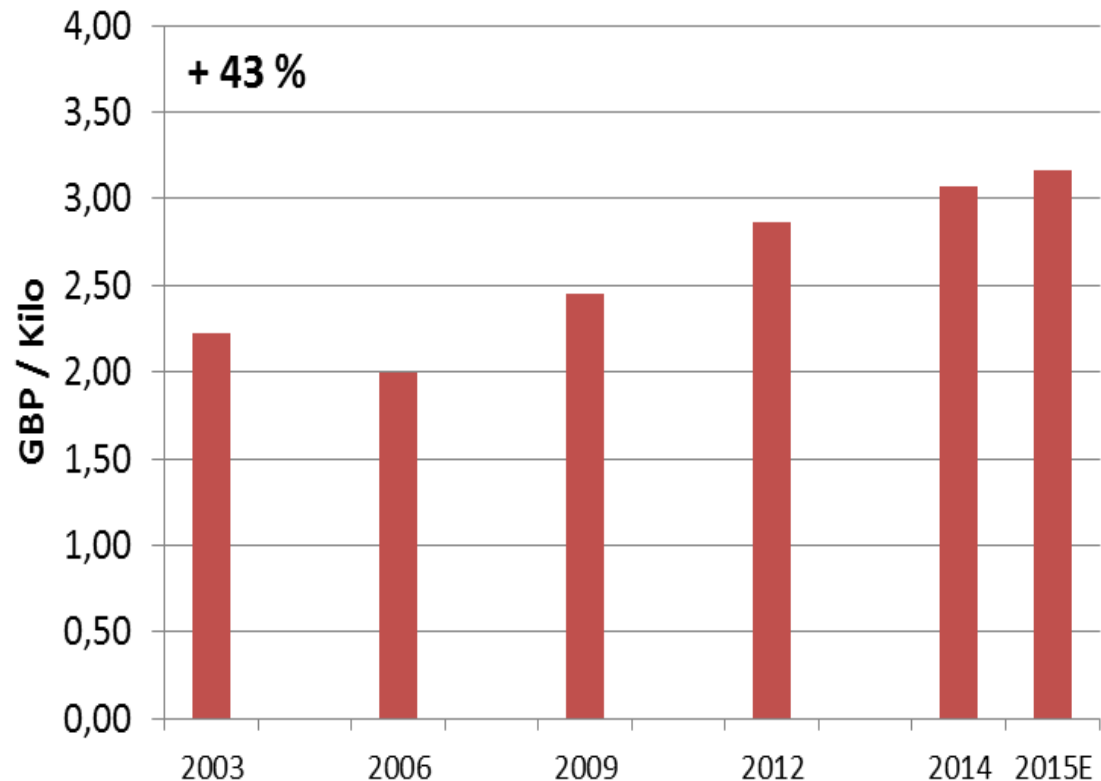
- Rapid increase to 2009
- Moderate increase since
- ISA-crisis 2007-2009
- Disease challenge in later years (SRS)
- Increased smolt cost
- Cost effect of stricter regulations
- In-efficient site structure
- Volcanoes, predators, algae blooms



# Scotland

## Cost development in GBP

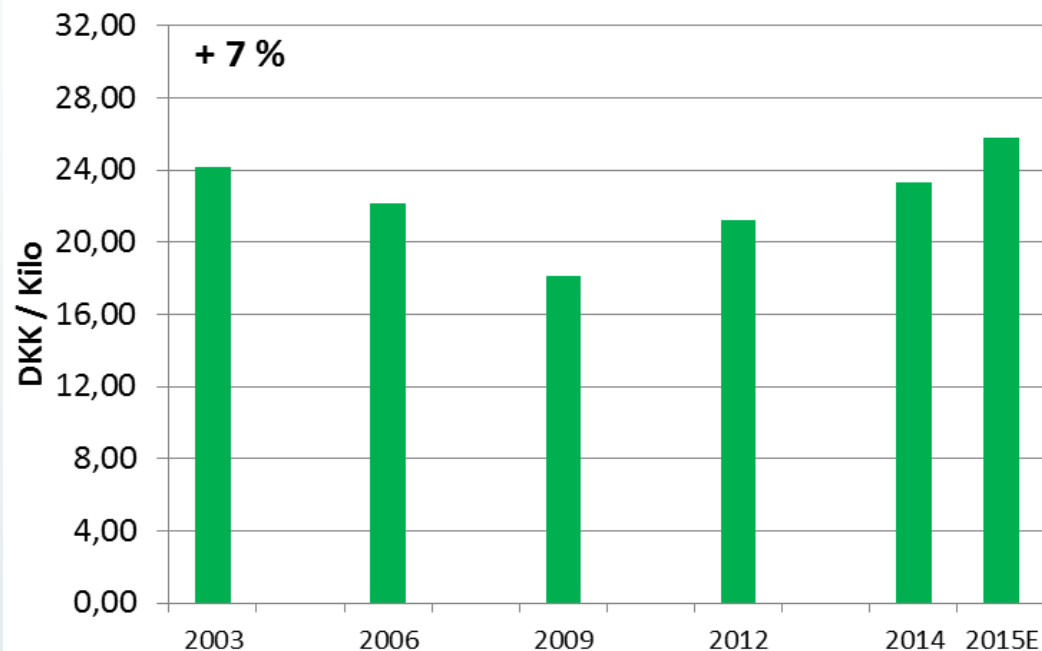
- Steady cost increase
- Feed and health costs
- Expensive smolt
- Small sites, less efficient operations
- Regulation, certification, strong public interest



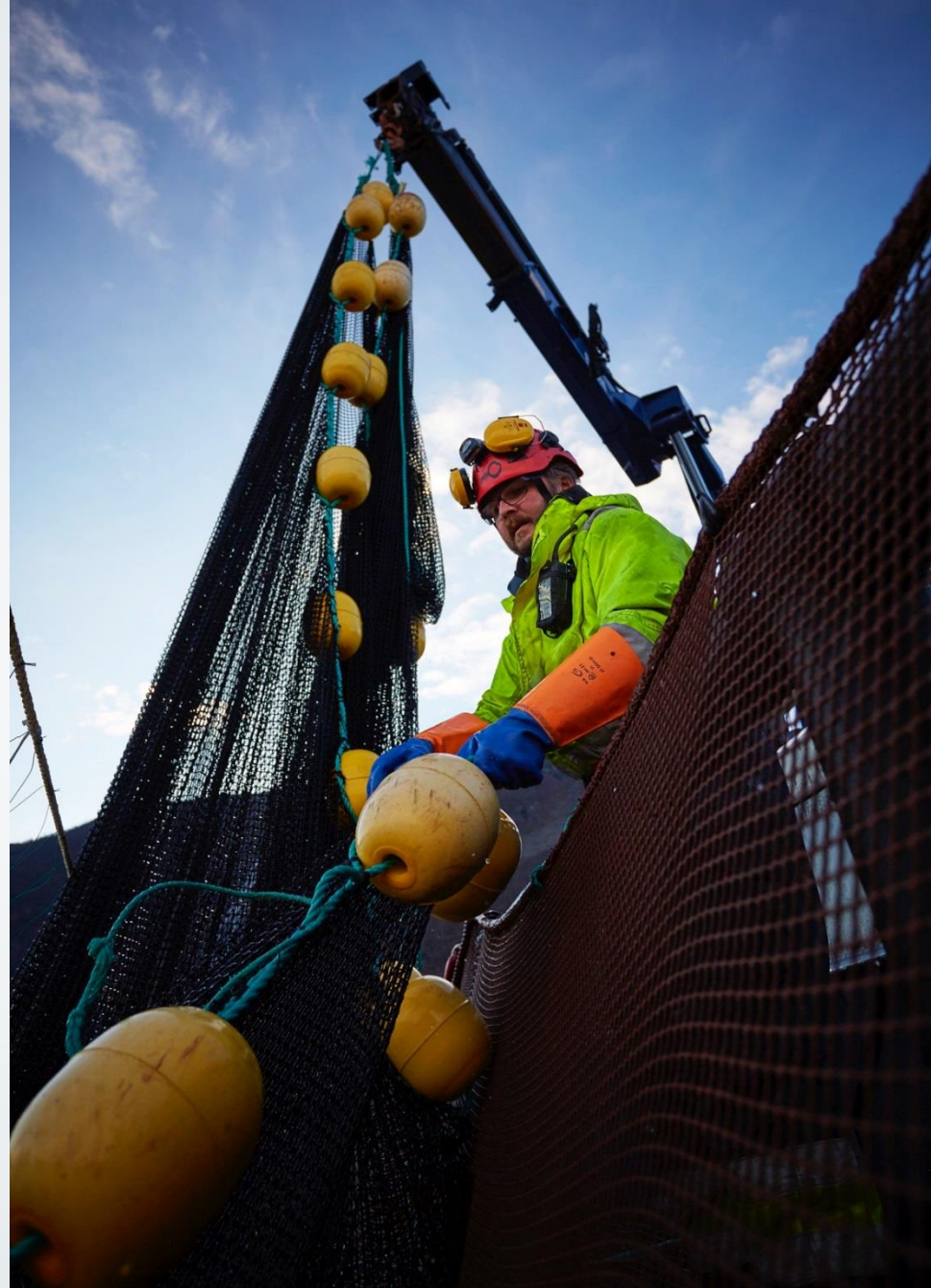
# The Faroe Islands

## - Cost development in DKK

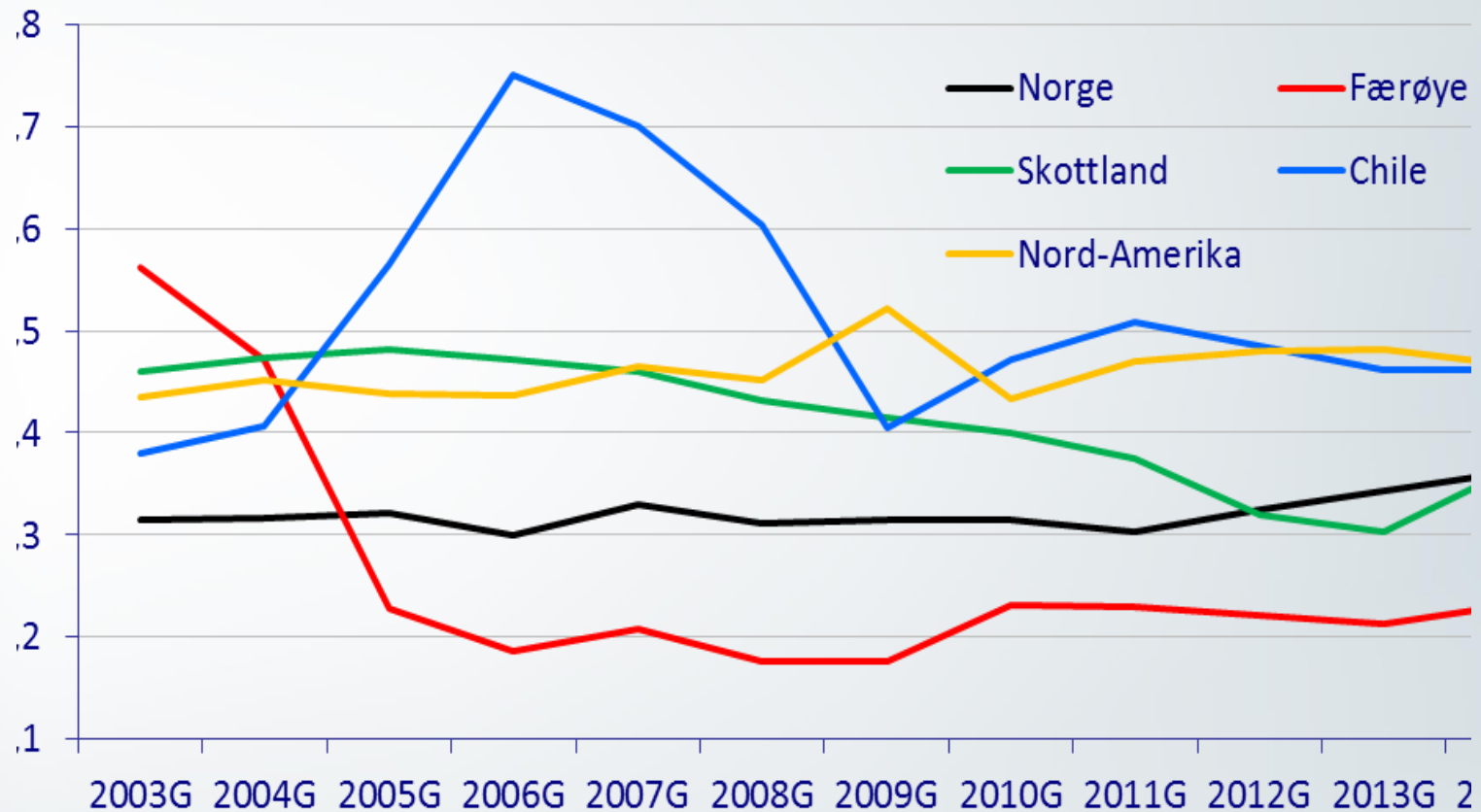
- Cost decrease till 2009, after ISA-crisis in 2003
- Steady growth since 2009
- Concentration and large-scale operations
- Strong health regulations
- Numbers are «best in class», both biologically and economically
- Lice is a challenge



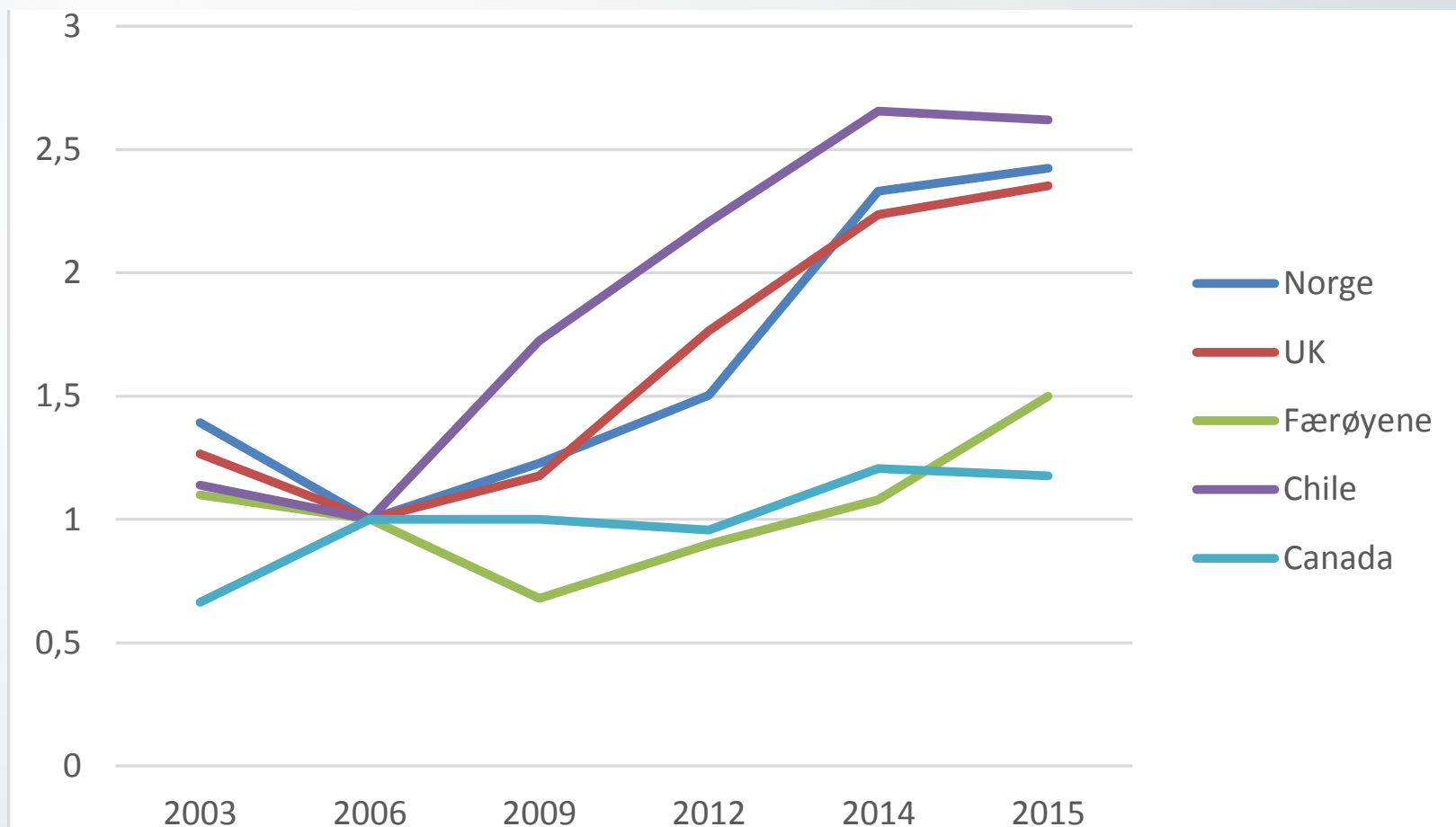
**Let us look at some  
of the explaining  
factors**



# Economic Feed Conversion Ratio



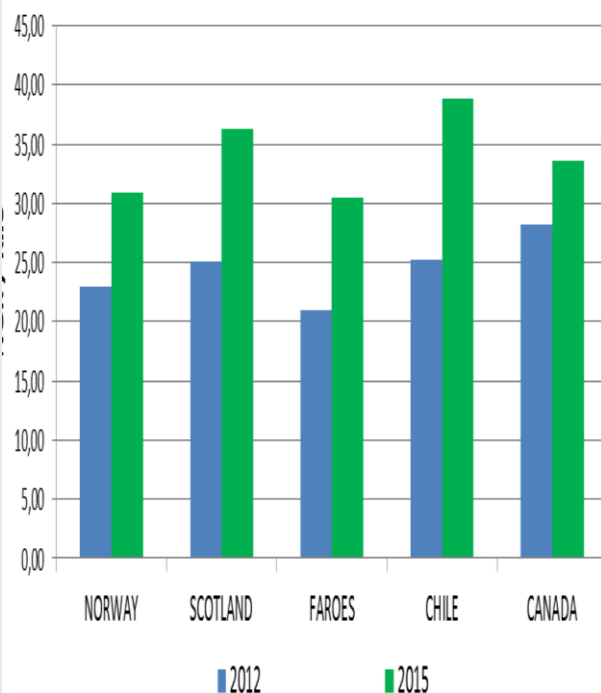
# Other operating costs



# Currency is important

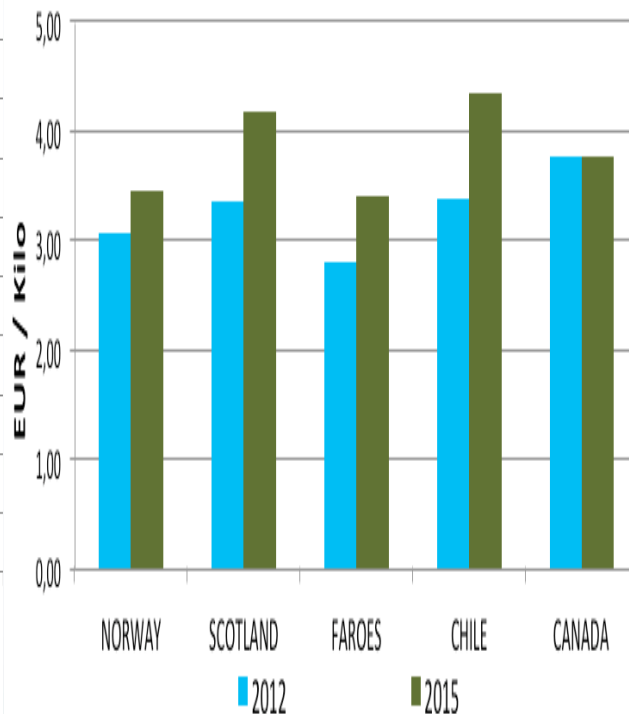
## NOK

Kostnadsutvikling 2012 - 2015; Sløyd, laks m/hode  
Levert, iset & pakket ex. Slakteri - Ex. renter - NOK/kg



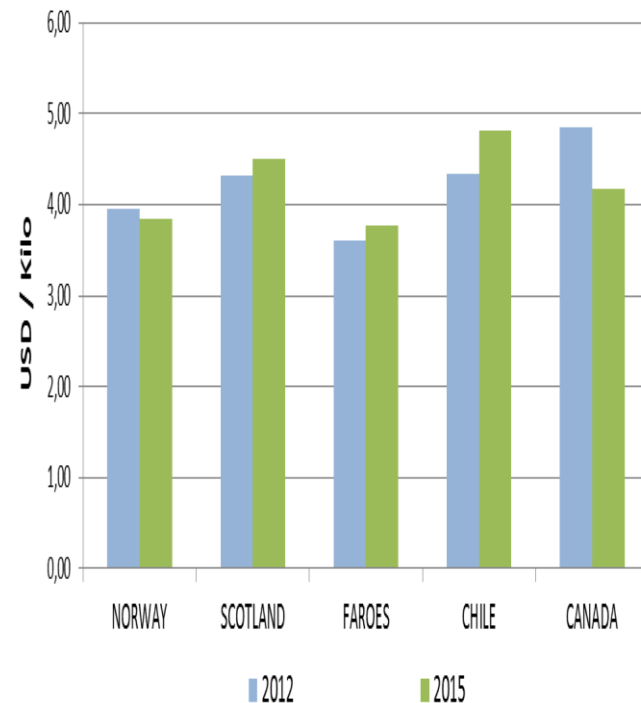
## EURO

Kostnadsutvikling 2012 - 2015; Sløyd, laks m/hode  
Levert, iset & pakket ex. Slakteri - Ex. renter - EUR/kg



## USD

Kostnadsutvikling 2012 - 2015; Sløyd, laks m/hode  
Levert, iset & pakket ex. Slakteri - Ex. renter - USD/kg



- Samme rekkefølge begge årene som målt i NOK
- Men endringen fra 2012 til 2015 er annerledes

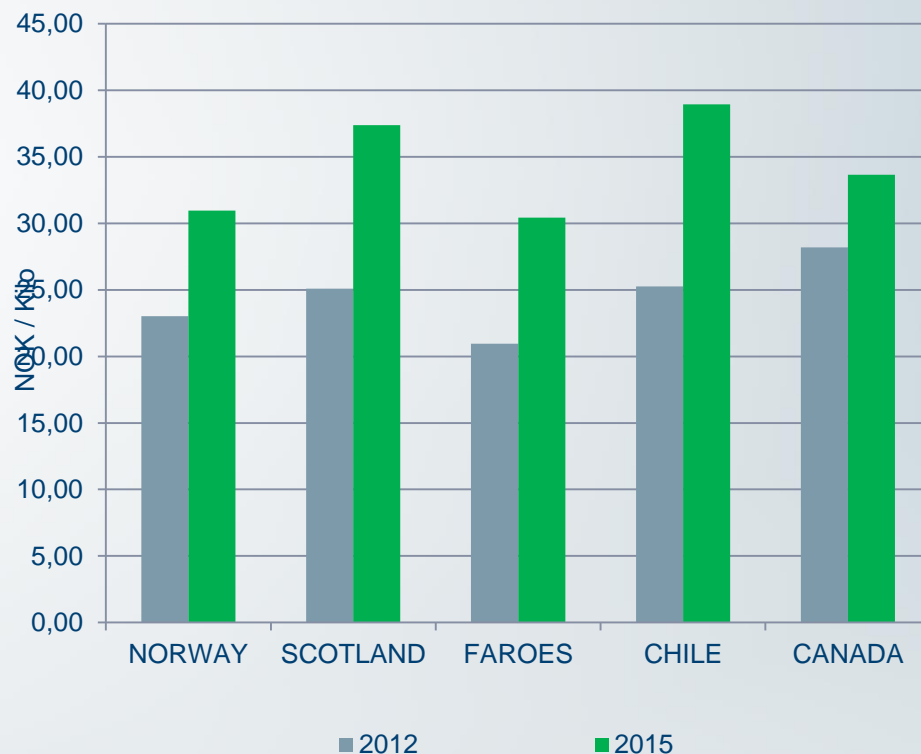
# Canada vs Norway: Cost gap is narrowing

## Norway vs Canada:

**2012:** + 22,5 %

**2015:** + 8,6 %

Kostnadsutvikling 2012 - 2015; Sløyd, laks m/hode  
Levert, iset & pakket ex. Slakteri - Ex. renter - NOK/kg

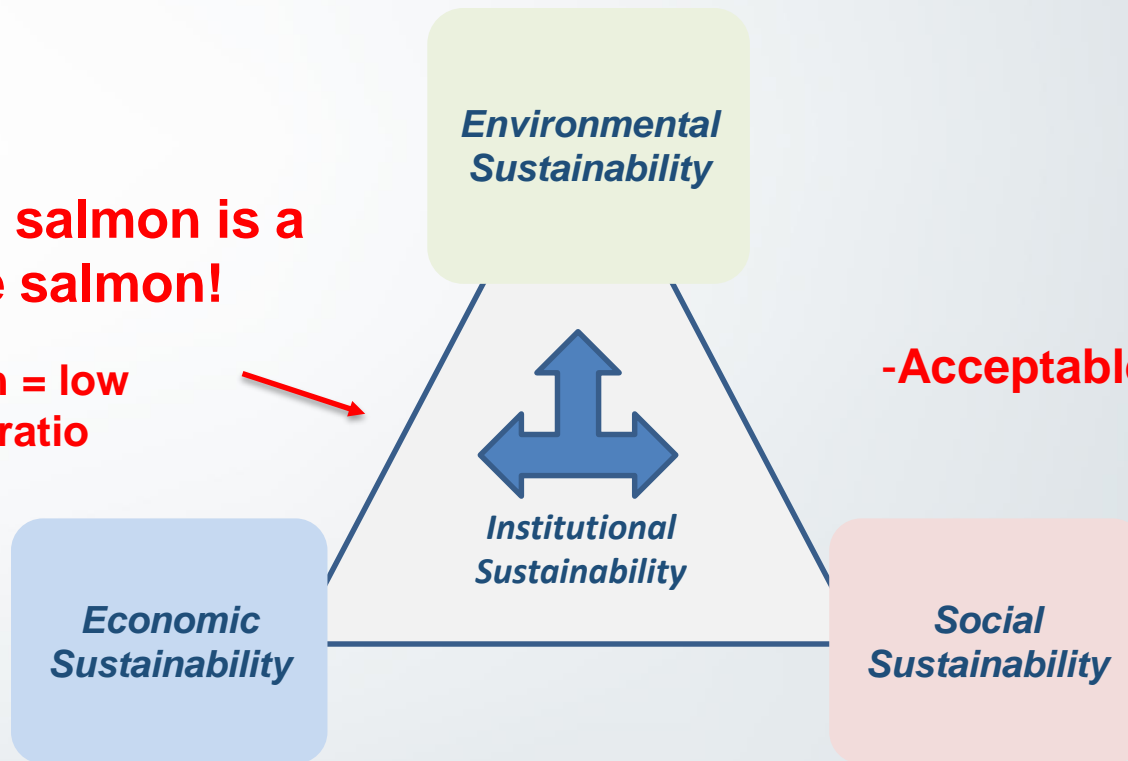


# Sustainability and competitiveness – no conflict!

-One possible exception to this rule: external effects

**A healthy salmon is a profitable salmon!**

-Good fish health = low feed conversion ratio



-Acceptable footprint?

**Thank you for  
your attention!**

