

Gill Health Initiative, Oslo 21-23 May, 2014

Update of the Fish Disease Situation in Norway

Brit Hjeltnes

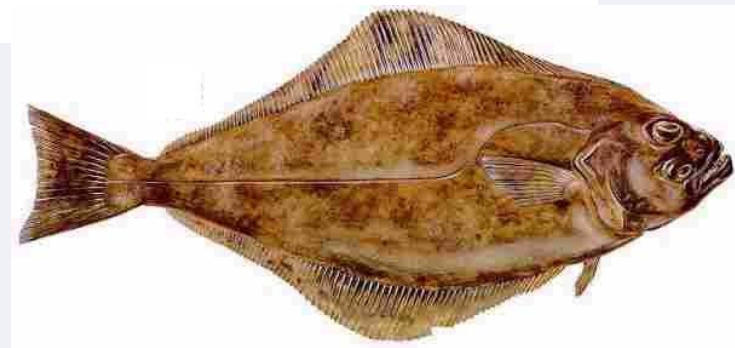
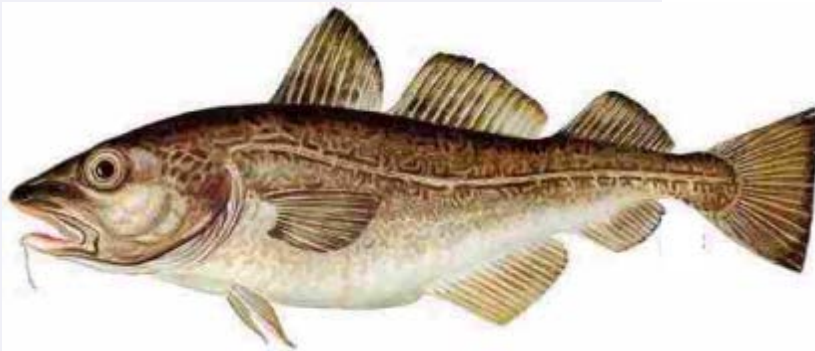
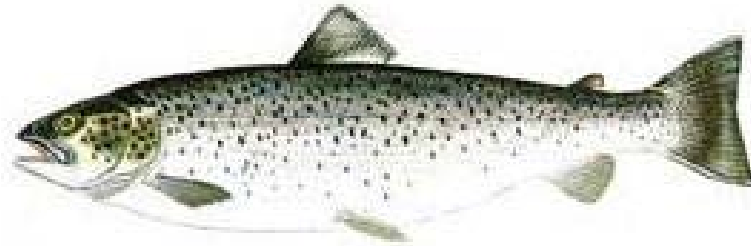


Veterinærinstituttet
National Veterinary Institute

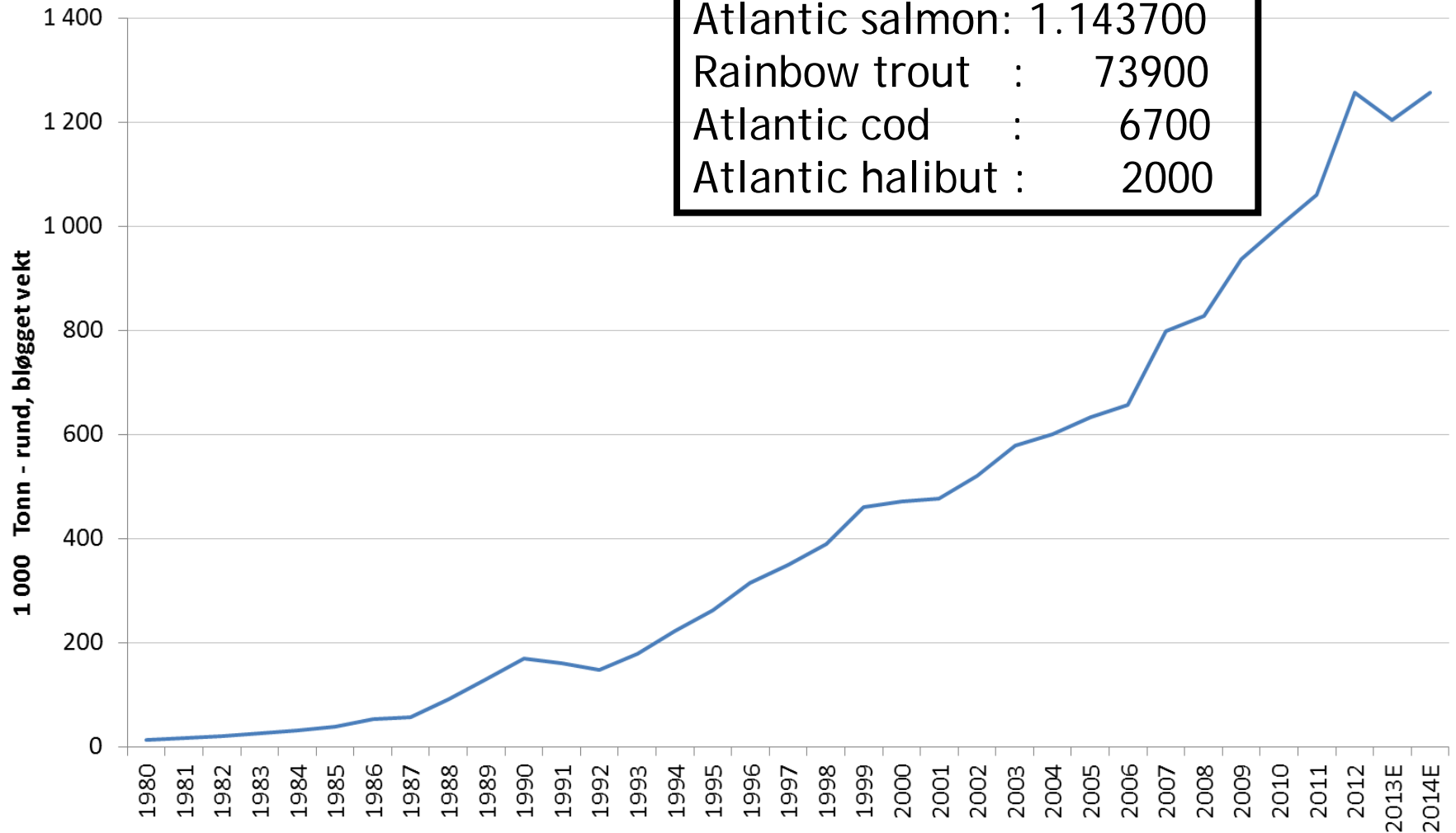


THE MAJOR SPECIES

- Salmon
- *Rainbow trout*
- *Atlantic halibut*
- *Cod*



Norwegian production (tons) of Atlantic salmon and rainbow trout 1980-2014

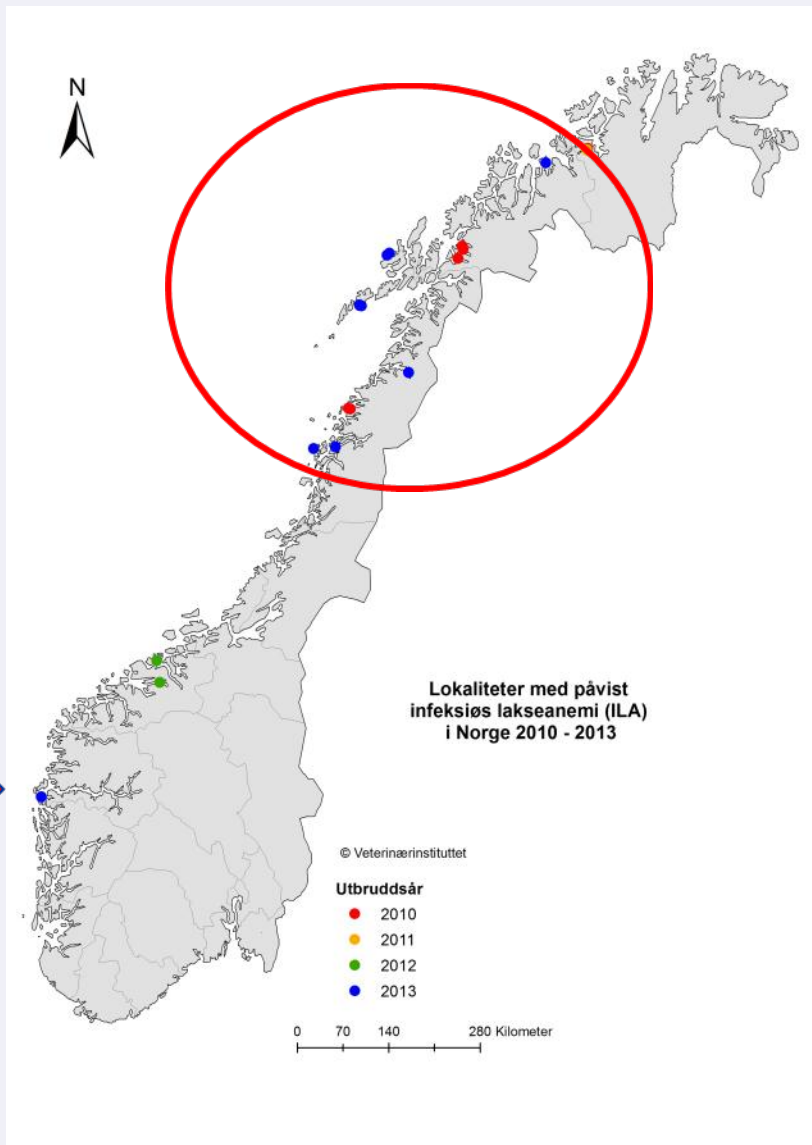


MAIN PRODUSERS EUROPE 2012

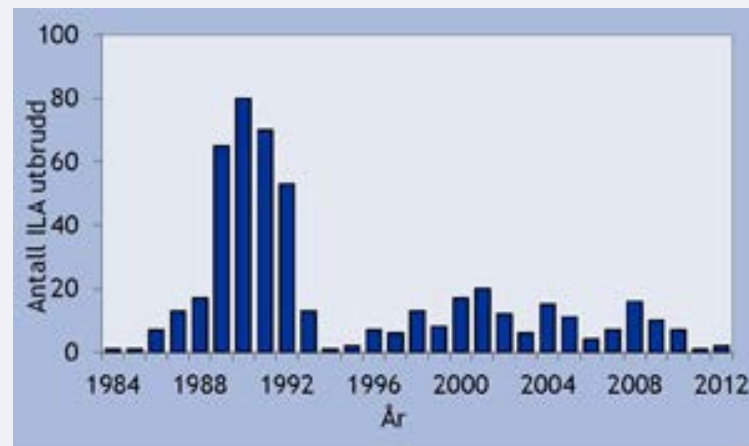
Norway	1183000
UK	156000
Faroe Islands	70000
Ireland	16000
Iceland	1000



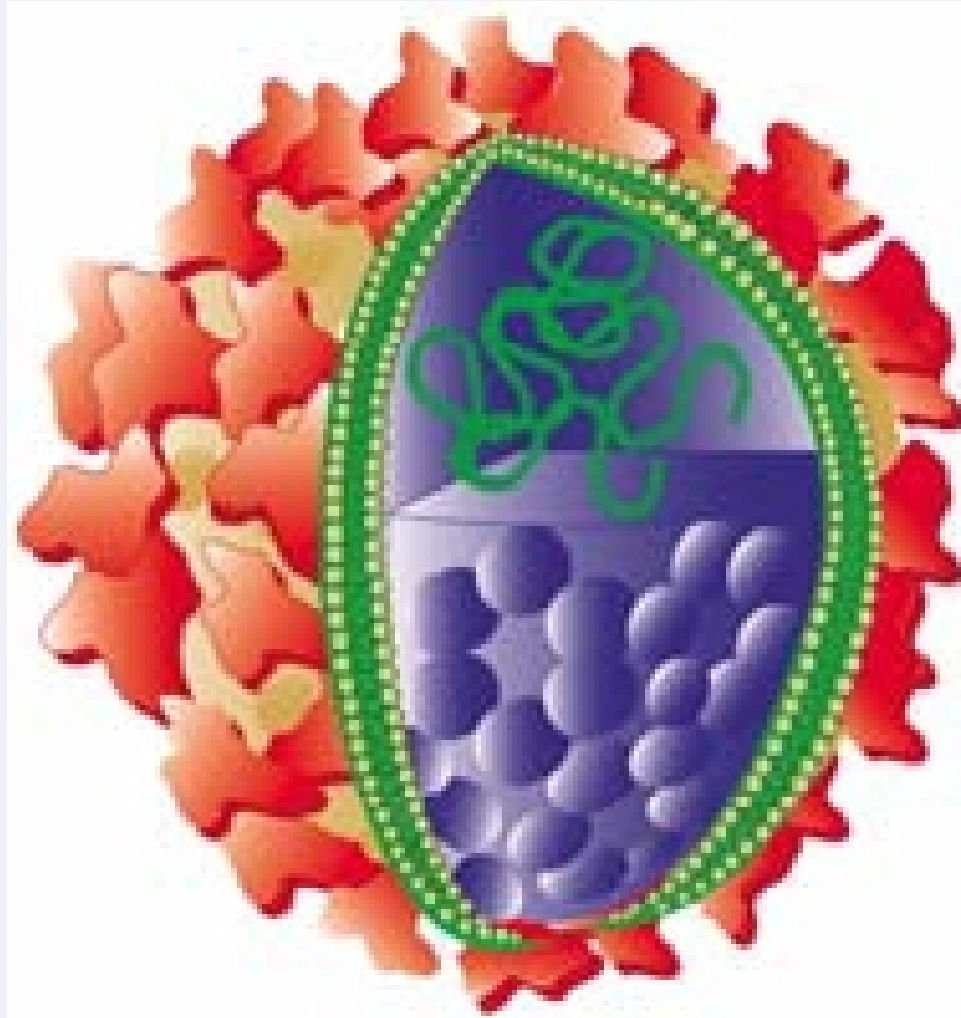
Infectious Salmon Anaemia (ISA)



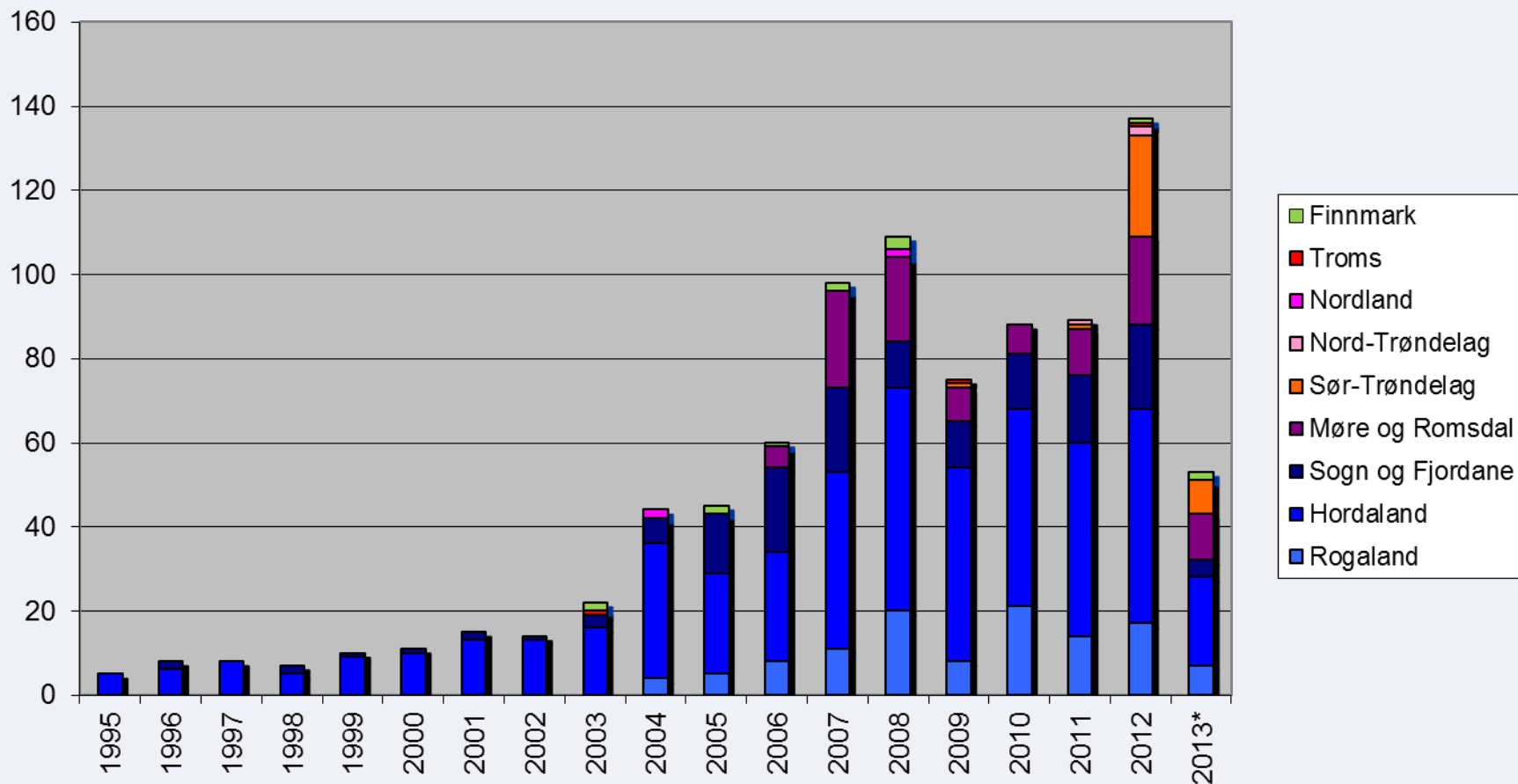
2014	3
2013	10
2012	2
2011	1
2010	7
2009	10



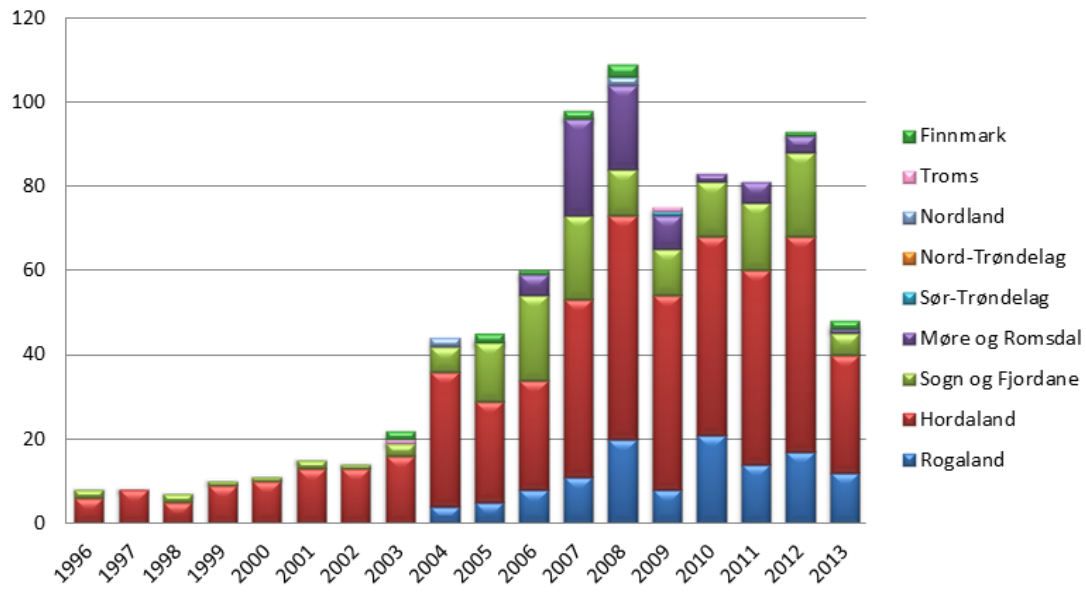
Infections with Salmonide alphavirus (Salmon Pancreas Disease)



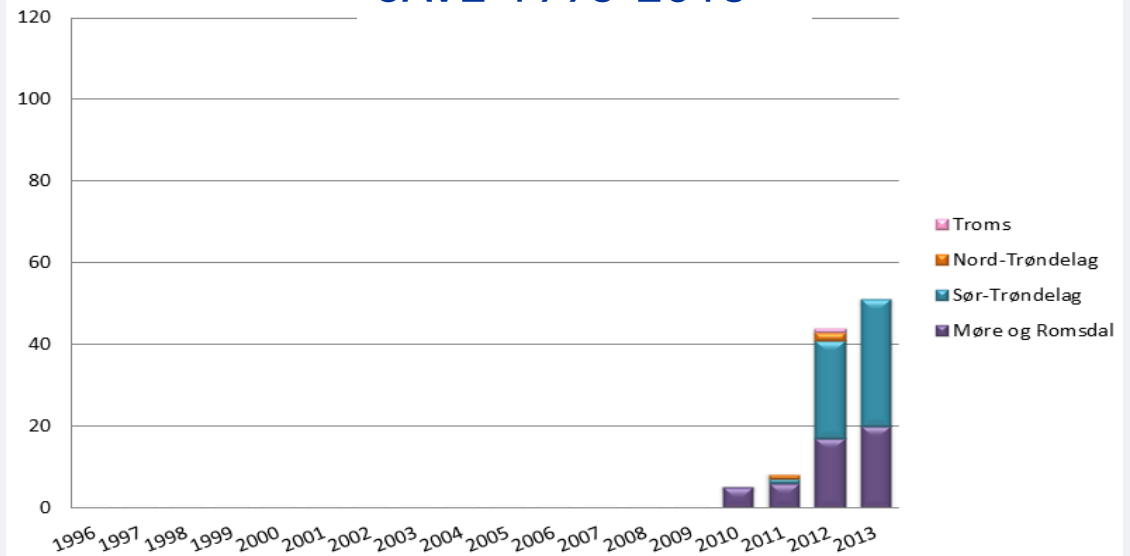
SAV. Distribution by county 2019-2013



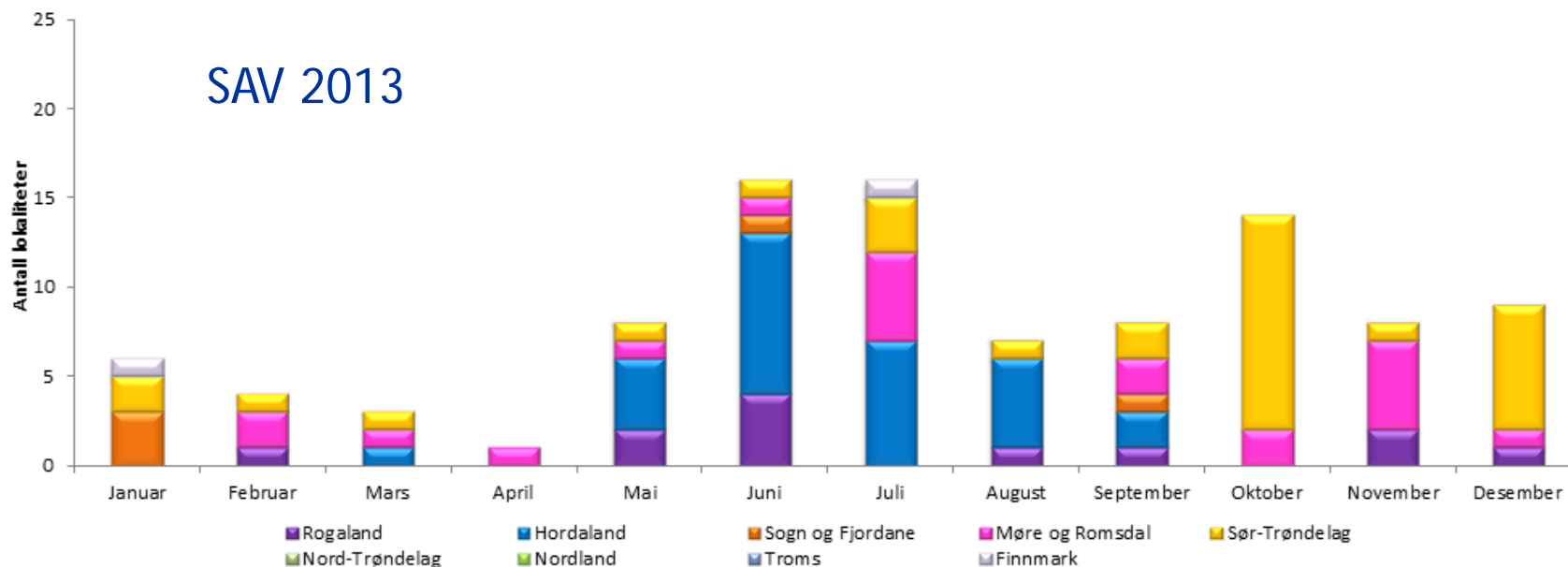
SAV3 1996-2013



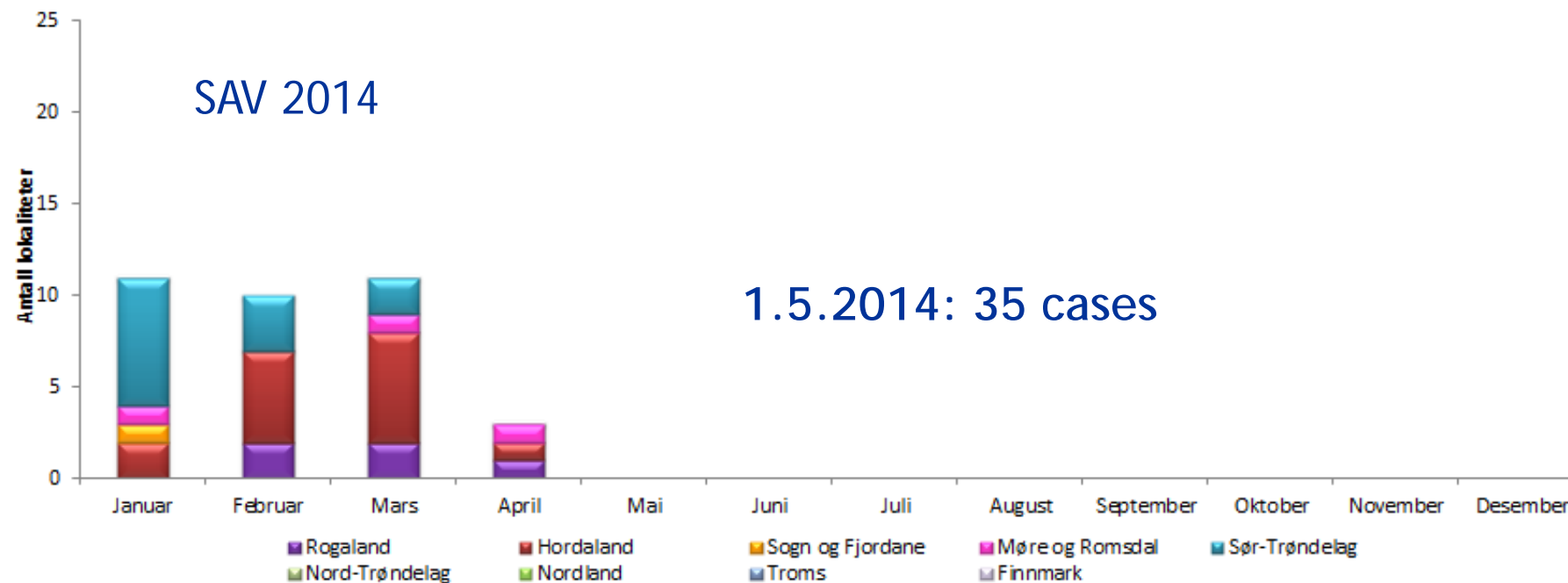
SAV2 1996-2013



SAV 2013



SAV 2014



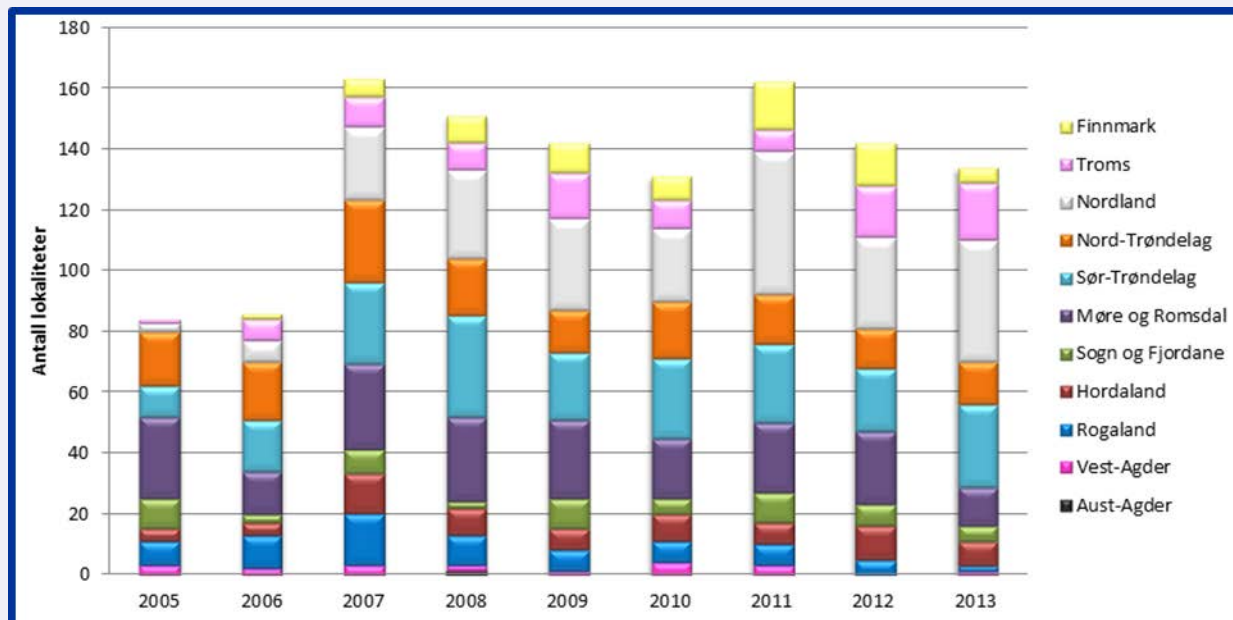
1.5.2014: 35 cases



Heart and skeletal muscle inflammation (HSMI)

2013: 134
2012: 142
2011: 162
2010: 31

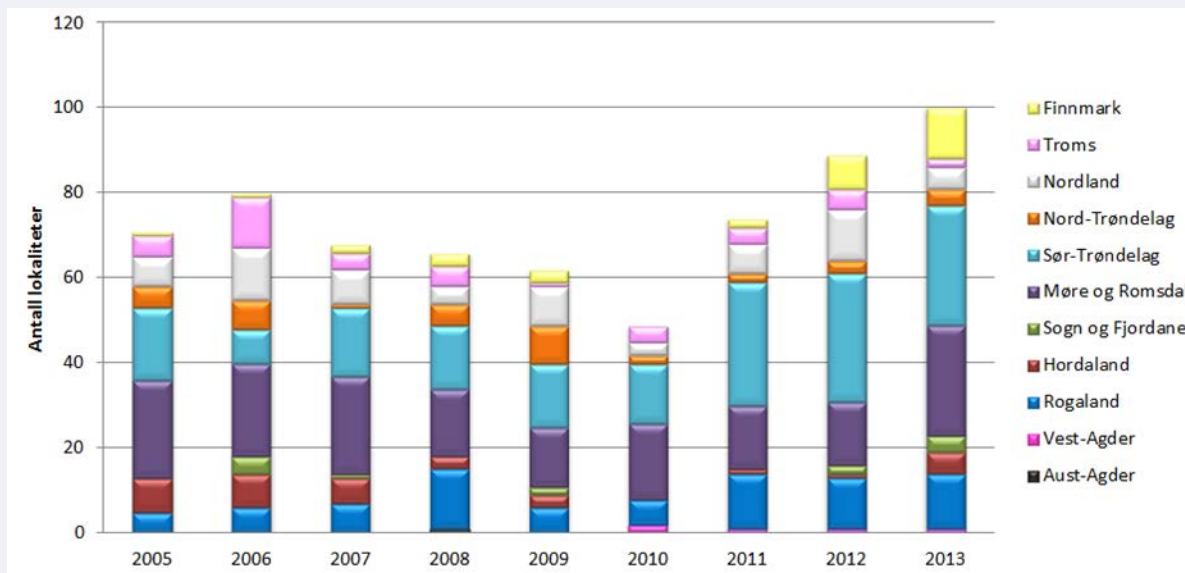
- Wide spread
- Associated with a new reovirus: piscine reovirus (PRV)
- PRV is commonly detected in healthy farmed salmon and in wild salmon
- Included on the national disease list. This is being evaluated



Cardiomyopathy syndrome (CMS)

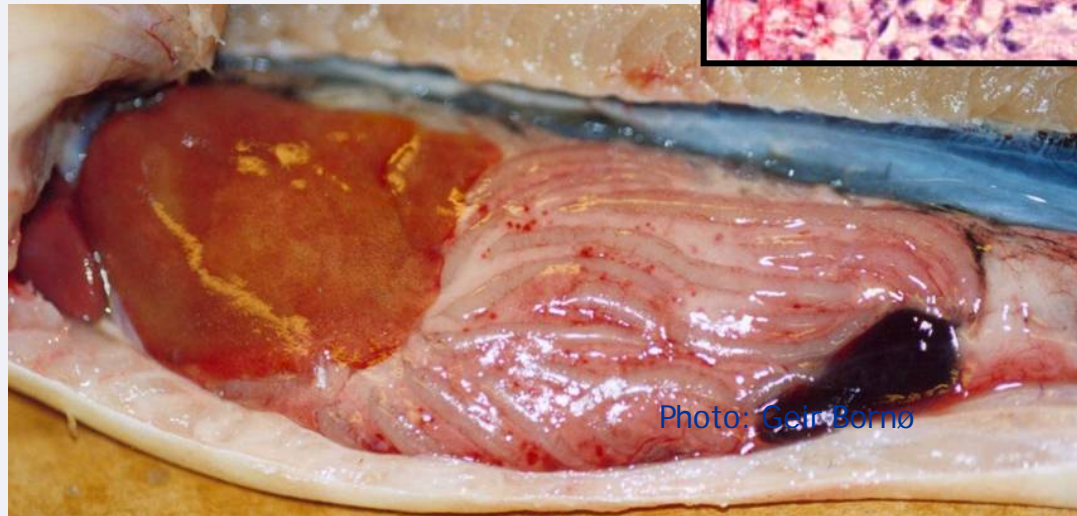
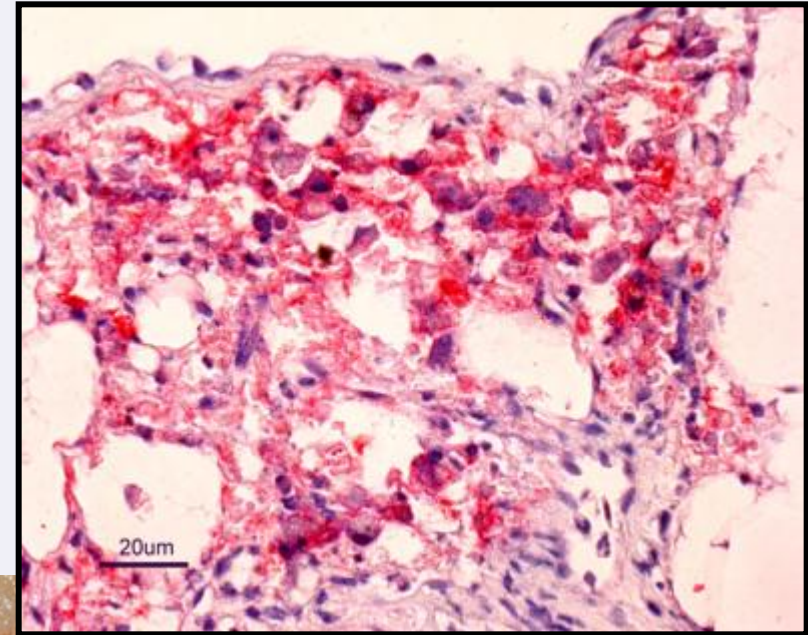
- Large, marked size fish
- Accumulated mortality seldom above 20%
- Associated with a new totivirus: piscine myocarditis virus (PMCV)
- PMCV only detected in salmon suffering from CMS

2013 **100**
2012 **89**
2011 **74**
2010 **53**

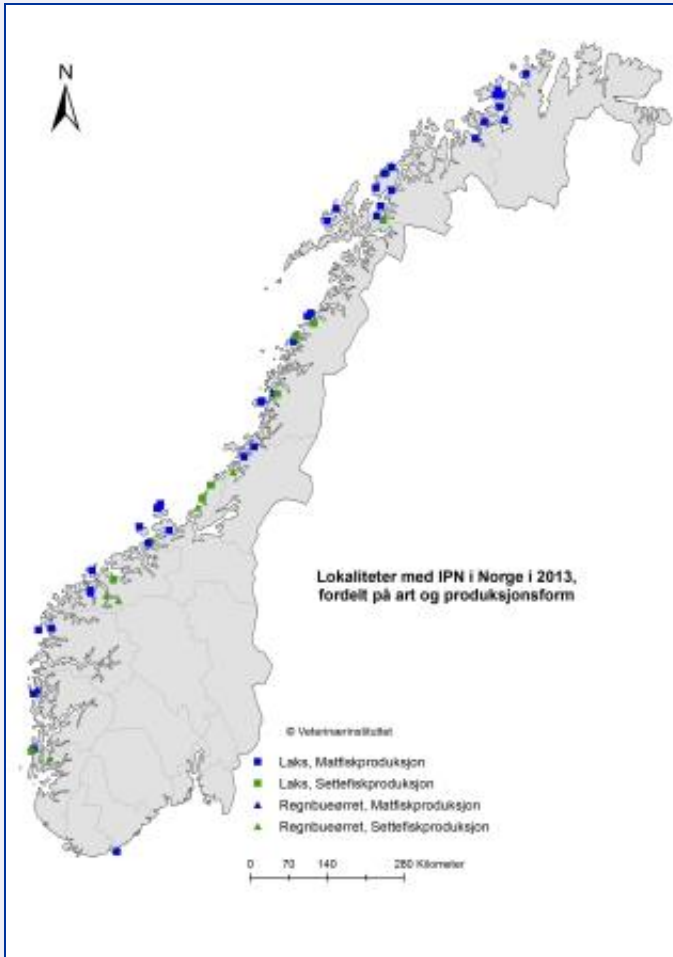


Infectious pancreatic necrosis (IPN)

A serious problem
in European
farming of Atlantic
salmon



Infectious pancreatic necrosis (IPN) 2013



Marine water: 39

Fresh water: 17

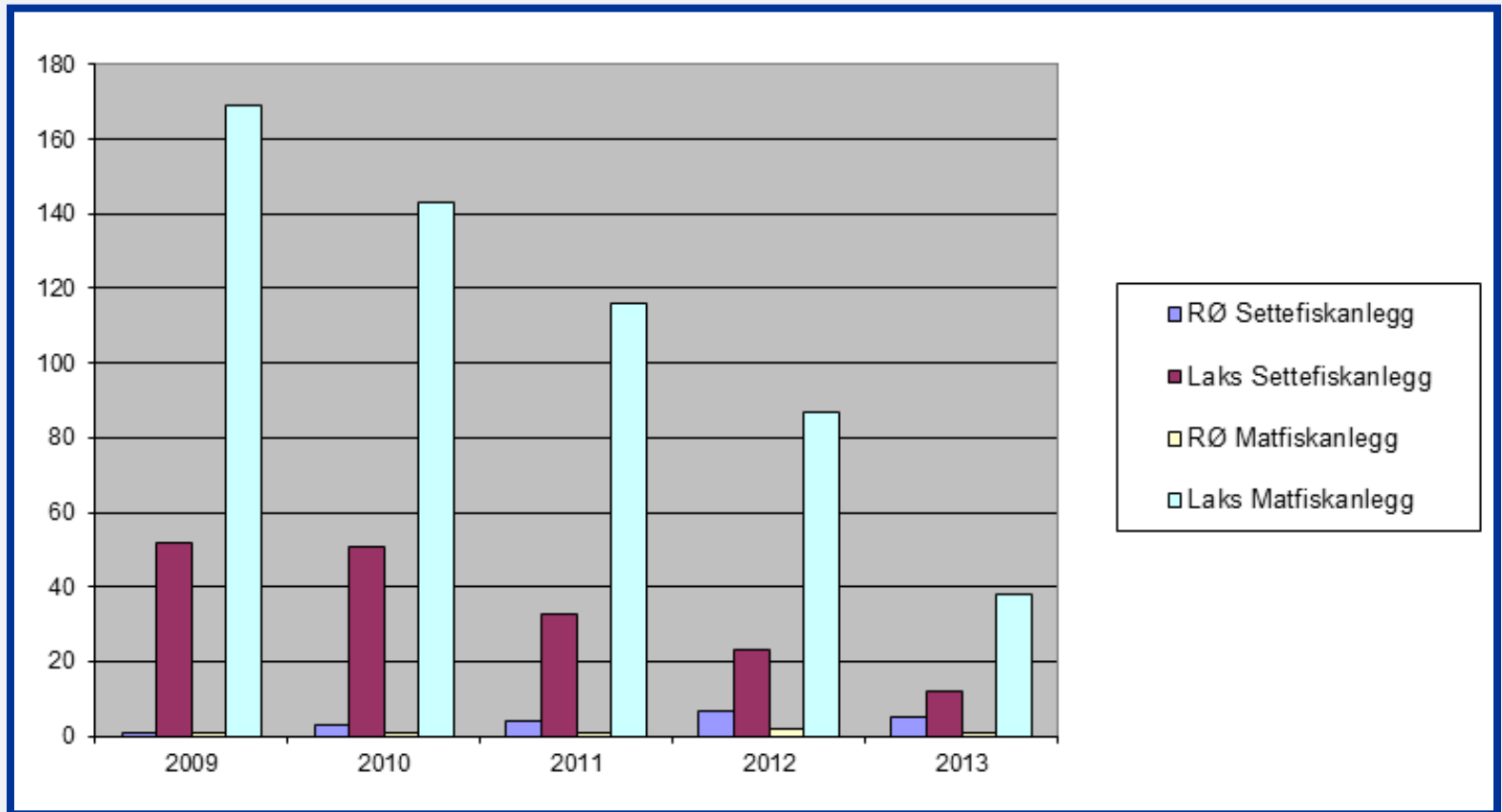
Broodstock:

Salmon (AS): 50

RBT: 6

Infectious pancreatic necrosis (IPN)

2009-2013 RBT (freshwater/marine), AS (freshwater/marine)



Vibrio salmonicida

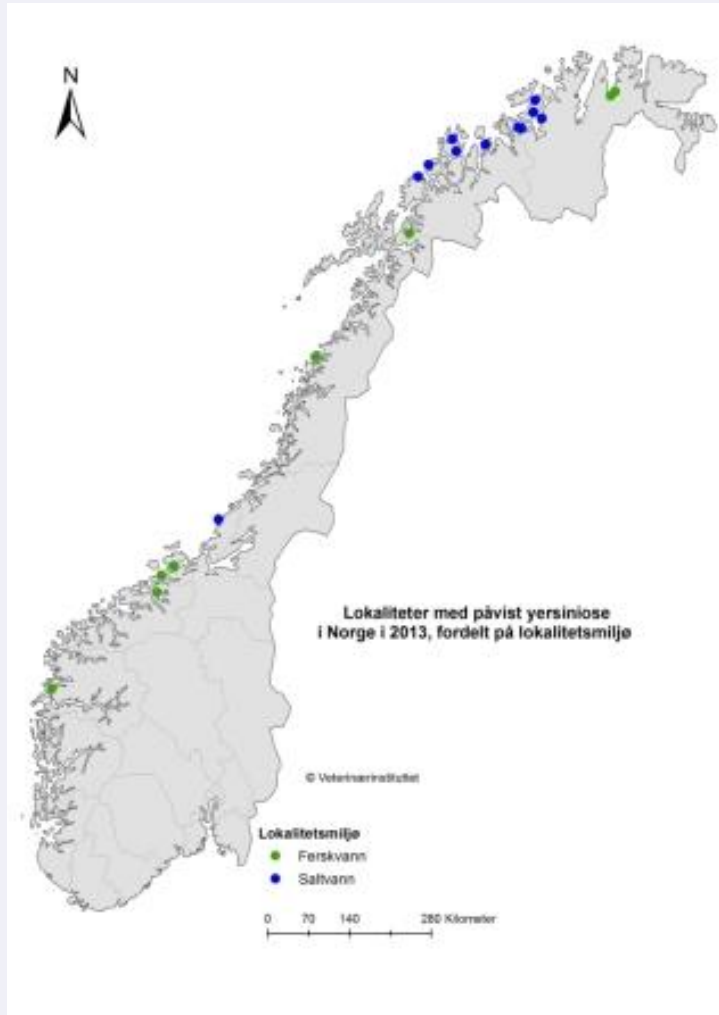
2013: 13 sites

2012: 21 sites



Yersinia 2013 (2012)

20 (16) sites



Flavobacterium 2013 (2012)

5 (12) sites



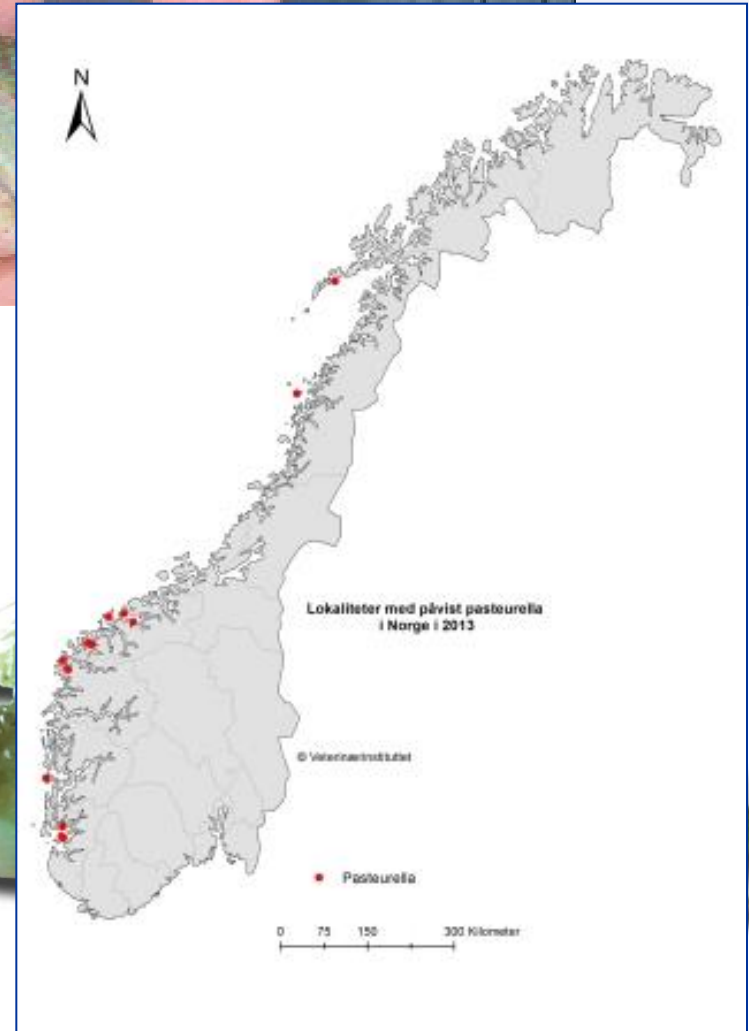


- 1978- Chemical treatment
- 1990 - New chemical compounds
- 2000 - New chemical compounds
- 2007 - Increased resistance
- 2013: A major fish health problem

Salmon lice

Increasing resistance to
anti sea lice chemicals

Cleaner fish



Vibriois
Atypical furunculosis
Pasteurella sp.

AGD

Paramoeba perurans

First detected in 2006

Second detection in 2012



2013

58 sites

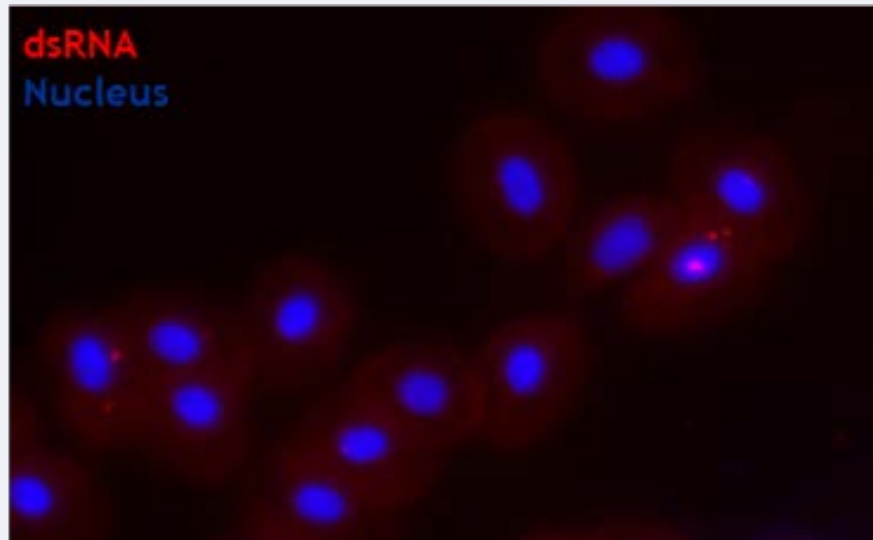
Western Norway (Vest Agder - Møre og Romsdal)

90% in October/November

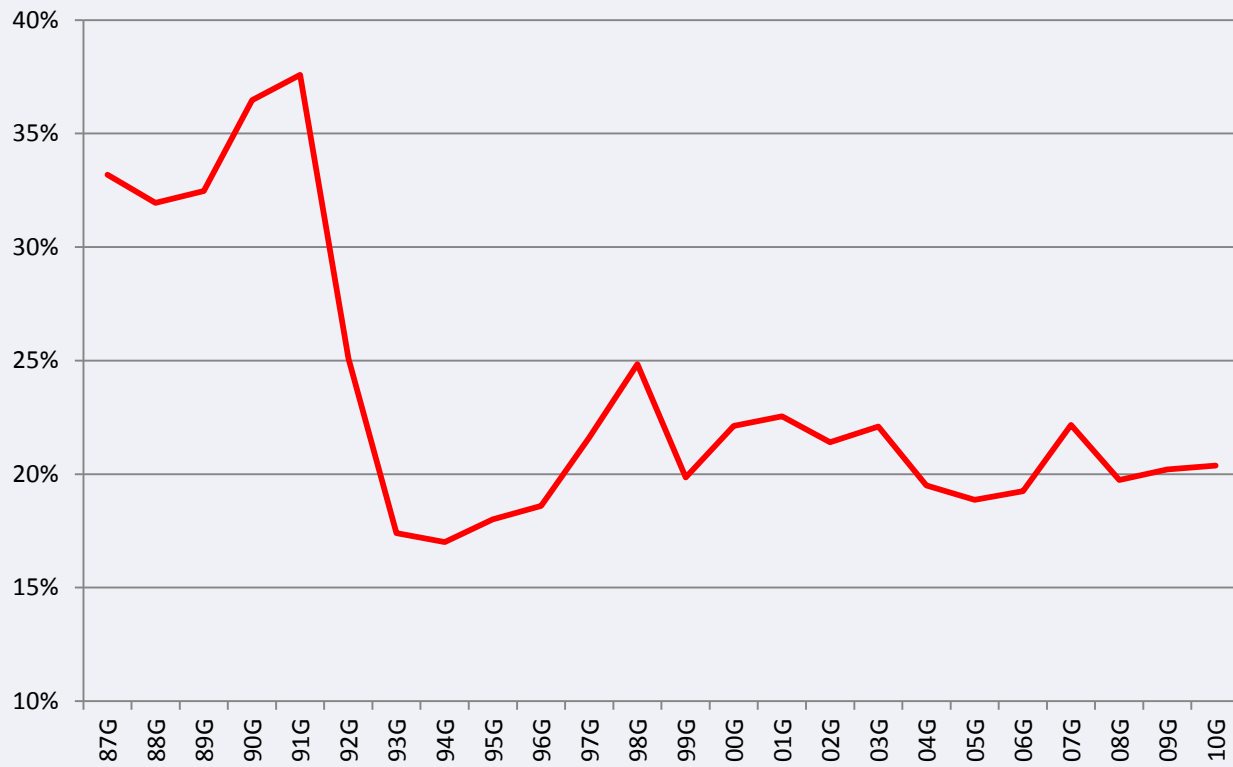
Several treatments



A new disease in rainbow trout probably associated with a virus (VirusY)



- Three hatcheries in 2013 (one hatchery in 2014)
- Western Norway
- Rainbow trout 30-100g



Production losses



Smolt quality Production related diseases

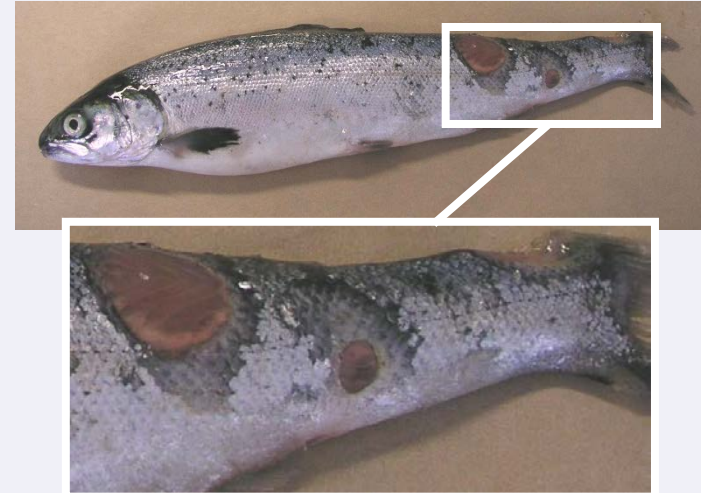
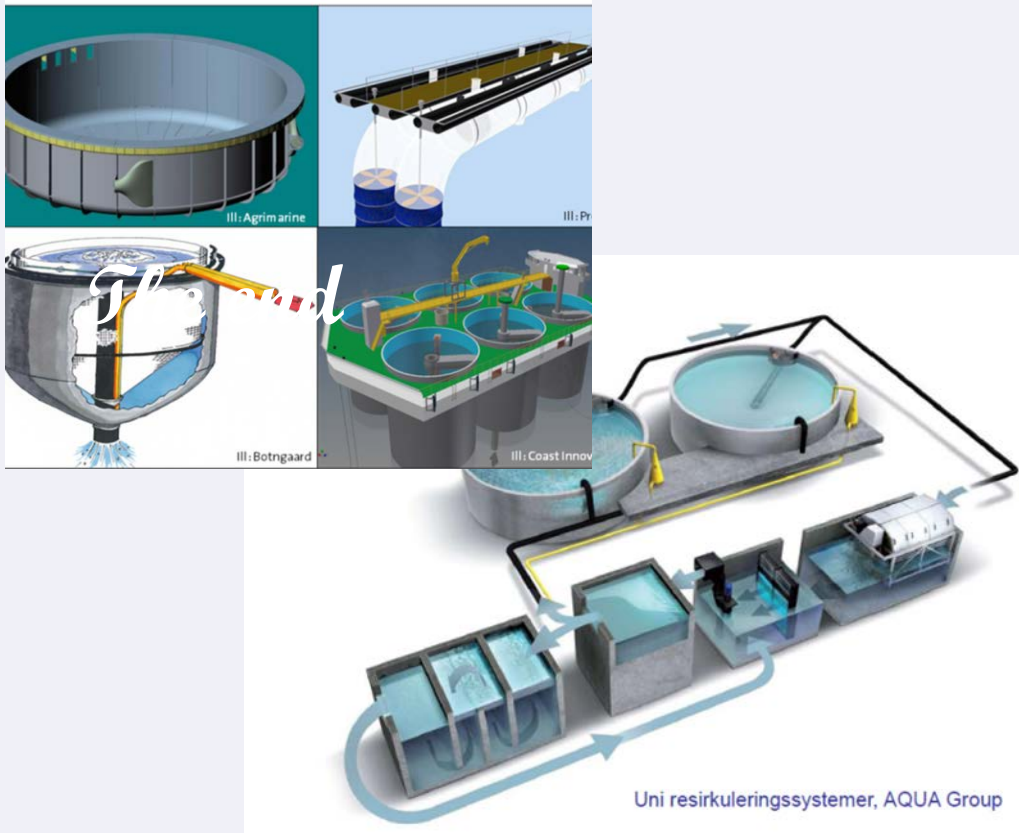


Foto: Geir Bornø, Veterinærinstituttet

CONCLUSIONS for 2013

- An increase in cases of infection with ISA
- Total cases of infection with SAV has decreased, but SAV 2 has increased.
- HSMI remains stable.
- CMS is increasing in no of reported cases.
- IPN continue to decreasing.
- A reduction in no of cases of cold water vibriosis compared to 2012.
- Increasing resistance to anti sea lice chemicals.
- AGD detected, but limited mortality.
- Production losses still high, but several companies shows decreasing losses.



Helsesituasjonen hos laksefisk 2009

Britt Bang Jensen
Attila Tarpai
Åse Helen Garseth
Hanne Ringjob Skjetstad
Renate Johansen
Ole Bendik Dale
Camilla Fritsvold
Hanne Nilsen
Øyvind Vaagnes
Kjell Flensjø
Svein Aune
Duncan Colquhoun
Irene Ørpetveit
Haakon Hansen
Peter Andreas Heuch
Brit Hjeltnes

Helsesituasjonen hos marin fisk 2009

Hege Holberg
Hanne K. Hilsen
Geir Børne
Hanne R. Skjetstad
Duncan Colquhoun
Britt Bang Jensen