

TriNation Meeting, Dublin, June 3-4th, 2015

Update of the PD, HSMI and CMS situation in Norway

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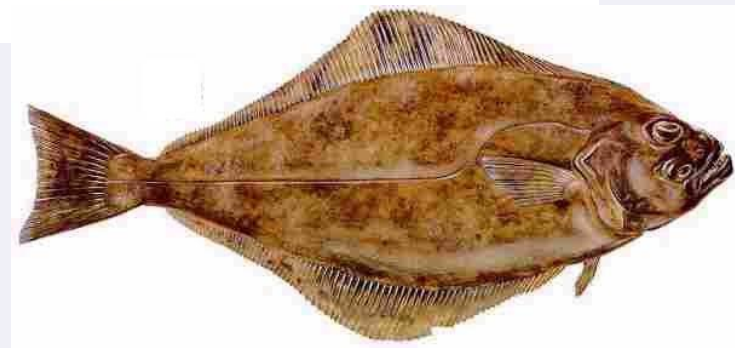
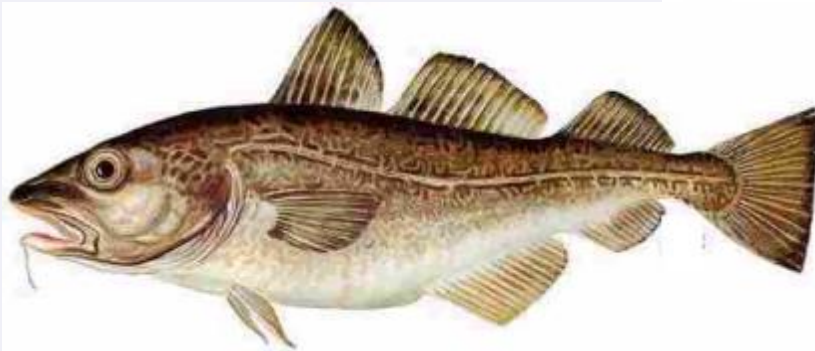


Veterinærinstituttet
National Veterinary Institute

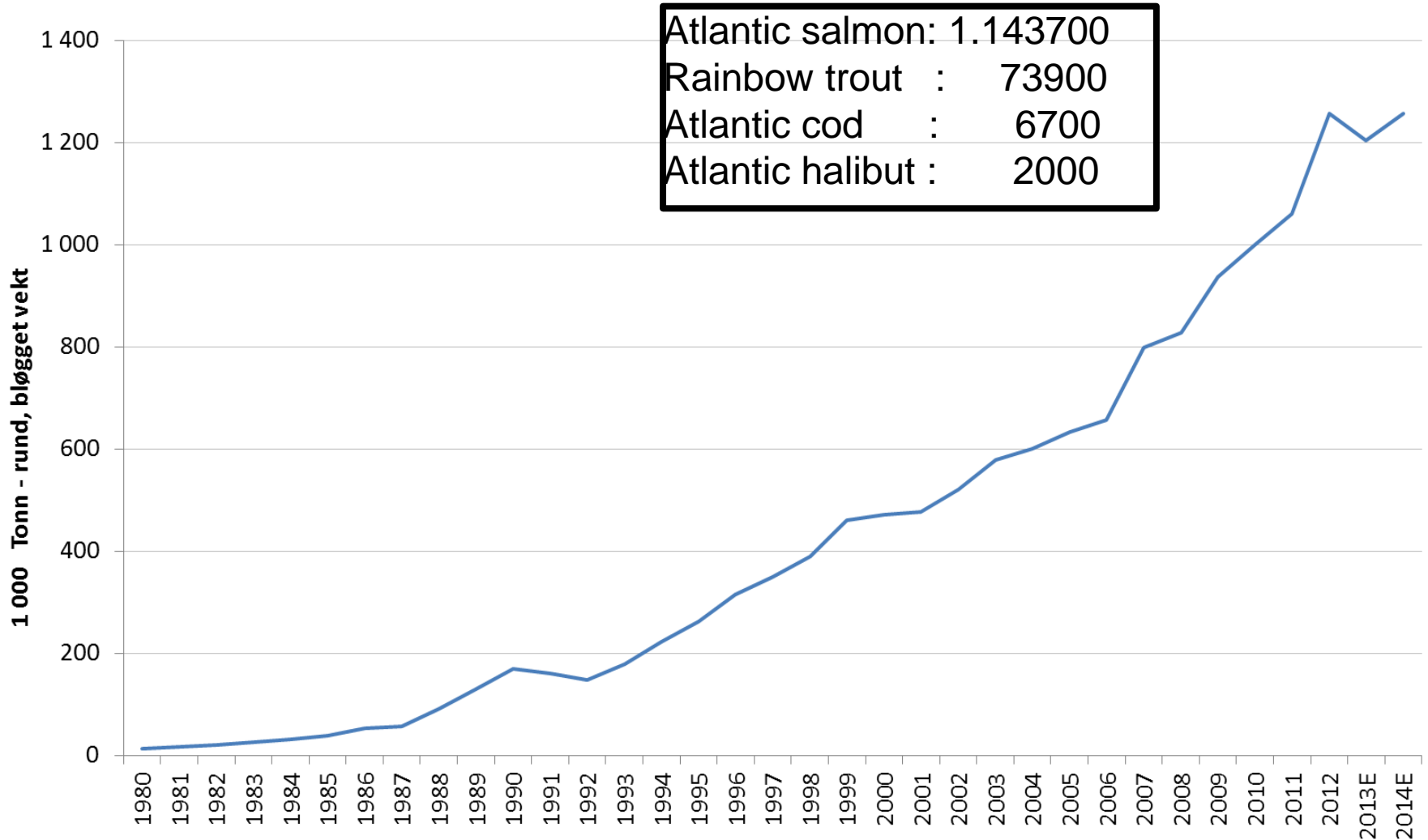


THE MAJOR SPECIES

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



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



Infections with Salmonid alphavirus

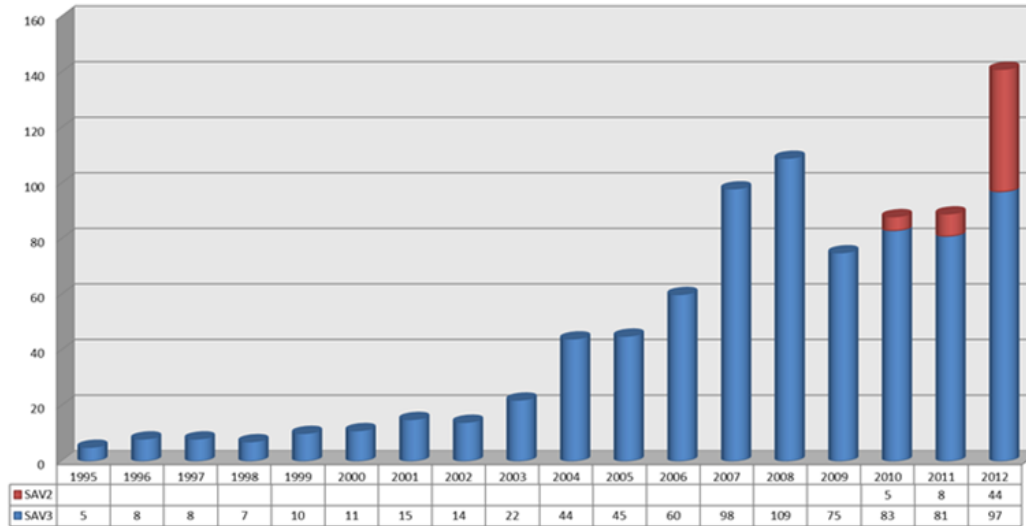
(Salmon Pancreas Disease)



Scotland 1976
Norway 1980s

Infections with Salmonid alphavirus (Salmon Pancreas Disease)

Antall årlige PD-utbrudd fordelt på subtype

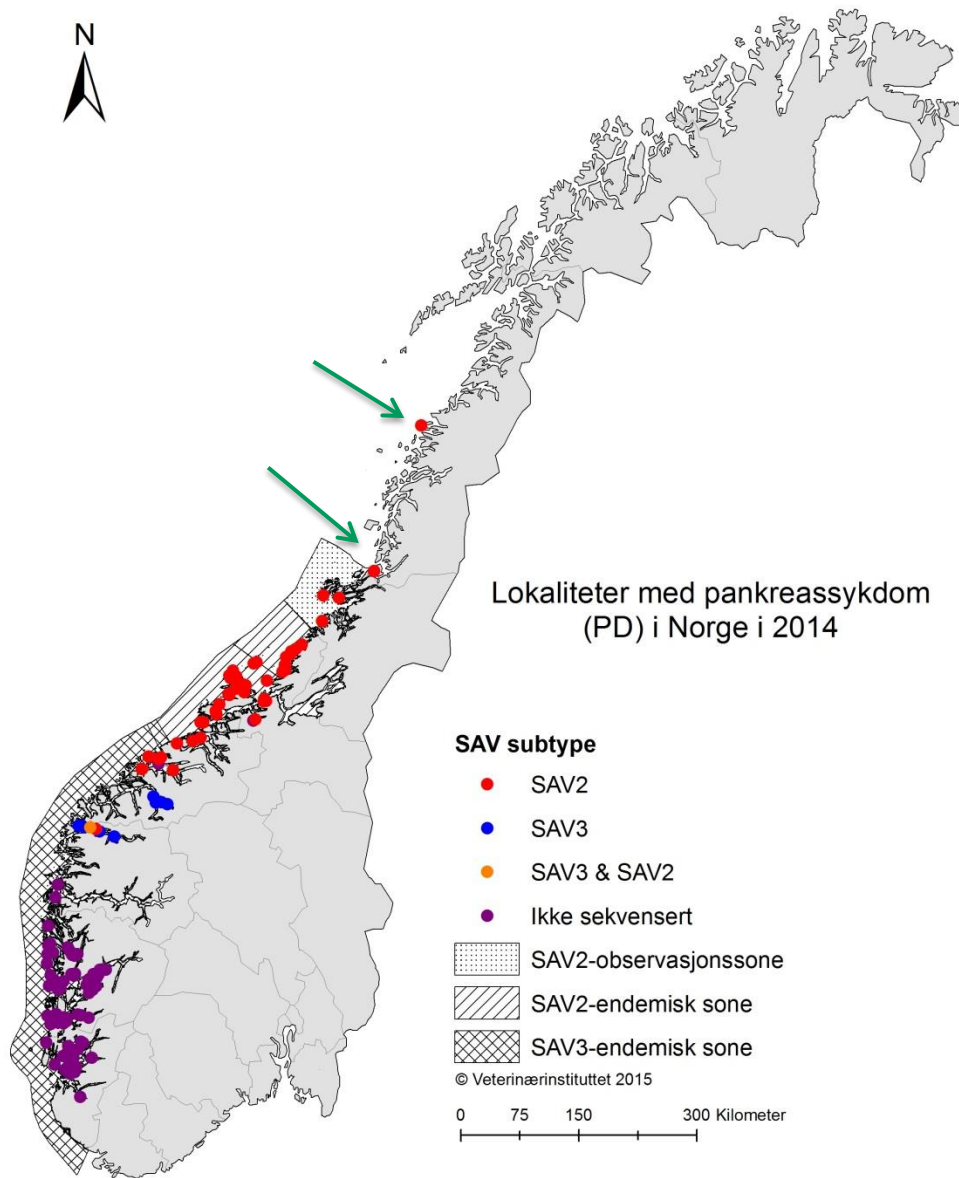


2014: 142
2013: 99
2012: 137



1995-2002: Limited distribution, slow increase in no of cases
 2003-2008: Spread south and north, increased no of cases
 2009: Decline in no of cases
 2010: SAV2





2014: 142

10 years

2004: 43

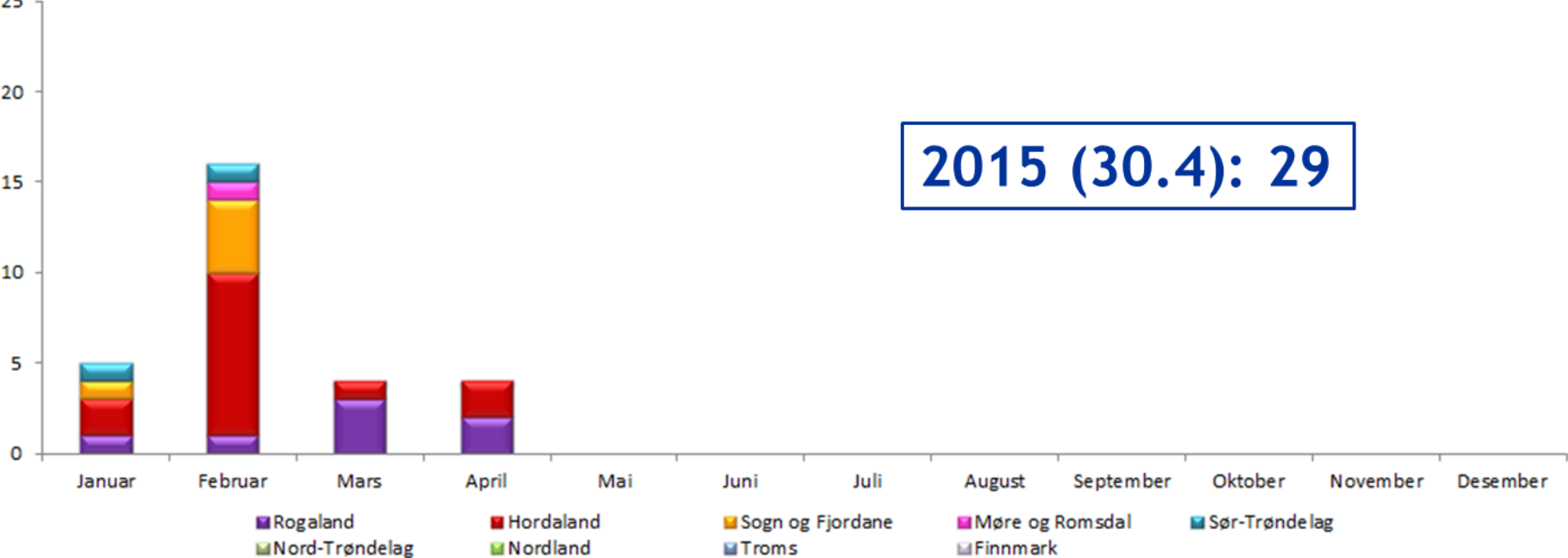
SAV 3

SAV 2



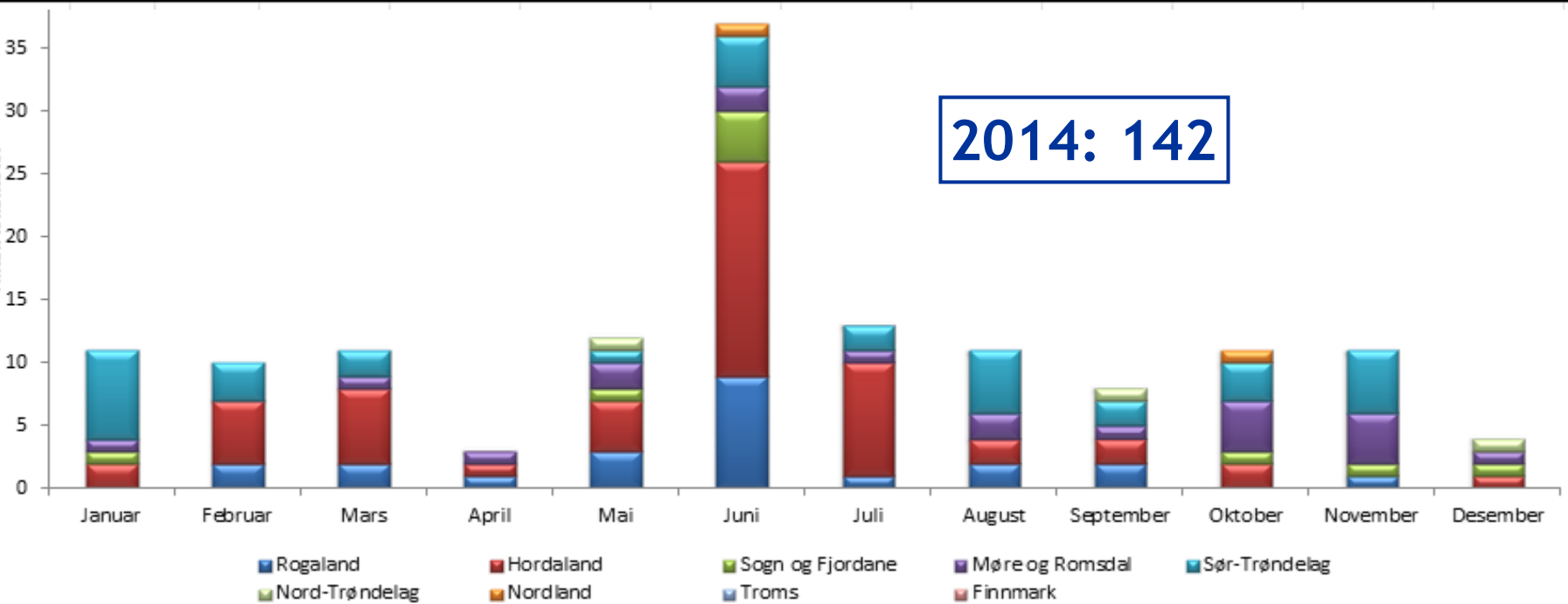
2015 (30.4): 29

Antall lokaliteter



2014: 142

Antall lokaliteter



Transmission:

Horizontal

Through water

Infected fish 

Vectors (wellboats) 

Main reservoir:

Infected farmed fish 



Heart and skeletal muscle inflammation (HSMI) PRV (Piscine orthoreovirus)

First detected in 1999
1999-2001: 12-15 cases a year
Mortalities: Insignificant - 20%



Heart and skeletal muscle inflammation (HSMI) PRV (Piscine Orthoreovirus)

2002: >41

2003: 57

2004: 54

2005: 83

2006: 94

2007: 162

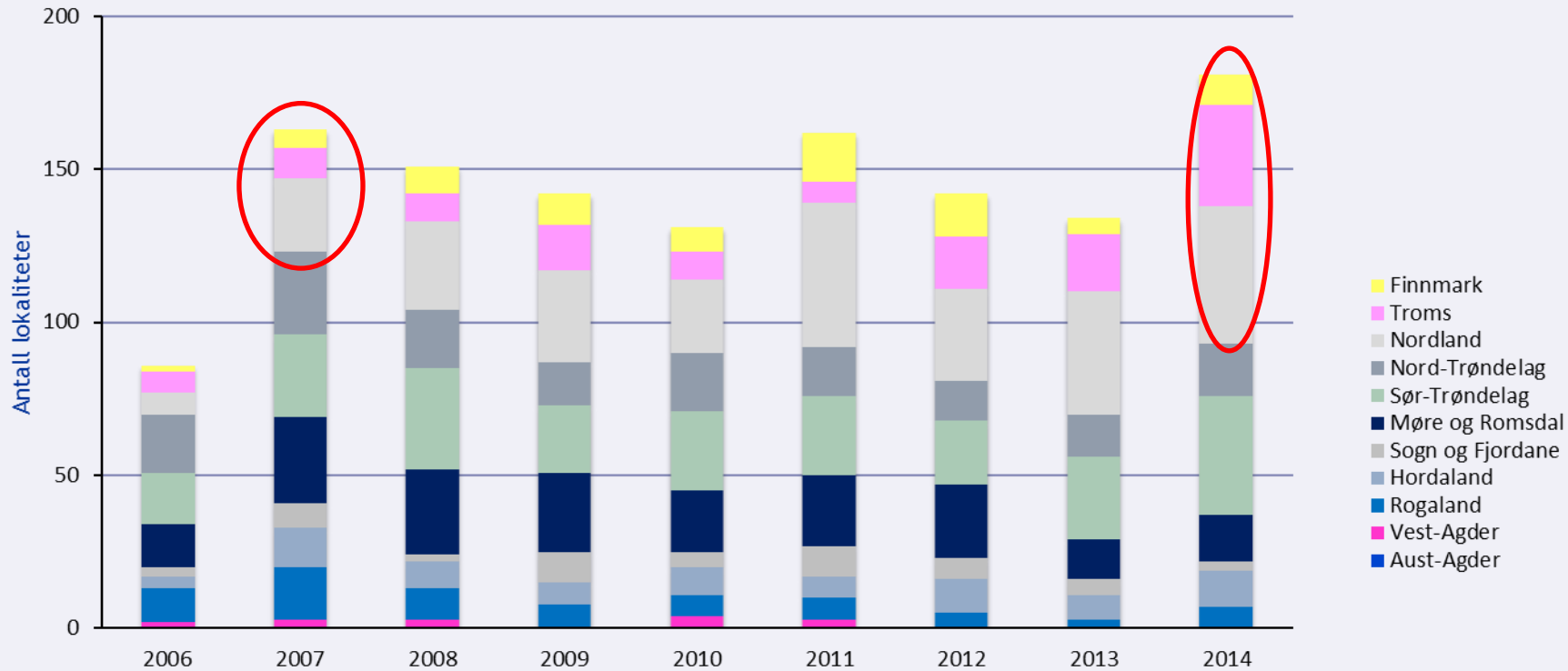
2008: 144

2009: 139

2010: 131



Heart and skeletal muscle inflammation (HSMI) PRV (Piscine orthoreovirus)



2014	181
2013	134
2012	142
2011	162
2010	131

HSMI has increased in no of cases
Spread to Northern Norway
Hatcheries

We do not know a lot about the transmission
Horizontally through the water
Vertically?

Delisted in 2014 from Norwegian National list

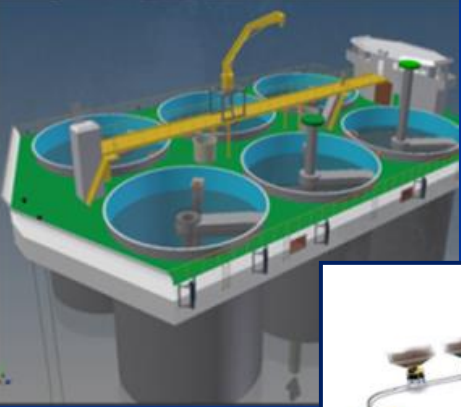
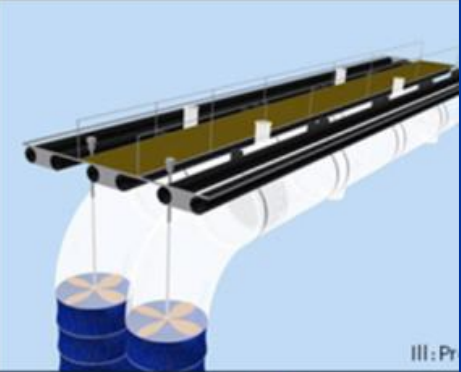
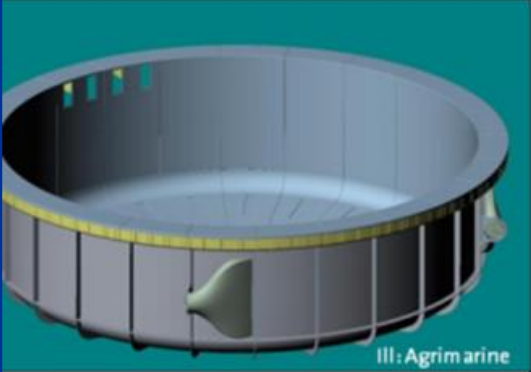




Treatment

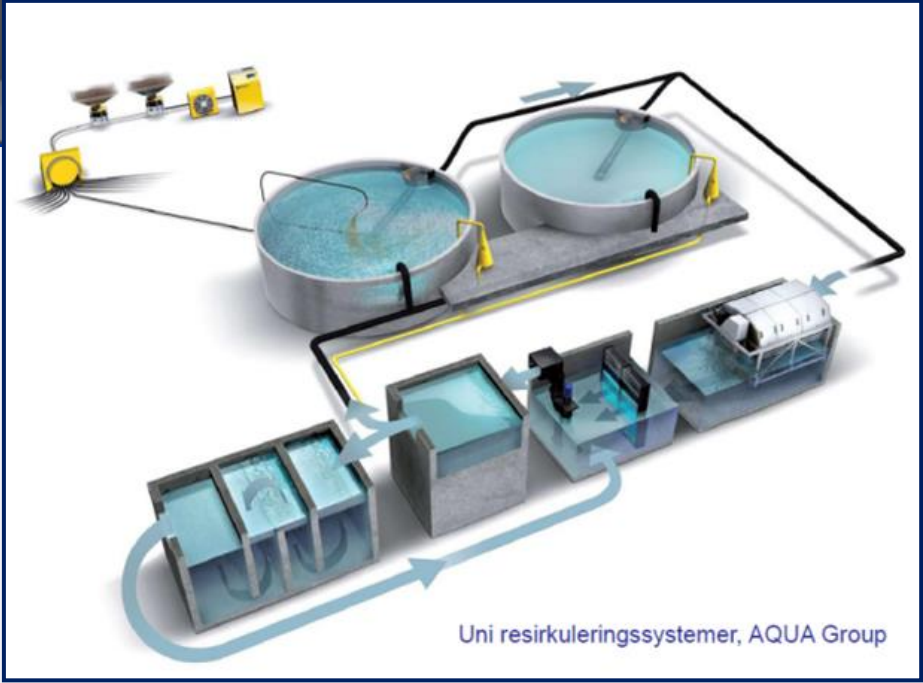


We need a more robust fish

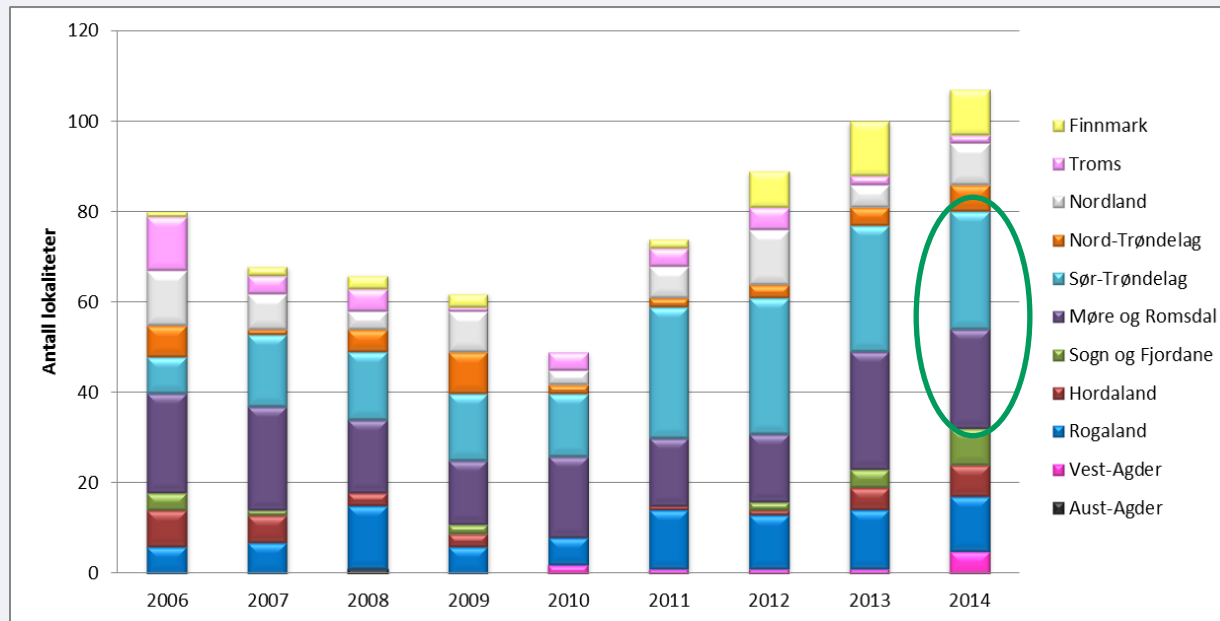


The end

New technology



Cardiomyopathy syndrome (CMS) PMCV (Piscine myocarditis virus) - Totivirus



2014	107
2013	100
2012	89
2011	74
2010	53
2009	85
2008	75
2007	76

Increasing no of cases



Thanks to a large number of colleagues at the NVI
Thanks to the Norwegian fish health services
Thanks to Espen Rimstad, Øystein Wessel and Hanne Haatveit



Thank you for your attention

