



Veterinærinstituttet  
*Norwegian Veterinary Institute*

# PD, HSMI and CMS in Norway

2023 - An overview

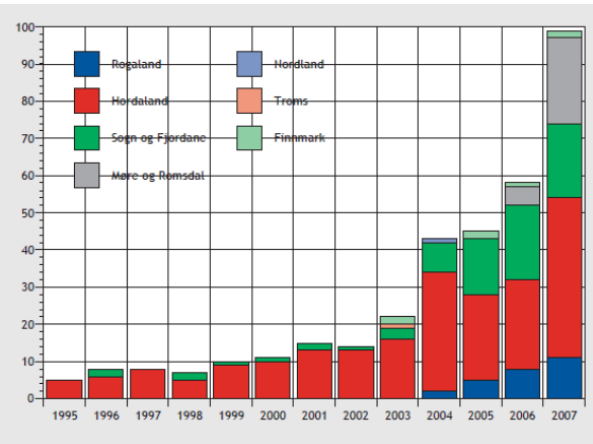
Hilde Sindre/Senior Researcher, WOAH expert SAV/Section Research Fish Health



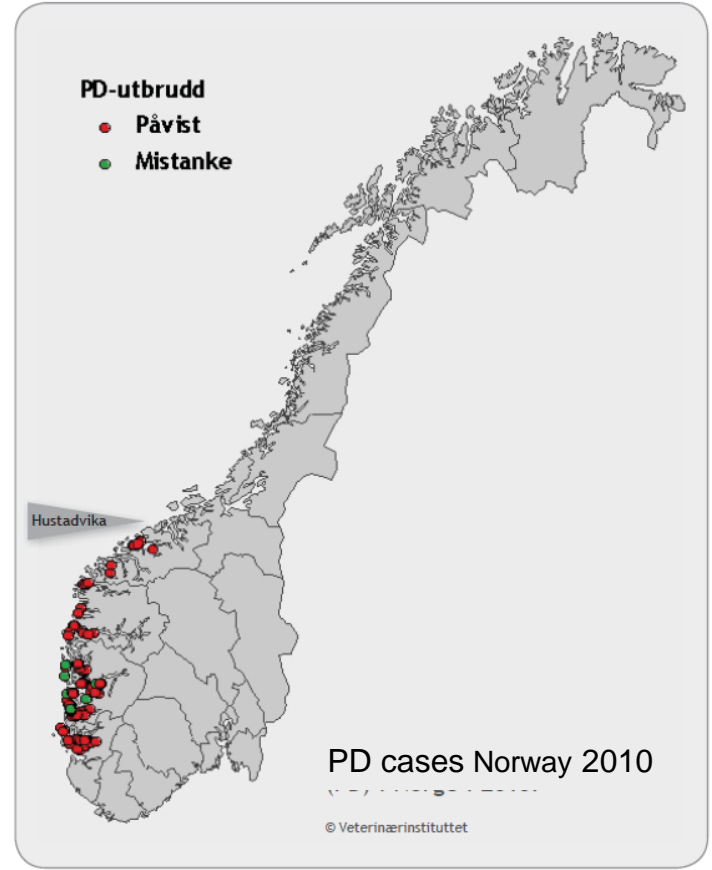
# PD in Norway - the beginning:



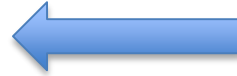
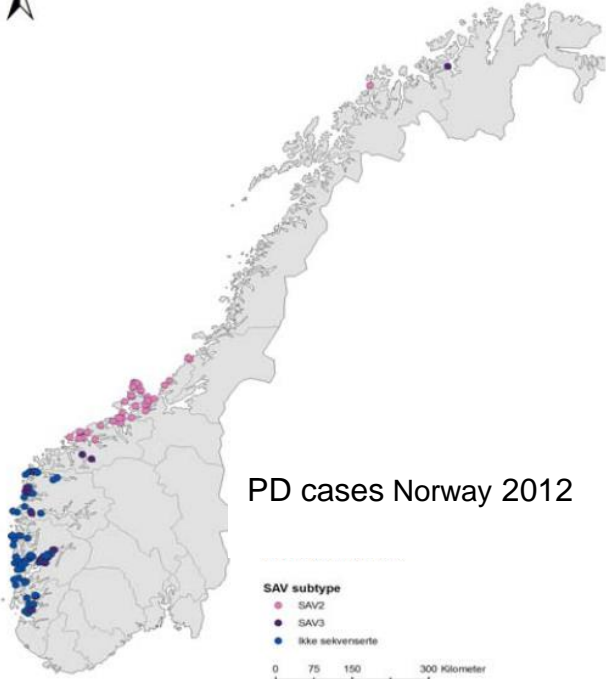
1995-2007



2007:  
PD  
notifiable  
disease



# PD in Norway - spreading:



First  
detection of  
SAV2 in  
north-west

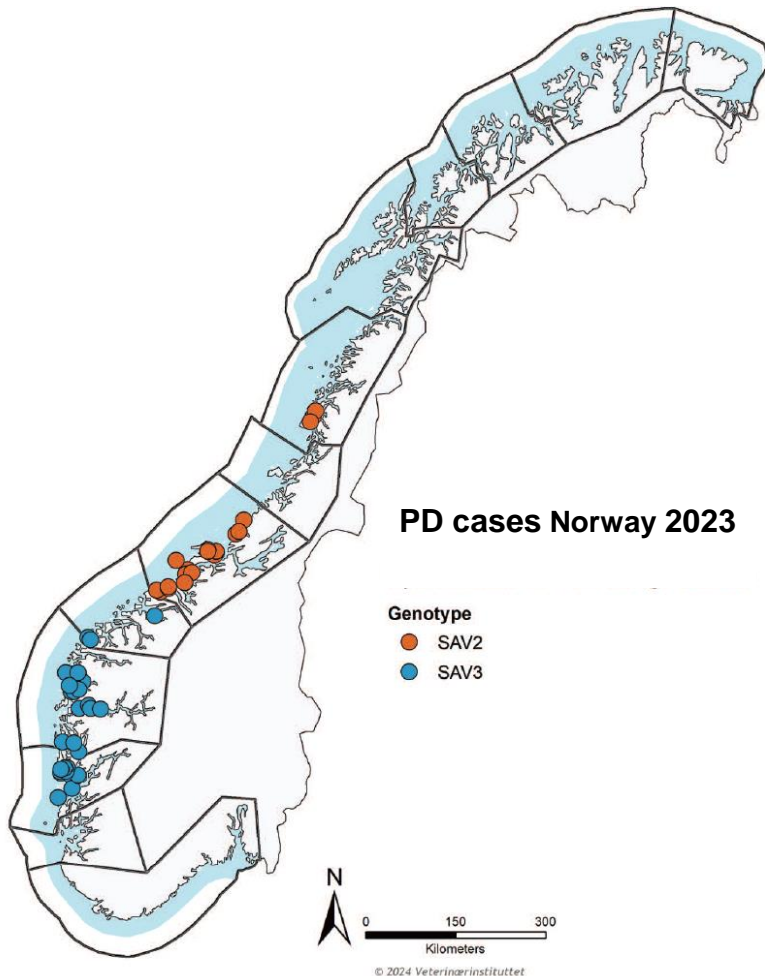


2012:  
Surveillance-  
program  
(SAV2)

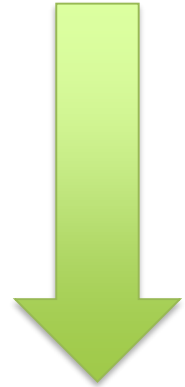


2017:  
National  
legislation  
monthly  
surveillance  
PD-zone  
PD-free  
zones

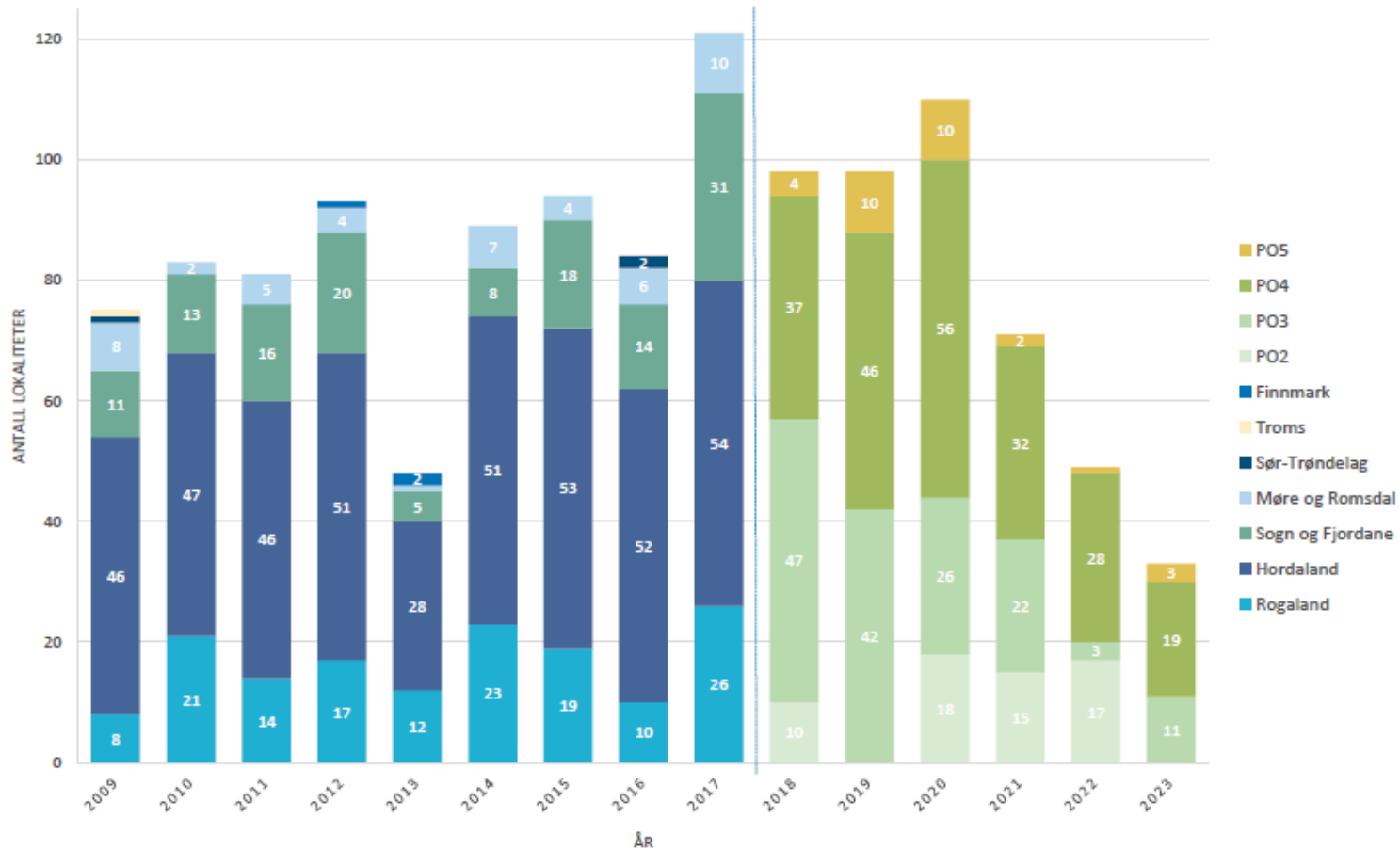
# PD in Norway - at present:



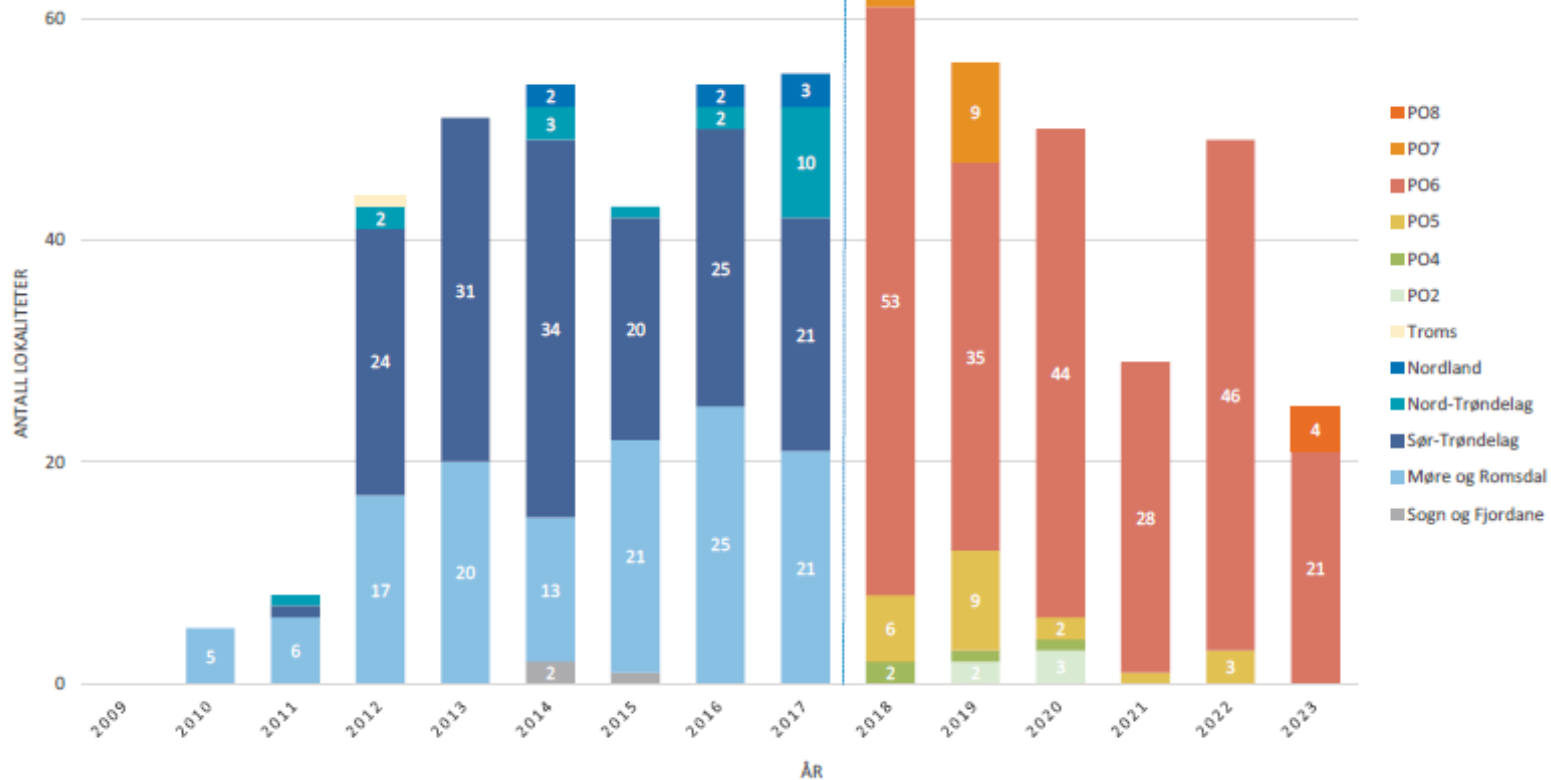
58 cases in 2023, compared to 158 back in 2020. 7 of these were from rainbow trout. Significant decrease in later years, especially for SAV3-cases.



# SAV3-CASES 2007-2023



# SAV2-CASES 2007-2023





## PD – in the PD-free zone, autumn 2023:

- A total of 4 cases (september to desember)
- PD restriction zone implemented
- Control/eradication measures:
- No transfer of new fish to sea
- Slaughtering at infected sites
- Coordinated following
- Cleaning/disinfection of equipment
- Avoid transport through the zone

# Decrease in SAV cases - why?

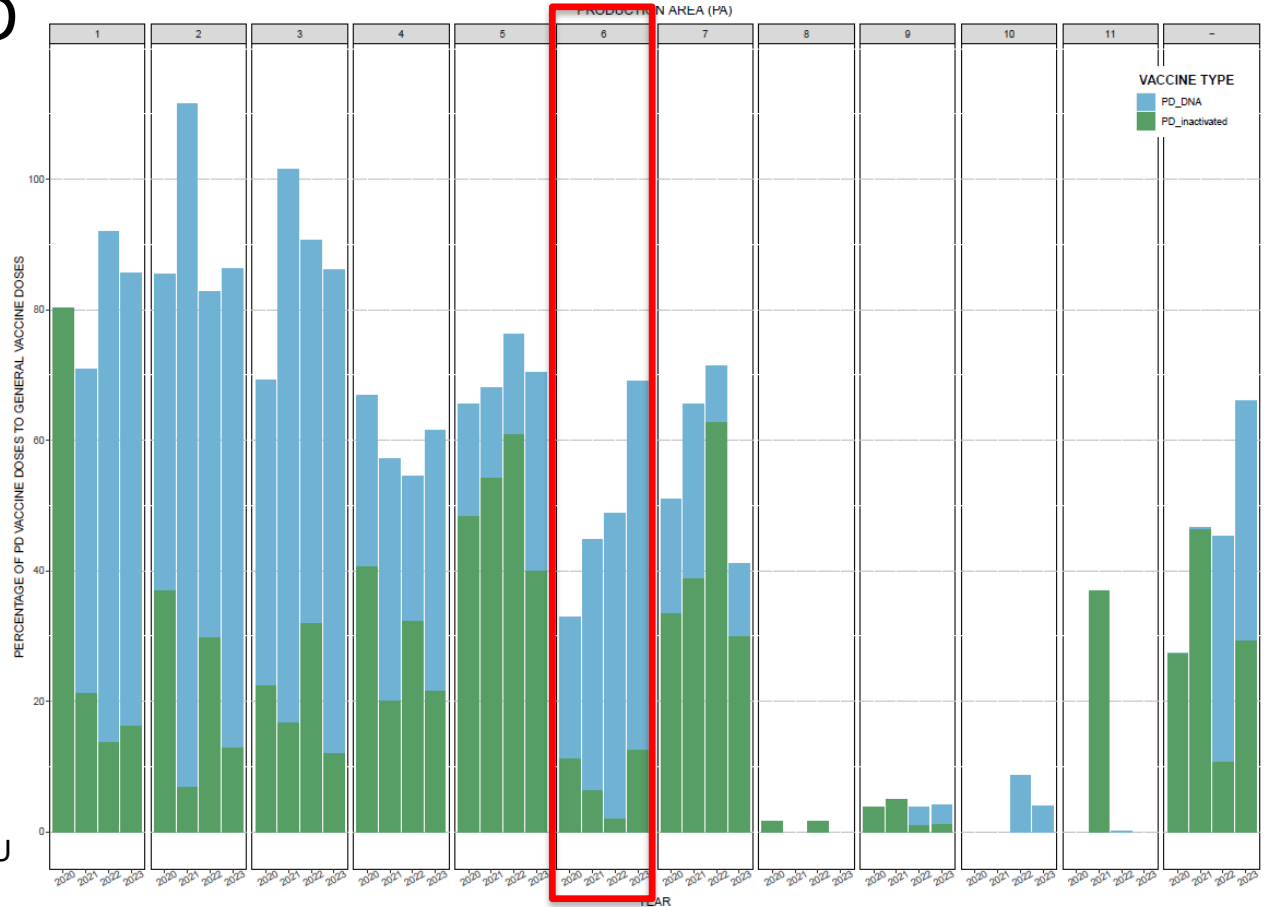
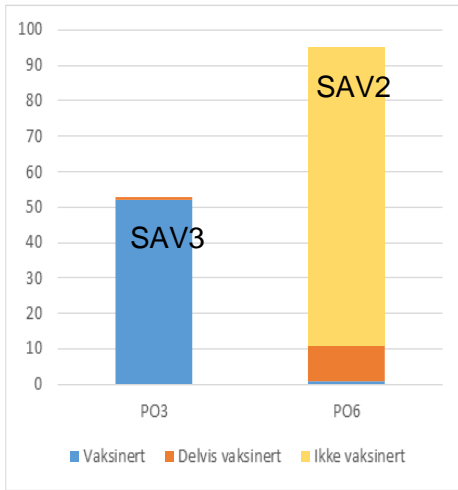
Possible contributing factors:

- Early detection through screening
- Preventive measures
  - Vaccination
  - Increased focus on biosecurity
- Coordinated fallowing
- Other operational and environmental factors



# Vaccine doses PD (2020-2023)

Varying vaccine coverage SAV3 – SAV2



\*-- signifies no PA could be determined.  
A vaccine is prescribed for both general and PD cases and is counted under both "General" and "PD\_inactivated"

Study by B. Bang Jensen, NVI, now DTU

# HSMI (A. salm)

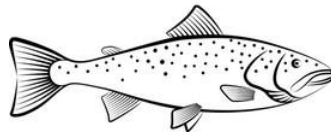
PRV-1:

Frequently detected in both hatcheries and sea water sites (A.salm) along the Norwegian coast



Development into HSMI is influenced by stress and health status

In 2023 HSMI diagnosis was given at NVI for fish from 40g (hatcheries ) and 130g – 6kg at sea.



# HSMI-like (RT)

PRV-3:

Detected in both hatcheries and sea water sites in the western part of Norway from 2017

PRV-3 detected at 9 sites in 2023 (10 in 2022) in PA 3 and 4

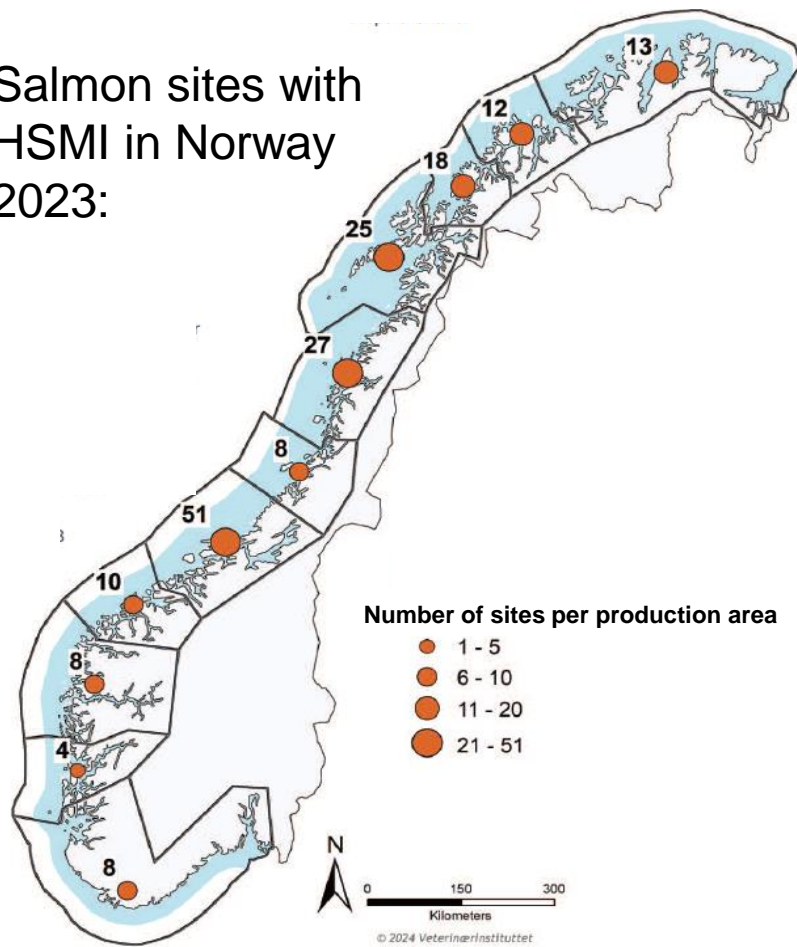


Only 1 diagnosis of HSMI-like disease

# HSMI:

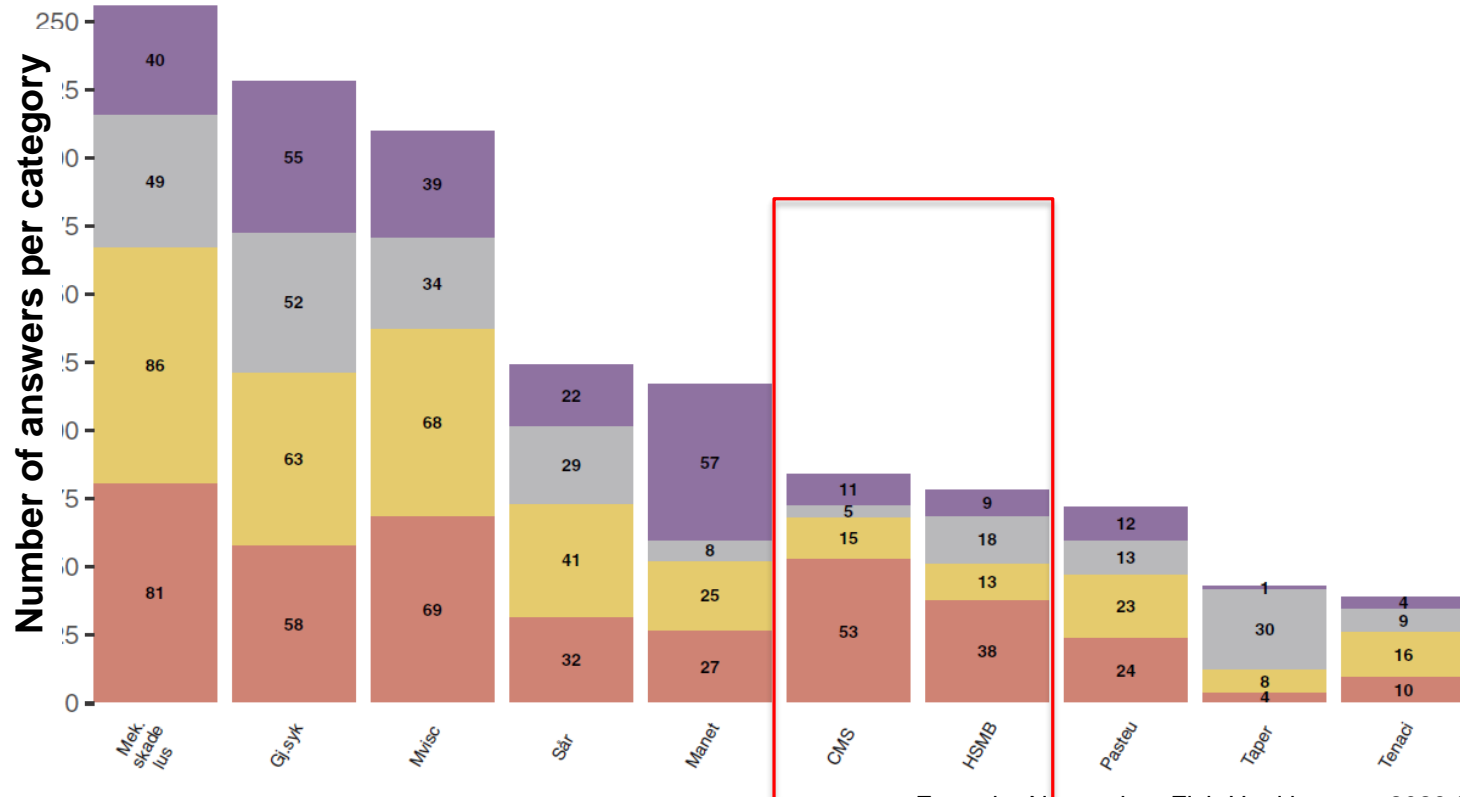
Salmon sites with HSMI in Norway 2023:

184 cases of HSMI in 2023  
(147 in 2022, 188 in 2021)



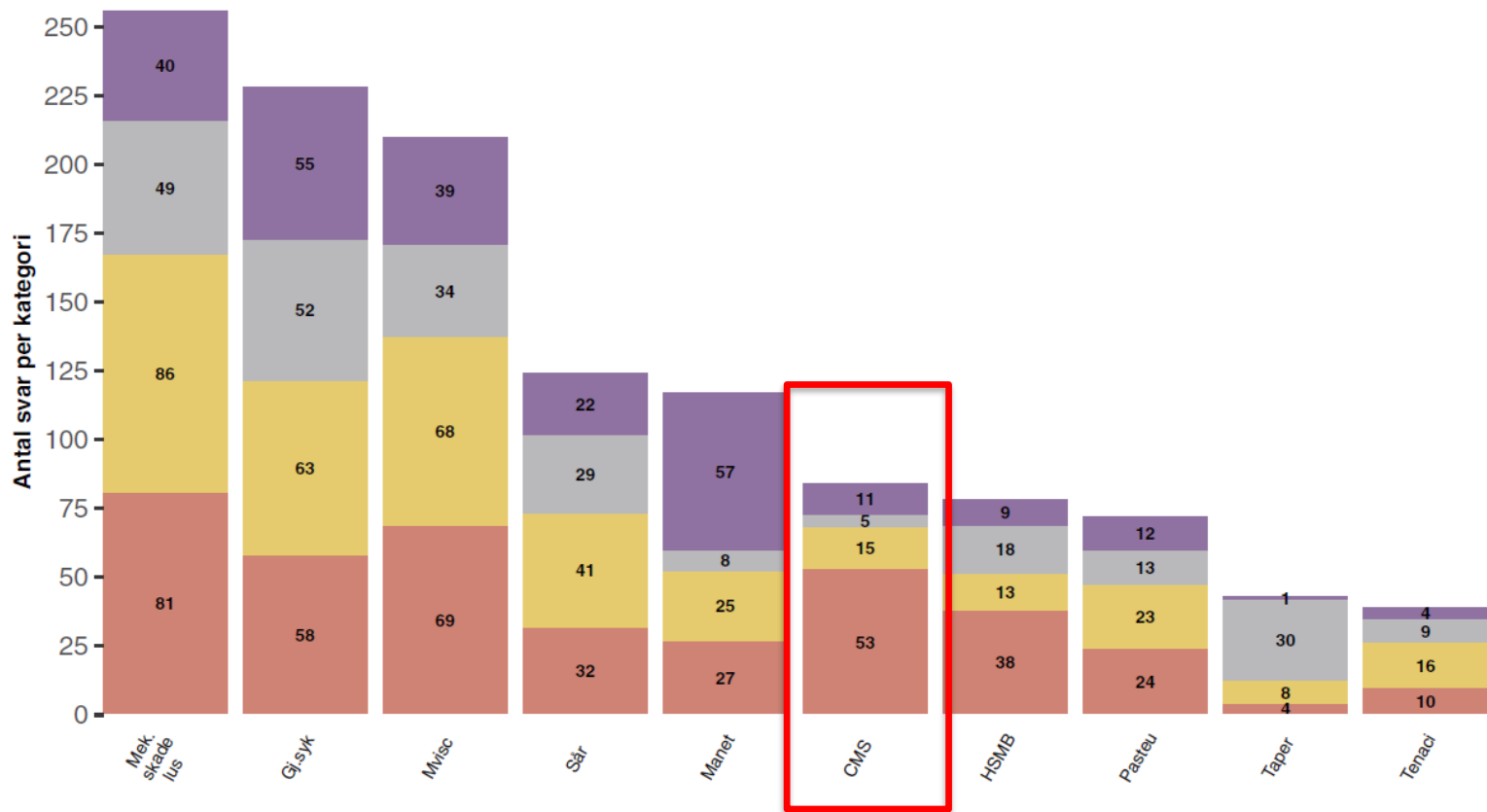
# Questback – most important health problems in salmon - marine phase

HSMI/CMS:



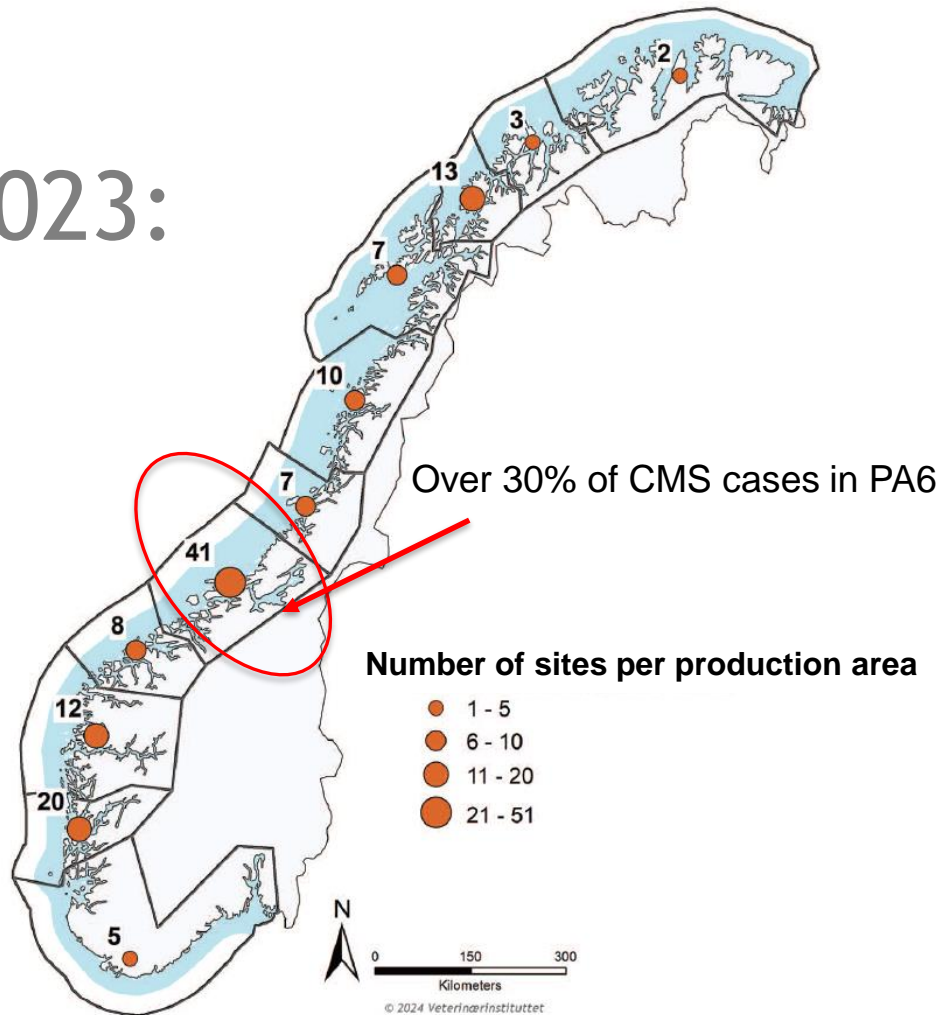
# CMS:

## Questback – most important health problems in brood fish



# Sites with CMS in 2023:

129 cases of CMS in 2023  
(131 in 2022)  
PMCV is frequently detected at  
sites without diagnosed disease.



# Summary:

- Decrease in SAV/PD-cases continues in 2023
- Status quo for CMS and HSMI
- Both CMS and HSMI are considered larger problems for salmon production at sea compared to PD

*Thank you for your attention!*



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