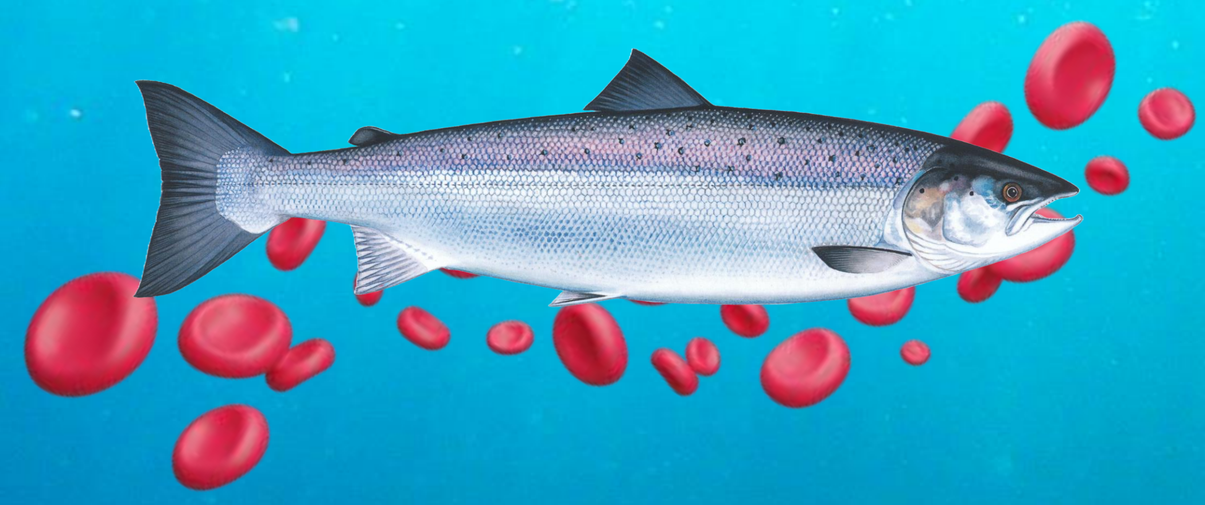
Distribution of infectious salmon anemia (ISA) in Trøndelag and Northern Norway

Context & Aim

Infectious salmon anemia (ISA) is a highly contagious viral disease affecting Atlantic salmon in aquaculture, causing significant economic losses, especially in Norway. This study investigates the correlation between the number of fish farms and the incidence of ISA in Trøndelag and Northern Norway to improve disease management strategies.



Materials & Methods

Raw data for ISA detected cases were collected from *Barenswatch*. Data for the number of fish farms were collected from *Fiskeridirektoratet*. Raw data were processed and analyzed in RStudio (version 4.4.1).

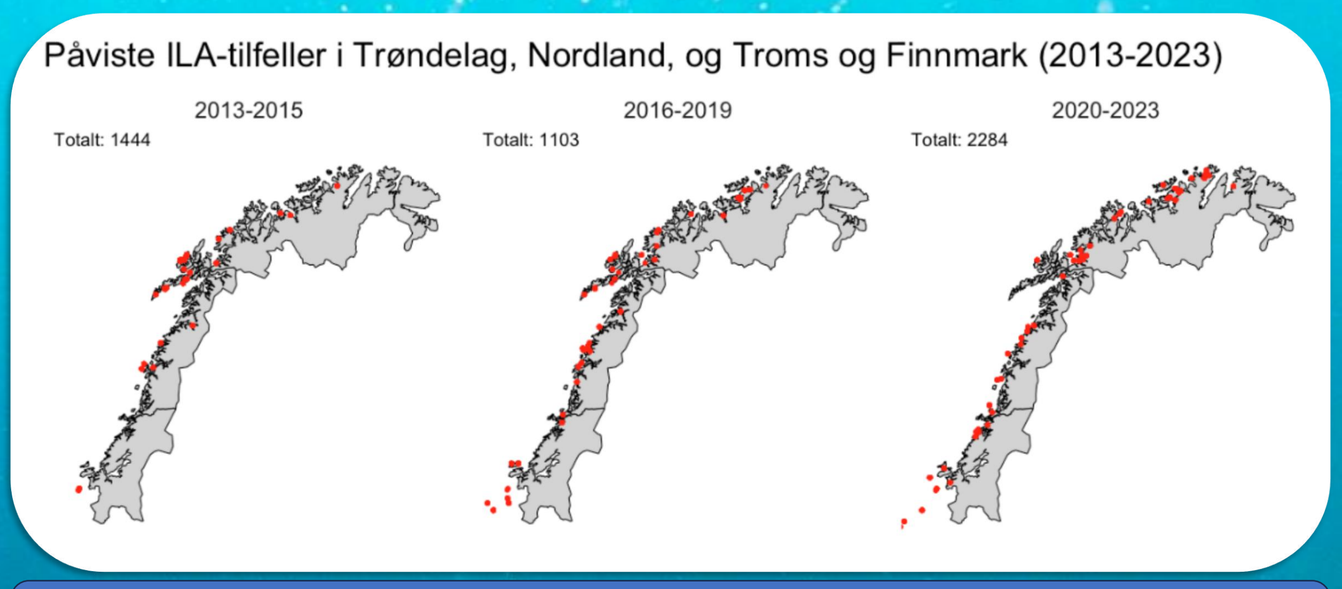


Figure 3.1: Map with an overview of salmon farming locations with detected virulent ISA virus from Trøndelag to Finnmark in three time periods.

Results

The results show a significant increase in the number of aquaculture sites over time across all counties. While Nordland has seen a decrease in ISA outbreaks, Trøndelag has experienced an increase in outbreaks alongside site growth.

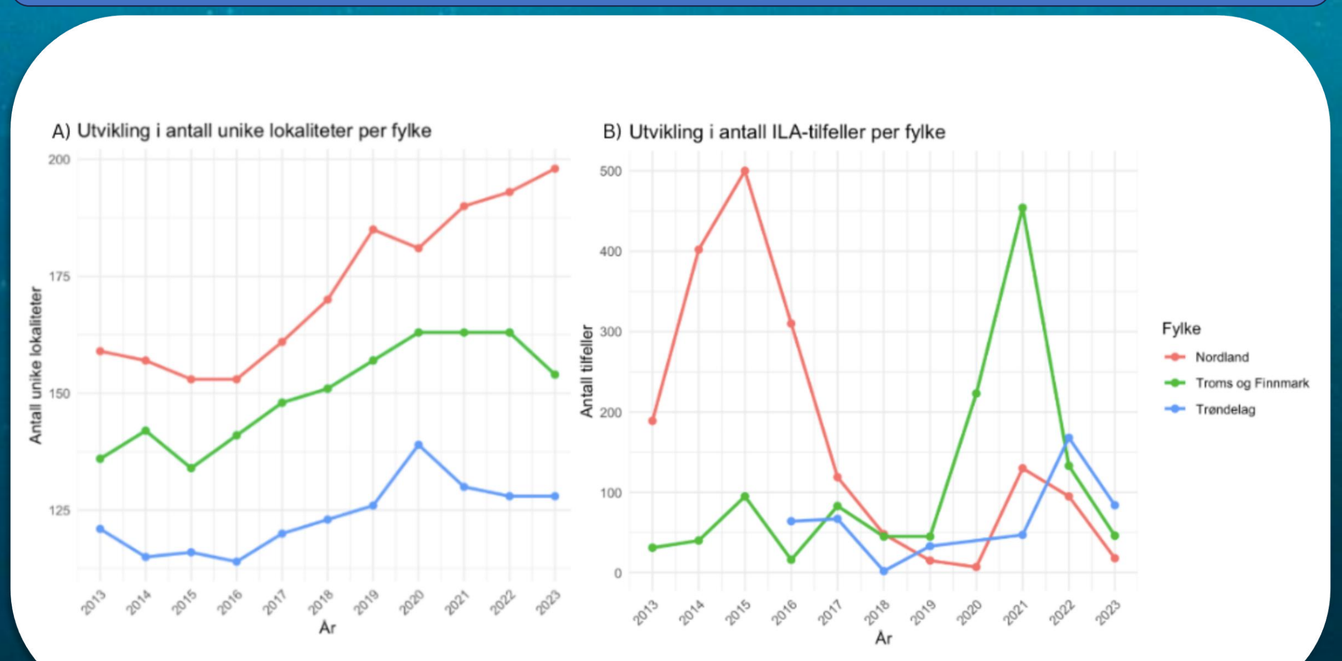


Figure 3.2 - Left: Graph shows the development of the number of localities per county. Right: Graph shows detections of virulent ISA virus at salmon farming sites per year from 2013 to 2023 in the counties of Nordland, Troms and Finnmark, and Trøndelag.

Conclusion

This suggests regional differences in the relationship between site expansion and ISA occurrence. Further research is necessary to determine factors that influence the distribution of ISA.

References: Barentswatch (2024) *Fiskehelse*. 4. september. Available at: https://www.barentswatch.no/fiskehelse/ Fiskeridirektoratet. (u.å). Biomassestatistikk. 4. september 2024. Available at: https://www.fiskeridir.no/Akvakultur/Tall-og-analyse/Biomassestatistikk/Biomassestatistikk-etter-fylke