UNIVERSITY OF BERGEN
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The Effect of Temperature & Precipitation on Salmon Lice

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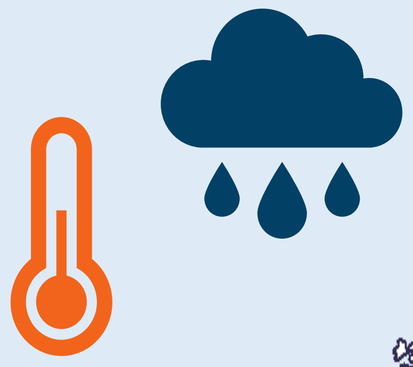
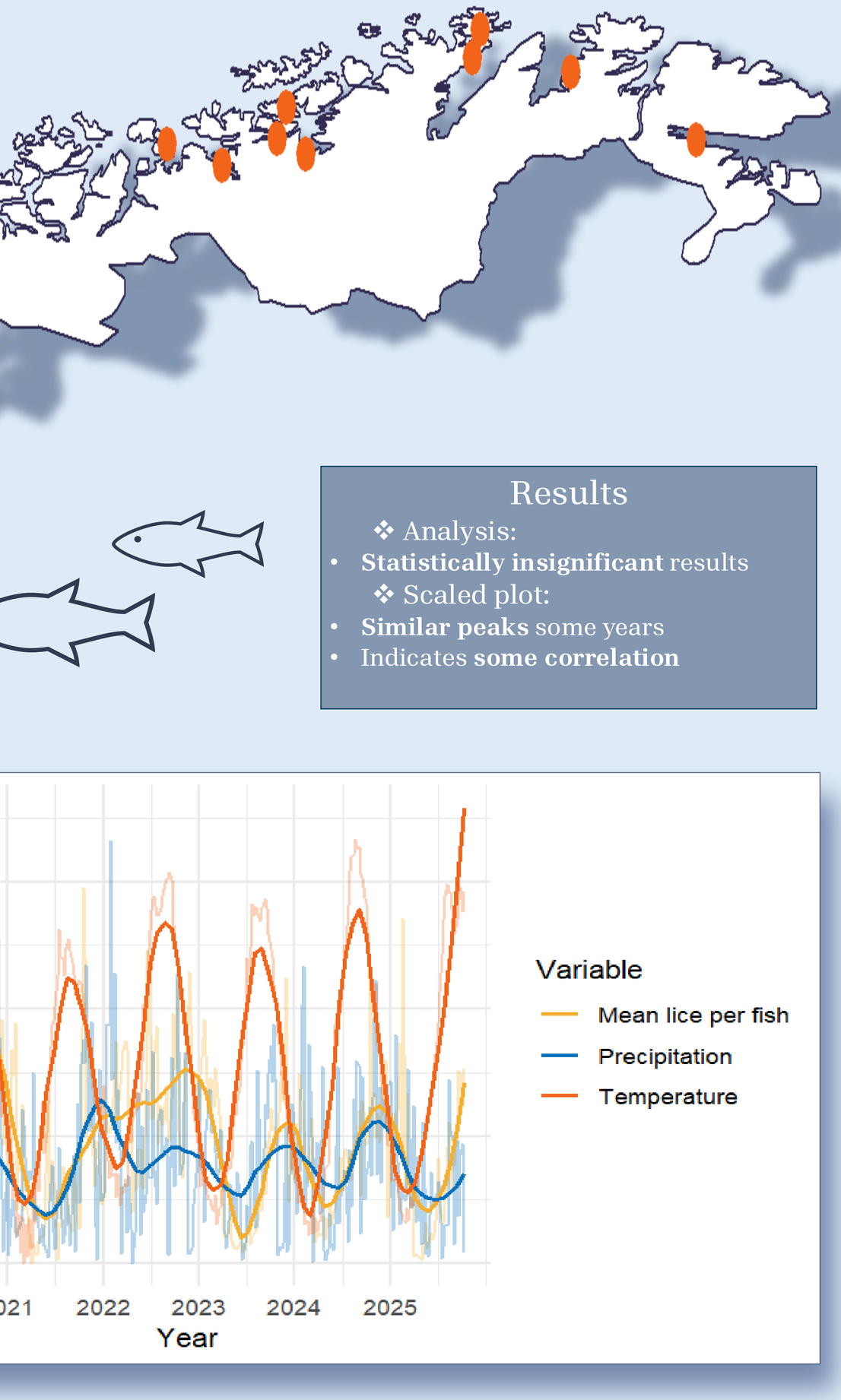
- Will **temperature** and **precipitation** (as a salinity proxy) affect **salmon lice** abundance?
- Study period: **2020-2025**
- Datasets from: Barentswatch & Seklima
- Analysis: **LMEM** – log-transformed two-week lagged increase rate in lice abundance ~ temperature + precipitation + random Intercept station

- **Environmental factors** tend to influence lice development strongly. They will thrive in **warmer waters** as well as in **higher salinity** levels. With climate change altering temperature and rainfall patterns, understanding these effects on lice abundance is vital.





Hypothesis: **Salmon lice** will exhibit the most **rapid population growth** under conditions of **elevated temperature and reduced precipitation**, corresponding to higher salinity levels.

Results

❖ Analysis:

- **Statistically insignificant** results

❖ Scaled plot:

- **Similar peaks** some years
- Indicates **some correlation**

Discussion

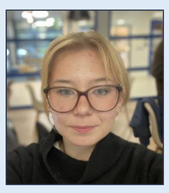
While **analysis** was statistically insignificant, the **plot** shows **similar trends**, indicating some **correlation** between the variables, and **other factors** than what we looked at affects **lice abundance**.

These factors can be:

- Fish density
- Farm density
- Frequency & type of delousing treatments.

Fiskehelse. (n.d.). Retrieved October 16, 2025, from https://www.barentswatch.no/fiskehelse/localities
Observations and weather statistics—Seklima. (n.d.). Retrieved October 19, 2025, from https://seklima.met.no/
Egge, Håvard. «Learning to Trace Salmon Lice». *Norwegian SciTech News*, 28. august 2023. https://norwegianscitechnews.com/2023/08/learning-to-trace-salmon-lice/.

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