

Additional practice abstracts: SalmonSyS

The **SalmonSyS dashboard** (salmon syndromic surveillance) is a prototype developed to **support early detection of health issues in Atlantic salmon farming** through the analysis of **site-level mortality data**. The system integrates monthly mortality records with key production and health-related variables, including stocking month, the occurrence of notifiable diseases, and sea lice infestation and treatment.

Through an interactive interface, SalmonSyS enables users to explore temporal patterns in mortality at the farm level, providing contextualised insights into potential drivers of increased mortality. A key feature of the tool is the comparison between **observed mortality and expected baseline levels**, allowing users to identify deviations from typical patterns.

Building on this approach, the system incorporates a **syndromic surveillance (SyS) model** that generates alerts when mortality exceeds expected thresholds. These alerts are intended to function as early warning signals, prompting further investigation into underlying causes, such as disease outbreaks or other health and management challenges. While the system was initially developed with a focus on detecting pancreas disease (PD), it also provides broader value by highlighting unusual mortality patterns that may reflect multiple health or environmental pressures.

The SalmonSyS prototype is presented as a decision-support and monitoring tool, complementing existing surveillance systems rather than replacing them. By combining routinely collected production data with statistical modelling, the tool demonstrates the potential of data-driven, **near real-time monitoring to support more proactive health management in aquaculture**.

The long-term vision is to further develop SalmonSyS into an **operational early-warning system**, with improved data inputs and model refinement, enabling more timely detection of health risks and supporting better-informed decision-making at farm and regional levels.

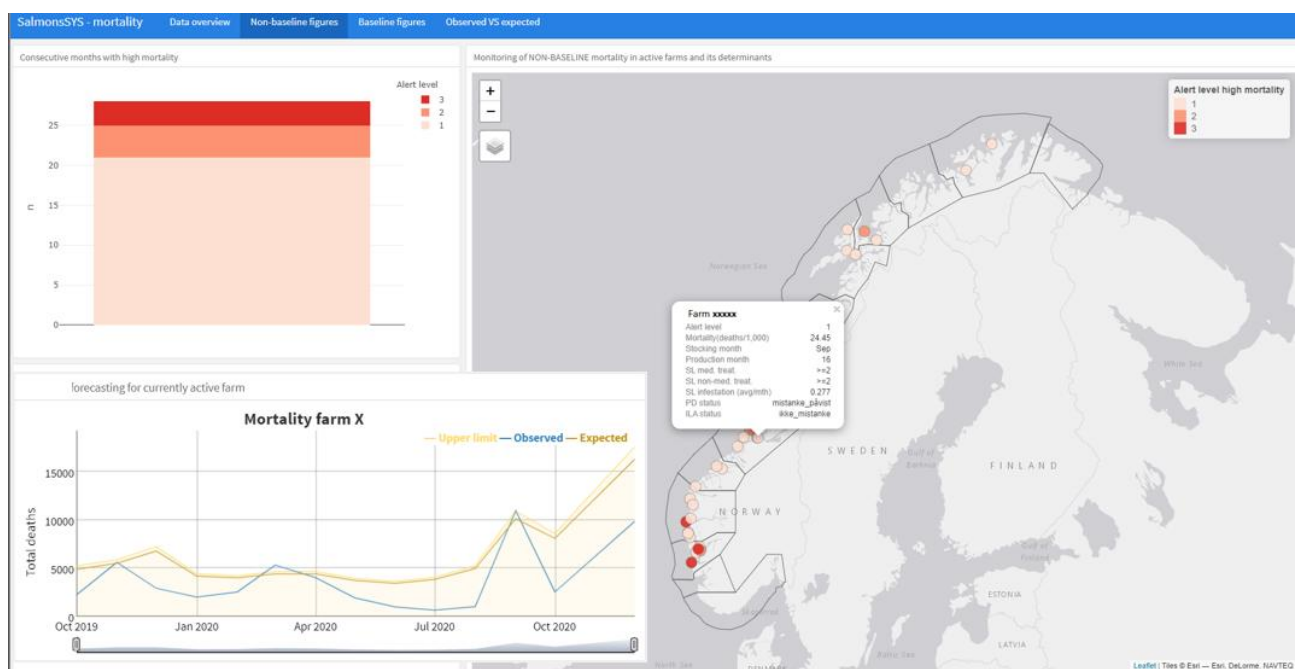


Figure 4. SalmonSyS screenshot.