TRANSFORMING AUSTRALIAN SHELLFISH PRODUCTION

PARTNERS

IN SHORT

This Food Agility CRC project delivered real-time, estuary-specific predictive modelling for shellfish farmers to manage and reduce the cost of closures.

> "Farmers have reported improved business efficiency based on access to data. Increased harvest opportunities were gained when sensor salinity data were used to manage harvest area closures instead of the traditional rainfall limits. "
>
> **Dr Lisa Szabo, NSW Food Authority**

THE CHALLENGE

As filter feeders, shellfish like oysters and mussels accumulate particles from surrounding waterways. Following high-risk events such as heavy rainfall, harmful algal blooms, or shellfish disease outbreaks in the estuary, regulators like the NSW Food Authority implement precautionary harvest area closures to manage potential food safety risks. If farmers were aware of an imminent closure, they could take meaningful action such as harvesting early or moving stock to lower risk areas of their lease to reduce mortality risk.

OUR APPROACH

This project delivered estuary-specific models relating to shellfish growth, disease risk, harmful algal bloom risk, sources of contamination, and other factors influencing industry productivity. Each of the models relied on measurements from real-time sensors developed by ICT International (NSW) and In Situ Marine Optics (WA), which were deployed across a number of commercial estuaries in both states. The high frequency data collection allowed more accurate modelling of harvest area conditions, which have informed farm management decisions for the shellfish industry in these areas. There are 14 estuary specific reports available to view.

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