

Media Release

Chiefs of Staff, News Directors

Friday 8 May 2015

IMAS to expand knowledge base around salmon

Marine ecologists at the University of Tasmania's Institute for Marine and Antarctic Studies (IMAS) and CSIRO will implement an extensive research program to gauge potential environmental interactions with salmon farming and recommend monitoring strategies.

Announcing a funding agreement today, the Head of Fisheries and Aquaculture at IMAS, Professor Chris Carter, said the research will target a range of issues that have been raised by industry and the broader community in the southern Tasmanian and Macquarie Harbour salmon farming regions.

Funding of \$900,000 is being provided by the Fisheries Research and Development Corporation to identify the potential for farming impacts in and around existing farms, and farther afield on reefs that support other forms of commercial and recreational fishing, including abalone and rock lobster, and to assess risk-appropriate monitoring strategies.

Professor Carter said agreement was reached this week with the research funding agency, based on an IMAS proposal that has been developed over the past 12 months and which extends existing research and management understanding, seeking to improve rather than replace current practices.

A team of 12 scientists and support staff from IMAS and CSIRO will be involved in the three-year study, which will begin in July. The project will be led by IMAS senior ecologist Dr Catriona MacLeod.

This is a continuation of important research that has been undertaken by IMAS and CSIRO over the past two decades, and is part of the Adaptive Management Framework in place for the salmon industry as regulated by the Tasmanian Department of Primary Industries, Parks, Water and the Environment (DPIPWE).

This research is a collaborative effort between industry, scientists and the regulators to ensure that DPIPWE can base its future management decisions on the best possible information.

Dr MacLeod said that maintaining high environmental performance is a priority for both the industry and its regulators and requires an understanding of how farming in new areas might influence environmental interactions.

“To ensure that management remains best practice, and farms continue to be efficient and sustainable, assessment of the local scale impact/ recovery dynamics and potential interactions with other resource users is required in newly developed farming environments and under different farming technologies,” Dr Macleod said.

“In Macquarie Harbour it is important to understand how current on-farm monitoring can support sustainable management by providing an accurate interpretation of sediment conditions. In the new farming areas in the southern regions of the Lower D’Entrecasteaux Channel and Storm Bay it is important to understand whether there may be adverse effects on reef health away from the farms as a result of increased aquaculture activities,” she said.

Dr MacLeod said the research would comprise a mixture of modelling, field-based studies and mesocosm experiments – with a view to characterising the zones of influence in each region and developing targeted experimental studies which could assess potential impacts before and after farming.

Data obtained would be used to inform predictive models. These models provide an important tool for determining risk to the ecology of both soft sediment and reef habitats in new farming regions.

Evaluation of potential indicators of change in reef health that might be associated with nutrient and sediment inputs from fish farming is an important component of this study, and responds to the concerns highlighted by the abalone, and recreational fishing communities.

The investigation will be undertaken at selected reef systems in the lower D’Entrecasteaux Channel and Storm Bay region, with specific sites selected based on a range of prioritisation factors including proximity to farming, representative reef communities, importance to fishing communities, previous research, and outcomes of specific hydrodynamic and depositional modelling.

Dr MacLeod said the potential for more sensitive changes will be assessed by undertaking novel physiological measurements of algal (reef) communities in line with the research findings of the current Australian Seafood Cooperative Research Centre (2011-042) project looking at the effects of enhanced nutrients on macroalgal communities in the D’Entrecasteaux Channel.

“An important component of this work will be to put potential reef changes in the context of broader system level changes due to other ecosystem influences such as changes in catchment inputs, water temperature, dynamics of regional currents and associated nutrient inputs,” Dr MacLeod said.

To view a video of Dr Catriona MacLeod speaking about IMAS’s role in ongoing research around salmon farming, visit: <https://www.youtube.com/watch?v=3N5P-xswjkQ>

Information released by:

Communications and Media Office, University of Tasmania

Phone: 61 3 6324 5019 or 0417 978 025

Email: Lana.Best@utas.edu.au