NSW DPI / Huon Yellowtail Kingfish Research Project - Stakeholder Update

April 2022

The joint research trial between NSW DPI and Huon Aquaculture on the NSW DPI Marine Aquaculture Research Lease will be concluded in the coming months following the planned removal of anchoring infrastructure from the lease area.

Decommissioning is scheduled to commence in late April 2022 and a media article was placed in the Port Stephens Examiner Thursday 21 April 2022.

The delay in removing the last of the submerged equipment was due to COVID-19 impacting interstate movements of equipment and staff. The five sea pens used in the project were relocated from the lease area and recycled.

A Marine Aquaculture Research Lease Decommissioning Plan was approved by the Department of Planning and Environment as part of the consent conditions and covers the decommissioning schedule, traffic/noise/waste, marine fauna interactions, emergency protocol and stakeholder communication. A NSW Marine Parks permit to undertake works has also been approved.

Vessels
Delilah (24m) and Southern Condor 11 (35m) will be used to decommission the Marine Aquaculture Research Lease. They will be moored in Salamander Bay when not working the lease.

Waste
Any waste generated will be taken to the Fishermen's Coop wharf and removed for recycling or disposal.

Noise
Operations on the lease will take place during daylight hours.

Marine fauna
Protocols established to protect and observe marine fauna used during Yellowtail Kingfish farming operations will be used during decommissioning.

Decommissioning duration
Weather dependent, it is anticipated it may take between six to eight weeks to remove infrastructure from the lease site.

The NSW DPI Marine Aquaculture Research Lease provided a platform for commercially relevant research for the development of a sustainable aquaculture industry in NSW.

The principal objective of the research was to provide NSW DPI and research partners with the opportunity to extend successful marine hatchery research and feed development to its next stage in an offshore commercial sea cage trial.

During the operation of the Research Lease there were:

- two commercial harvests of fish (12 months to market size 5kg)
- marketing knowledge generated and consumer acceptance of farmed Yellowtail Kingfish
- two Annual Environmental Management Reports
- pre and post fish stocking water and sediment sampling undertaken by the University of Newcastle, four sampling events in total with no significant environmental impact
- better understanding of design and operation of sea pens in the offshore environment of NSW
- marine fauna monitoring data and effective mitigation strategies developed
- development of hatchery and nursery techniques for the consistent supply of Yellowtail Kingfish for aquaculture and restocking programs
- promotion of seafood in the region, participation in Love Seafood Love Port Stephens
- local employment and expenditure in local community
- development of the NSW Marine Waters Sustainable Aquaculture Strategy. See https://www.dpi.nsw.gov.au/fishing/aquaculture/marine-waters-strategy

Outcomes from the research are detailed in the two annual environmental management reports, environmental monitoring reports, marine fauna monitoring data, video transects under the sea pens and around the lease and stakeholder updates. See https://www.dpi.nsw.gov.au/fishing/aquaculture/starting-up/finfish-aquaculture-lease-modification-application

Additional publications from the project include:

Fielder D, O'Connor W, Booth M, 2020. Enabling Land Based Production of Juvenile Yellowtail Kingfish in NSW. Final Report to Fisheries Research and Development Corporation, Deakin, ACT, Australia. 2015-213. 51pp.

Stone DAJ, Booth MA, Clarke SM, Growing a profitable Innovative and Collaborative Australian Yellowtail Kingfish Industry. Final Report to Fisheries Research and Development Corporation, Deakin, ACT, Australia. 2016-200. 896 pp.

Premachandraa HKA, Lafarga-De la Cruz F , Takeuchi Y , Miller A , Fielder S, O'Connor WA , Frèrea CH, Nguyen HN, Bar I, Knibb W 2017. Genomic variation confirmed *Seriola lalandi* is three different populations in the Pacific, but with recent divergence. Nature Scientific Reports 7: 9386. DOI:10.1038/s41598-017-07419-x

Walburn JW, Wemheuer B, Thomas T, O'Connor WA, Booth M, Fielder S, Egan S, 2018. Diet shapes early gut microbiome development in Yellowtail Kingfish (*Seriola lalandi*). Microbial Biotechnol. Do/abs/10.1111/1751-7915.13323

Platell ME, Gaston TF, Evans CE, Ryan T, Smith T, Raoult V, O'Brien D, Whyte D, Lovell E, Lyall I, O'Connor W, 2018. Plenty of polychaetes and amphipods in coastal waters – does offshore aquaculture make a difference? 27th Annual NSW Coastal Conference, 7-9 Nov, Merimbula NSW Australia.

O'Connor WA, Dove MC, Fielder DS, Booth M, Pirozzi I, 2019. The need for clever solutions. 3rd Australia New Zealand Marine Biotechnology Society Conference, 20 -22 May, Sydney, Australia.

Fielder DS, Booth M, Pirozzi I, O'Connor WA, 2019. Developments in production of juvenile Yellowtail Kingfish. 3rd Australia New Zealand Marine Biotechnology Society Conference, 20 -22 May, Sydney, Australia.

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More information

http://www.dpi.nsw.gov.au/fishing/aquaculture/starting-up/finfish-aquaculture-lease-modification-application