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Latest report on Macquarie Harbour environmental conditions

Institute for Marine and Antarctic Studies (IMAS) researchers today released [the latest results of surveys of environmental conditions in Macquarie Harbour](#), carried out earlier this year as part of research assessing oxygen dynamics and conditions on the bottom of the harbour.

The report provides an update on the status of dissolved oxygen (DO) and benthic conditions in the harbour and follows previous reports released regularly since 2017.

IMAS Research Fellow Associate Professor Jeff Ross, who leads the project, said the latest results are consistent with improved sediment health across the harbour.

“Sediment health has improved over recent years, and the abundance and numbers of benthic species seen at the external reference sites throughout the harbour have returned to and remain well within the range reported before the deterioration in conditions and decline seen in spring 2016 to early 2017,” Associate Professor Ross said.

“We also continue to see improved conditions in our video assessments of the seabed, and the presence of *Beggiatoa* bacteria remains low.

“However, we continue to observe the cycle of declining oxygen concentrations in middle and bottom waters each spring and subsequent replenishment of oxygen due to oceanic and wind-driven recharge through late spring to autumn.”

Associate Professor Ross said that while the trend of improving sediment health over recent years is encouraging, oxygen levels remain low compared to those observed historically.

“Through spring 2019, bottom water oxygen levels declined due to higher river flows and limited oxygen oceanic recharge.

“It wasn’t until late December that we observed notable oceanic recharge and replenishment of bottom water oxygen,” he said.

Associate Professor Ross said the more prolonged period of low oxygen levels in late 2019 again demonstrates the pivotal role that the weather (e.g. wind, river

flow) plays in influencing the magnitude and extent of the seasonal DO decline and therefore the capacity to affect sediment health.

The project is funded by the Australian Government's Fisheries Research and Development Corporation (FRDC), the Tasmanian Government, and Tasmanian salmon aquaculture companies.

The latest report, together with those released previously, can be found [on the IMAS website](#) under the heading 'Salmon'.

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