

## Media Release

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### **New report shows record low coral cover at many WA reefs**

The most extensive report into the state of Western Australia's coral reefs, led by the Australian Institute of Marine Science (AIMS), shows many reefs have the lowest coral cover on record.

Western Australia's coral reefs, comparable in extent and diversity to those on Australia's Great Barrier Reef, have been seriously affected by heat stress and cyclones.

This latest study of WA reefs was undertaken through the collaboration of 26 researchers from 19 institutions, and included important marine observations from regional managers, tourist operators and Bardi Jawi Indigenous Rangers in the Kimberley.

AIMS marine scientist Dr James Gilmour said it was the first study of its kind to establish a long-term history of changes in coral cover across eight reef systems and the extent of coral bleaching at 401 survey sites.

"Despite their extent and diversity, there are few published accounts of the condition of Western Australia's reefs," Dr Gilmore said.

"Coral reefs make a significant contribution to the nation's economy and identity through associated fisheries, tourism and recreation, so we are formally assessing their condition following the third global coral bleaching event in 2016 and establishing a baseline for future change."

WA Department of Biodiversity Conservation and Attractions marine scientist, and co-author in the research, Dr Shaun Wilson said a heat wave in 2016 had its greatest impact in the north-west but had relatively little effect on those reefs south of the Pilbara, such as Ningaloo.

"However, these reefs were affected by heat stress in La Niña years, particularly the 2011 heat wave, so over the past 10 years, few reefs have escaped bleaching," Dr Wilson said.

University of Western Australia physical oceanographer and co-author Dr Rebecca Green said to assess changes to reef systems, the team had linked site-specific data since 1990 on the coral's exposure to damaging marine heatwaves and heat stress, with mean changes in coral cover.

"We found half the reef systems have been severely impacted by coral bleaching since 2010, which has been further compounded by cyclones at some reefs," Dr Green said.

Dr Gilmour said for 75 per cent of reef systems with long-term data of between five and 26 years, coral cover is currently at, or near, the lowest on record.

“Full recovery is unlikely if heat stress and cyclone disturbances continued to intensify, however, at some reefs, coral cover has remained relatively stable or has increased in recent years.”

“Within all reef systems, the condition of communities based on their exposure to disturbances, was varied.”

“We have started identifying coral communities least susceptible to disturbances, which show some capacity to adapt to future warming, and investigating how their coral larvae connect between reefs following coral spawning.”

Dr Gilmour said the capacity for coral larvae to disperse between reefs and expand their distribution would be important for future research and management priorities.

The report entitled ‘*The state of Western Australia’s coral reefs*’ is published in the research journal *Coral Reefs* here: <https://link.springer.com/article/10.1007/s00338-019-01795-8>

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