



## Media Release

Chiefs of Staff, News Directors

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### Study suggests Rock Lobster fishery resilience to climate change

New IMAS research investigating the environmental factors that influence Southern Rock Lobster settlement on reefs has found evidence that the fishery is showing broad resilience to climate change.

The number of juvenile lobsters surviving in the open ocean and returning to shore has been monitored monthly for 17 years at a range of locations across the Australian fishery.

In a study led by IMAS PhD student Dr Ivan Hinojosa and recently published in the journal [Fisheries Oceanography](#), this large data collection was analysed to see if changes over time are driven by environmental factors such as ocean current patterns, water temperature, swell, or wind patterns.

The study's co-author, IMAS Professor Caleb Gardner, said the research identified many complex environmental factors affecting the abundance of juvenile lobsters, but those that were important in one region were often completely different from those in another.

"The reef settlement of the rock lobster *J. edwardsii* is a complex process where larval behaviour, biological factors and oceanographic processes interact over different scales," Professor Gardner said.

"This complexity implies resilience of the fishery to climate change, as conditions that were bad for one region tended to be good for the fishery somewhere else.

"While this research does not mean the fishery is completely off the hook for climate change, it does suggest that the fishery will continue into the future, although there may be variability from year to year and from region to region.

"This large scale analysis also highlights an interesting scientific issue around climate change.

"If we had only studied one region of the fishery we would probably have identified a factor that suggested vulnerability to climate change.

"But the conclusion was very different when we took a broader view with a huge data set."

Professor Gardner said the IMAS study suggests that the best management strategy for Southern Rock Lobster needs to consider that productivity of the fishery is highly variable from year to year.

This implies the need to take a conservative approach in controlling the size of the catch across the entire range so that stocks can be maintained at healthy levels during the lean years.

Dr Hinojosa and Professor Gardner's research was made possible through funding provided from the BECAS-Chile Programme, The Australian Research Council (ARC) Linkage Projects, the ANZ Trustees Programme 'Holsworth Wildlife Research Endowment', the ARC's Industrial Transformation Research Hub, and government-funded lobster fishery research programs in South Australia, Victoria, Tasmania and New Zealand.

**IMAS Media Contact** Andrew Rhodes (03) 6226 6683 or 0417 239 537, email: [ajrhodes@utas.edu.au](mailto:ajrhodes@utas.edu.au)

**Information released by:**

Communications and Media Office, University of Tasmania

Phone: 61 3 6226 2124

Email: [Media.Office@utas.edu.au](mailto:Media.Office@utas.edu.au)