

Dr Ming Feng
CSIRO Wealth from Oceans Flagship
Western Australia

Dr Ming Feng has been CSIRO's principal oceanographer in Western Australia for the past eight years, and was appointed as the Western Australian Marine Science Institution (WAMSI) climate change research (Node 2) leader three years ago.

WAMSI has allocated more than \$7 million to this research that focuses on climate variability and change in the Indian Ocean and their effect on the Leeuwin Current and Ningaloo Reef. The node research has produced some outstanding results in the last few years.

Dr Feng has quantified the effect of rising ocean levels, rising sea temperatures and unusual weather patterns on the tropical and rapidly-warming Leeuwin Current which, since the 1960s, has experienced one of the fastest rising water temperature levels in the Indian Ocean (a 0.6 to one degree celcius rise).

He and team members from the Bureau of Meteorology (BoM) have studied the Indian Ocean dipole. The dipole causes wind, rain and sea temperatures to shift across the entire ocean, and Dr Feng and his team have discovered that it has a huge effect on marine life in WA and rainfall throughout Australia.

The team can now predict the long-term effects of Indian Ocean weather patterns two to three seasons in advance, enabling the community, coastal planners, the oil and gas industry, the fishing industry, fishing management agencies and aquaculture businesses to plan for the future.

He and his team have discovered that ocean changes have caused changes to fish and crustacean numbers and are linked to a string of poor puerulus (juvenile) western rock lobster settlement. The western rock lobster is a main part of the WA fisheries industry which generates \$400 million a year.

Dr Feng has worked with international, national and State colleagues and initiated many new research projects on ocean movements and currents stretching well into the future.

"I've been privileged enough to attain a broad view of how the world's oceans are moving and changing, and how that may effect the oceans around Australia, especially the Indian Ocean which is my area of research," he said.

"Hopefully they will ensure that everyone knows what is happening to our seas and oceans, which make up 70 per cent of the Earth, and that there is a good understanding of our planet when decisions are," he said.

Dr Feng has led and co-authored many published scientific papers.

He would like to acknowledge the work of his team of scientists from CSIRO, BoM, AIMS and DoF.

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