

MEDIA RELEASE

NEWS FROM THE UNIVERSITY OF TASMANIA

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ATTENTION: Chiefs of Staff, News Directors



Training program is helping re-shape Australia's modelling expertise

CSIRO and UTAS have committed to a \$5 million dollar, five-year extension of their collaborative Quantitative Marine Science (QMS) PhD Program, which focuses on training marine and climate scientists at a time of increasing national and global demand for these skills.

The agreement further develops Hobart's international reputation as a centre of excellence in marine science.

Prof. Tom Trull, Director of QMS, says the program trains students to work in areas of marine science that require highly developed skills in mathematical synthesis of observations, modelling of physical, chemical, and biological systems, and the generation of forward projections for use by scientists and environmental and resource managers.

"This program is the first of its kind in Australia to offer specialised graduate level coursework in quantitative marine science, and the re-signing of the partnership indicates its vital importance." Prof. Trull said.

"The QMS program combines the research and teaching skills of the two organisations, providing the strongest and most diverse academic training ground for temperate and Southern Ocean marine science in Australia."

Seventeen students have already graduated from the program and another 27 are currently enrolled. The program is international in scope – many projects include overseas co-supervisors, and students have are enrolled from six countries.

Prof. Tom Trull believes quantitative methods underpin good research. "You take an idea, transform it into an expression, manipulate the expression and come out with a new idea. It's not just about getting the number; it's a way of thinking!"

"The QMS program provides an unparalleled opportunity for the development of marine scientists and guarantees an interdisciplinary focus on marine research," Prof. Trull said.

CSIRO's Dr Trevor McDougall explains that ocean modelling research needs in climate science have increased substantially because governments around the world recognize the value of understanding the ocean environment and oceanic influences. Such demand is contributing to the worldwide skills shortage, particularly in climate sciences.

“The intent of the QMS program is to reshape capabilities so that Australia can retain, nurture, and grow our quantitative expertise,” Dr McDougall said.

He said Australia’s largest environmental research organisations are also investing in model development.

CSIRO, the Bureau of Meteorology and universities are building the Australian Climate Change Earth Systems Simulator, and just three months ago a CSIRO model was one of two models that provided the basis for the UN’s Food and Agriculture Organisation to map future food production based on a range of climate scenarios.

Other users of model output range from the Department of Climate Change and Energy Efficiency and the Department of Agriculture Fisheries and Forestry to water management authorities, all tiers of Government with responsibility for environmental management, international aid projects and the primary international climate reporting body, the Intergovernmental Panel on Climate Change.

“It is one thing to have the models but quite another to have the staff with the necessary skills to take on risk assessment projects for government and community organisations,” Dr McDougall said.

The program is backed up by diverse and deep research expertise at the University of Tasmania and CSIRO Marine and Atmospheric Research. Currently, there are more than 100 marine science academics and researchers within the two agencies.

Graduates from the QMS program will find job opportunities within CSIRO and other research agencies, such as the Australian Antarctic Division, Geoscience Australia, the Australian Institute of Marine Science, the Bureau of Meteorology, Inland Fisheries Service, Tasmanian Aquaculture and Fisheries Institute (TAFI), State and Federal Government agencies dealing in marine and freshwater research. These agencies employ over 600 research scientists specialising in marine disciplines

For more information about the QMS program and the joint partnership visit:

<http://www.utas.edu.au/cms/qms/index.html>