
Lesley Clementson



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Lesley both established and runs Australia's only dedicated marine bio-optics laboratory. Her lab has 'world class' status as one of only four phytoplankton pigment laboratories internationally accredited by NASA. The high quality data and analysis produced by Lesley's lab has been pivotal to the success of multi-institutional projects within satellite remote-sensing (SRS) of ocean colour, biological oceanography, coastal water quality management, biofuels from micro-algae and fisheries management.

Lesley plays a leading role in coordinating and managing Australian and international databases in pigments and bio-optical properties. Lesley developed and maintains a unique data archive of *in situ* bio-optical parameters for Australian waters, which currently contains over 15,000 data points from 1997 to the present day and is publicly available through the IMOS web portal. Lesley's collaborations with scientists at both the North American (NASA) and European (ESA) Space Agencies has allowed this data archive to be seamlessly included in their global databases, SeaBASS and MERMAID. This unprecedented inclusion of such a large amount of *in situ* data from the Australasian region in these global datasets both underpins the assessment of ocean colour products for this region and allows for regional tuning of global algorithms and the parameterization of regional algorithms.

The database is not only a valuable asset for satellite ocean colour validation and phytoplankton functional type (PFT) algorithm development, but also for the marine and climate science community in general; providing historic data and input variables for biological and ecological models at both local and global scales. Since late 2011 Lesley has been a

member of the International Working Group for Phytoplankton Functional Type (PFT) Algorithm Development and has lead the development of global data sets to be used for the parameterisation and validation of PFT algorithms.