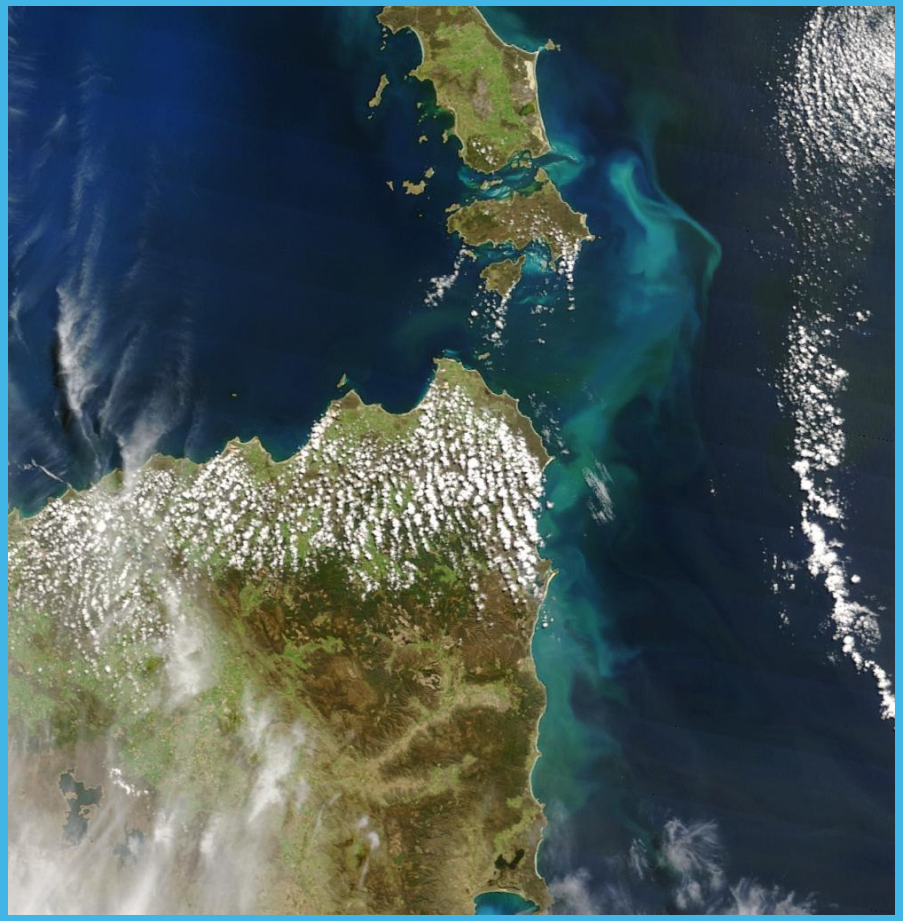
How do we best utilize existing programs or recommend new programs to validate satellite approaches for detecting ephemeral blooms in the sea - Australia



Lesley Clementson

IOCS, Busan, Korea - 08 April 2019,

Existing programs

IMOS Integrated Marine Observing System

IMOS SRS Bio-optical database of Australian waters (around 25,000 IOP measurements)

https://portal.aodn.org.au/

CPR data from NRS sites and ships of opportunity network

Review papers

McKinna, L. (2014). Three decades of ocean-color remote-sensing *Trichodesmium* spp. in the World's oceans: A review. *Prog. Oceanogr.*

Blondeau-Patissier, D., Brando, V.E., Lønborg, C., Leahy, S.M., Dekker, A.G. (2018). Phenology of *Trichodesmium* spp. blooms in the Great Barrier Reef lagoon, Australia, from the ESA-MERIS 10-year mission. *PLOS One*

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Current to Future

Australian Space Agency

Launched May 2018

Earth Observation a priority research area

https://www.industry.gov.au/strategies-for-the-future/australian-space-agency

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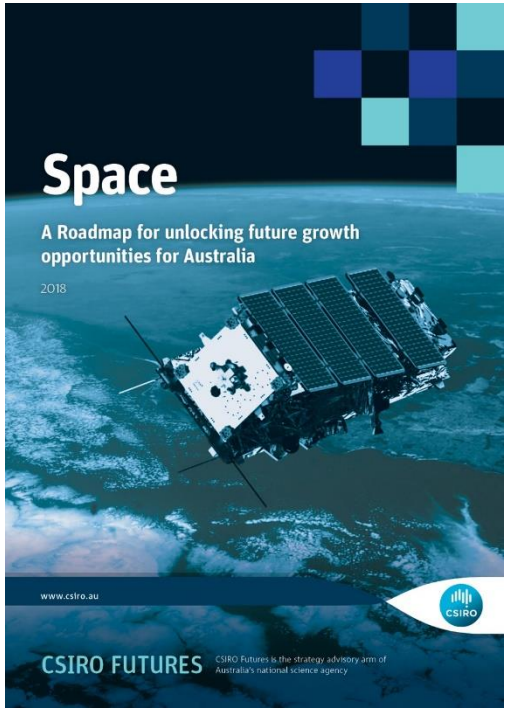
Space Future Science Platform

Launched November 2018

https://research.csiro.au/space/



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Future Parameters

For PFT analyses there is a need to go beyond absorption, pigment and TSS data

Flow cytometry data

Microscopic species identification

Imagery data available from above methods

Also more satellites coming on line – continually compare satellite data against a common dataset of in situ properties.

Recent Datasets

We have recently put together two small datasets which will be publicly available

Clementson, L.A. and Wojtasiewicz, B. (2019). Dataset on the absorption characteristics of extracted phytoplankton pigments

Data In Brief - DOI: 10.1016/j.dib.2019.103875
https://doi.org/10.1016/j.dib.2019.103875

Clementson, L.A. and Wojtasiewicz, B. (2019). Dataset on the absorption characteristics and pigment composition of various phytoplankton species

Data In Brief – under review

Thank you

CSIRO
Lesley Clementson

t +61 3 6232 5337
e lesley.clementson@csiro.au
w www.csiro.au/lorem