

# AUSTRALIAN GEOSS REPORT

9<sup>th</sup> GEOSS Asia-Pacific Symposium  
Tokyo, Japan, January 2017

**Dr. Andy Steven- CSIRO**





# Australian Reporting Institutions

Australian Government

- Australian Bureau of Meteorology
- Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- Geoscience Australia,
- Space Coordination Office, Department of Industry

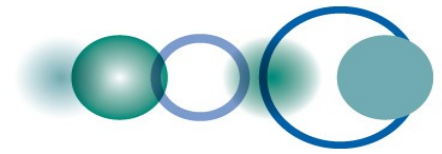


**Australian Government**  
**Bureau of Meteorology**



**Australian Government**  
**Geoscience Australia**

# Highlights



1. Continued Support and Engagement with GEO and Initiatives
2. CEOS Chairmanship 2016
3. Support for Satellite missions
4. Australian Geophysical Data Cube project and support for other countries
5. APEC Earth and Marine Observations workshop

# Supporting GEO Initiatives

- ExComm (S. Minchin)
- Program Board via Blue Planet, GFOI, CEOS Secretariat
- GEO Blue Planet (A. Steven)
- GFOI –Satellite Data Coordination Group (A. Held)
- GEOGLAM Implementation Team, and Advisory Committee (J. Guerschman & A. Held)
- GEO Aquawatch (A. Dekker)
- GEO Sustainable Development Goals Initiative – via lead of CEOS SDG Ad-hoc team (A. Held)

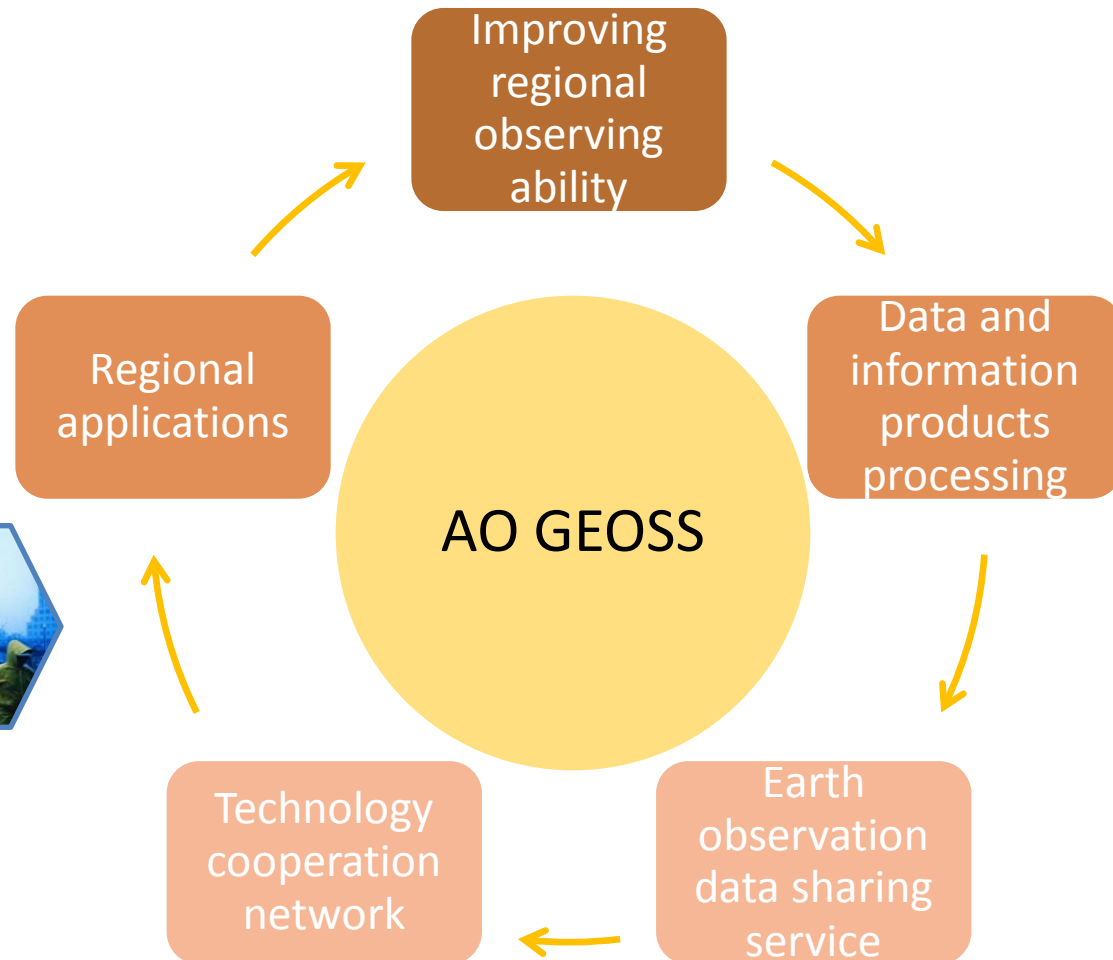


## Priority Areas

- ❑ Sustainable Agricultural
- ❑ Cross-regional disaster mitigation
- ❑ Ecology & environment



- ❑ Infrastructure monitoring
- ❑ Surveying and mapping
- ❑ Ocean remote sensing monitoring
- ❑ Water resources
- ❑ .....





# 2016 Chair of Committee on Earth Observation Satellites

## Non-Meteorological Applications for Next Generation Geostationary Satellites

- Review relevant initiatives and plans
- Identify missions, instruments, and non-meteorological applications of relevance
- Evaluate lessons learned from early prototypes
- Assess and prioritize various applications and algorithms
- Enhance coordination through CEOS opportunities around **Big Data, Analysis Ready Data, EO platforms**
- Identify key issues and opportunities, including in the specification of requirements for relevant future missions and instruments
- Make recommendations for CEOS and its agencies



CEOS Plenary, Brisbane, Australia  
November 1-2 2016



CEOS DataCube Initiative and regional Pilots – Kenya, Colombia and new “MekongCube” with Vietnam Space Center



# Supporting Satellite Missions & Datacube Application

## Data Cube applications

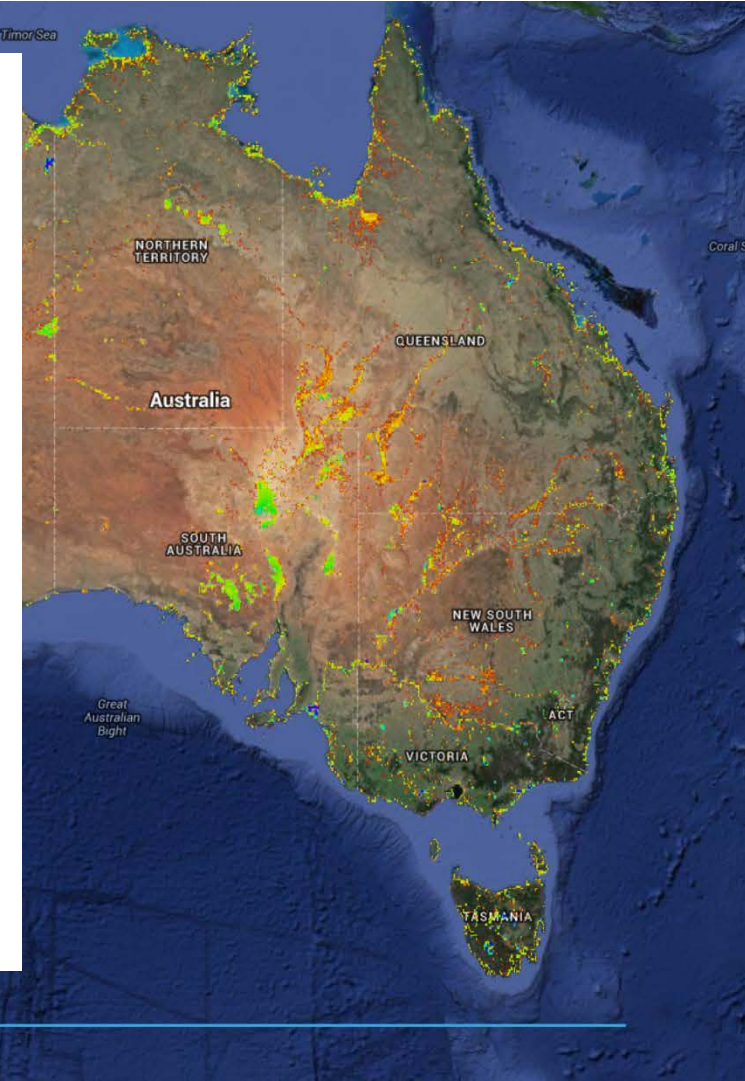
- **Domestic:** AGDC further developed apps on water, coastal vegetation
- **International:** CEOS Datacube (with NASA)
- **Other countries:** Assisted Pilot projects in Kenya, Columbia,
- Discussions: Vietnam, China, Canada, Switzerland, Chile

## Satellite Missions and Applications

- *HIMAWARI*
  - Himawari NMO Working group
  - Developing atmospheric corrections for Himawari
- *COPERNICUS*
  - Copernicus Regional Hub
  - Sentinel 2 and 3 working groups and validation projects-
- *NASA CORAL Mission*
  - Support calibrations missions in Australia

# Australia Geo Data Cube

- Vegetation change, agricultural production
  - Flood inundation mapping, farm dam development
  - Wetland management and characterisation
  - Carbon accounting
  - Seagrass and substrate mapping
  - Coastal change and water quality
  - Shallow water bathymetry
  - Mining footprint and urban development
  - Bushfire scar mapping and forestry inventory
  - Location-specific products for mobile platforms
- “Map my paddock”





# Australia's Regional Copernicus Data Access/Analysis Hub



The screenshot shows the Copernicus Australia website. At the top, there's a green header with the Australian Government and European Commission logos, and the text 'Copernicus Australia'. Below this is a large image of a Sentinel satellite in orbit. The main content area has a dark blue header with 'Welcome to Copernicus Australia'. Below this, there's a paragraph of text: 'Copernicus Australia provides free and open access to data from the European Commission's Sentinel satellite missions for the South-East Asia and South Pacific region. This regional data hub supports Europe's most ambitious and multi-faceted Earth observation programme yet. Below are access points to the Scientific Hub and API Hub along with links to the user guide and roadmap. The Scientific Hub provides access points for all ESA and EUMETSAT produced Sentinel data in this region utilising a basic download interface. The API Hub offers a Machine to Machine interface to the data which is currently under construction, expected late 2016.' Below the text is a row of six green icons with labels: 'Regional Data Hub', 'Regional API Hub', 'User Guide', 'Roadmap', 'About Us', and 'Contact Us'. At the bottom, there's a 'Statistics' section with two icons: a globe with an upward arrow and a download arrow. The text next to the globe icon says '68909 products published' and next to the download icon says '118 TB of data holdings'.

**Welcome to Copernicus Australia**

Copernicus Australia provides free and open access to data from the European Commission's Sentinel satellite missions for the South-East Asia and South Pacific region. This regional data hub supports Europe's most ambitious and multi-faceted Earth observation programme yet.

Below are access points to the Scientific Hub and API Hub along with links to the user guide and roadmap.

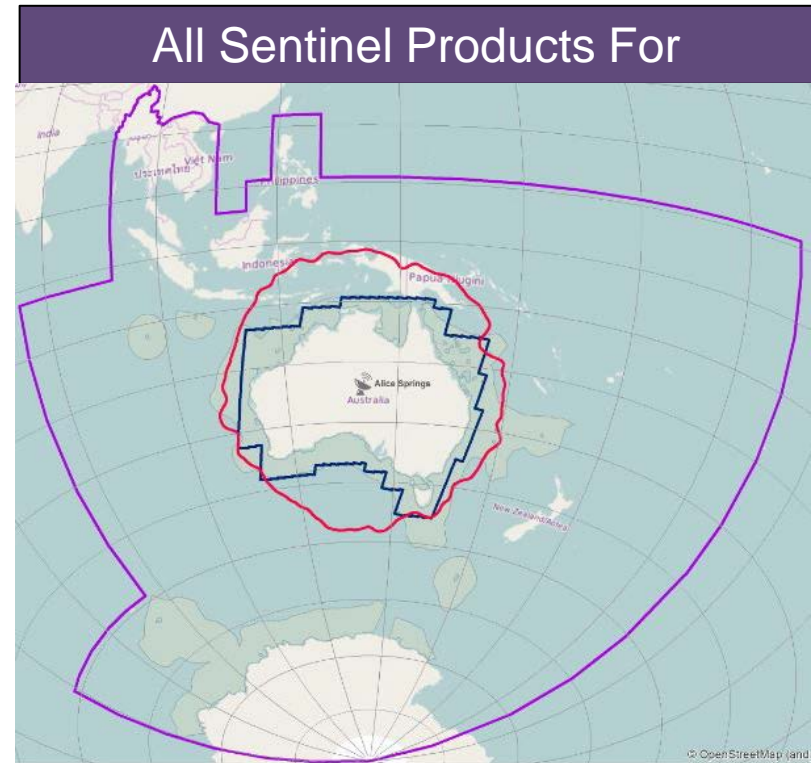
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**Statistics**

68909 products published

118 TB of data holdings



For more information and the data please visit:

[www.copernicus.gov.au](http://www.copernicus.gov.au)

Supporting

Consortium

Partners

Collaborators



# Workshop on Building Regional Earth and Marine Observing Systems to Safeguard APEC Resources and Communities

- Facilitate and **share** in-situ data among economies
- Utiliise **satellite data** including overlap of geostationary satellites across the APEC region,
- **Downscale climate projections** to scales relevant for decision-making
- **Engage** other APEC member economies in **GEOGLAM**
- Encourage shared investment in detecting and diagnosing the **ENSO**
- Encourage innovation to lower the **cost of sensors** and other observing platforms
- Facilitate the **transfer of knowledge and capacity building** of earth and marine observation communities across APEC member economies
- Target the **enhancement of existing observing networks**
- Assist in the **evaluation of the economic benefits** of earth and marine observing work
- Raise **awareness** of earth and marine observing systems to relevant **policy-makers**





# THANK YOU

**Andy Steven**

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