



Australian Government



Digital Earth  
AUSTRALIA

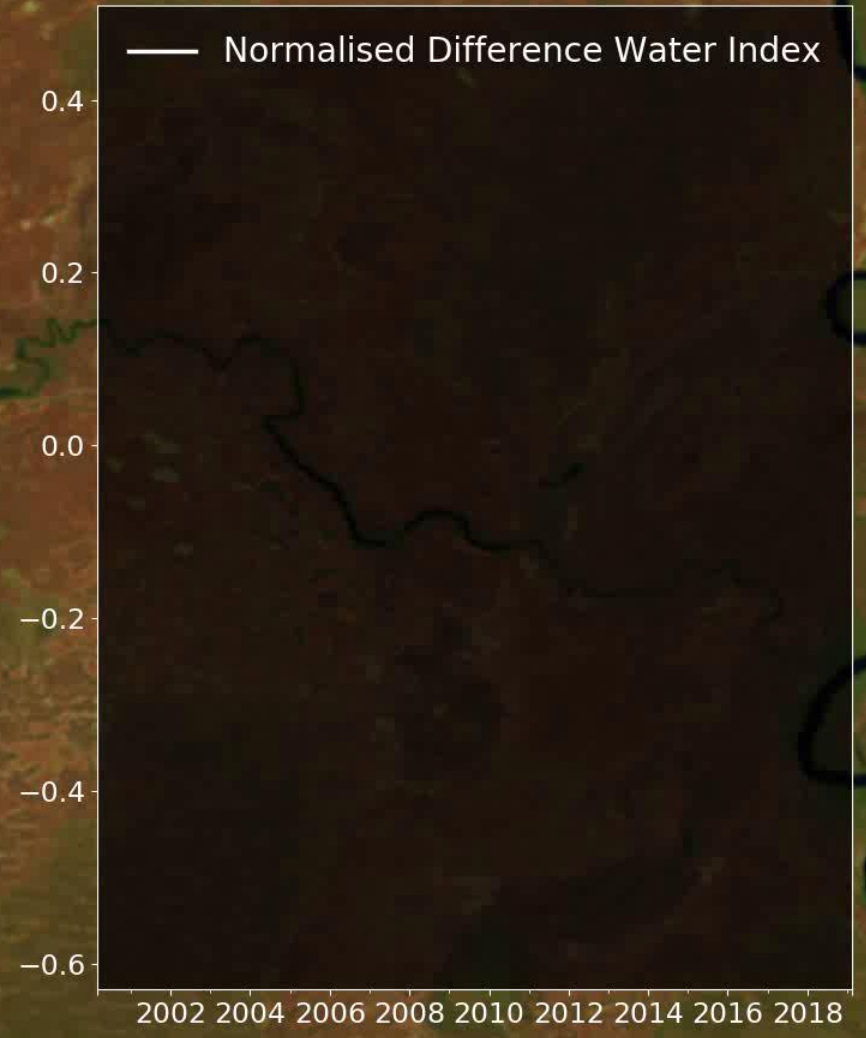
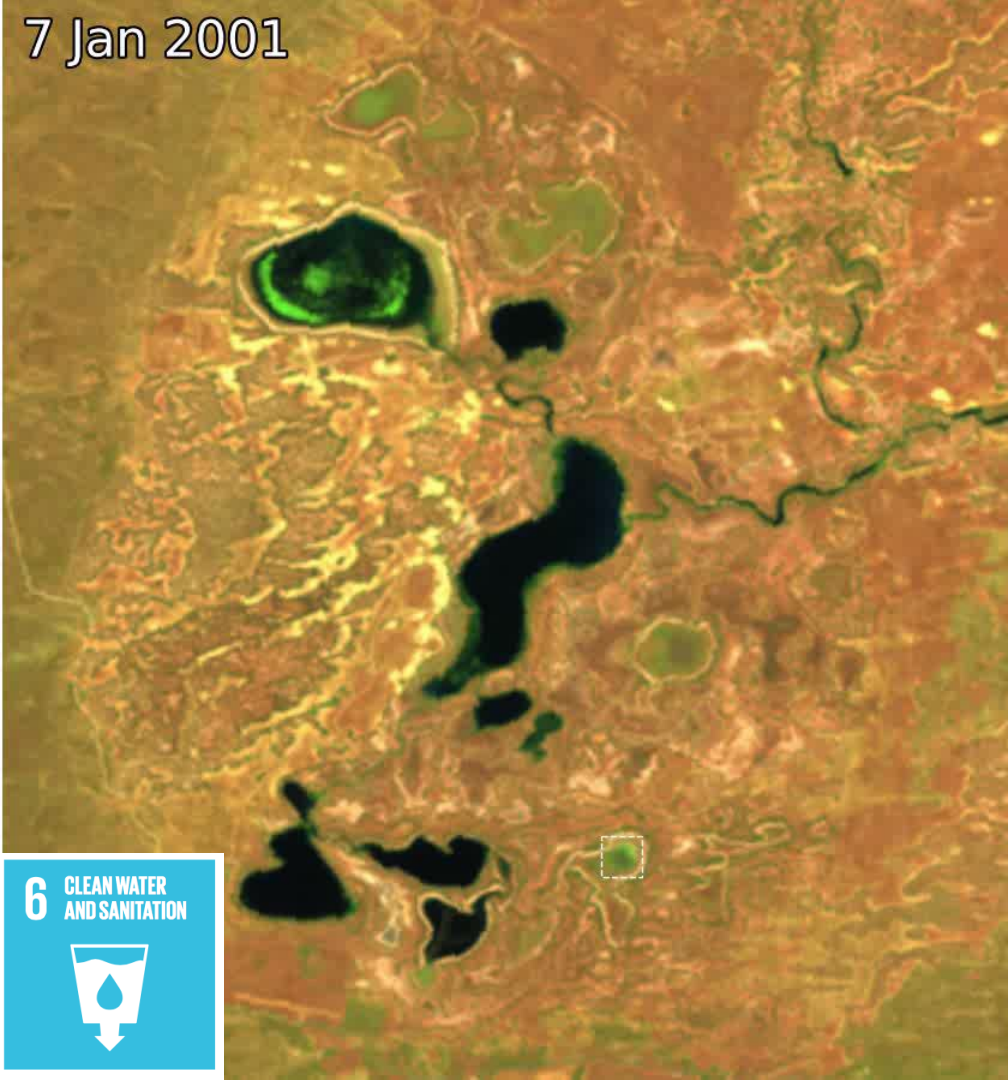
# Digital Earth Africa: From Satellites to Insights

Dr Stuart Minchin,  
Geoscience Australia





7 Jan 2001



**6** CLEAN WATER AND SANITATION

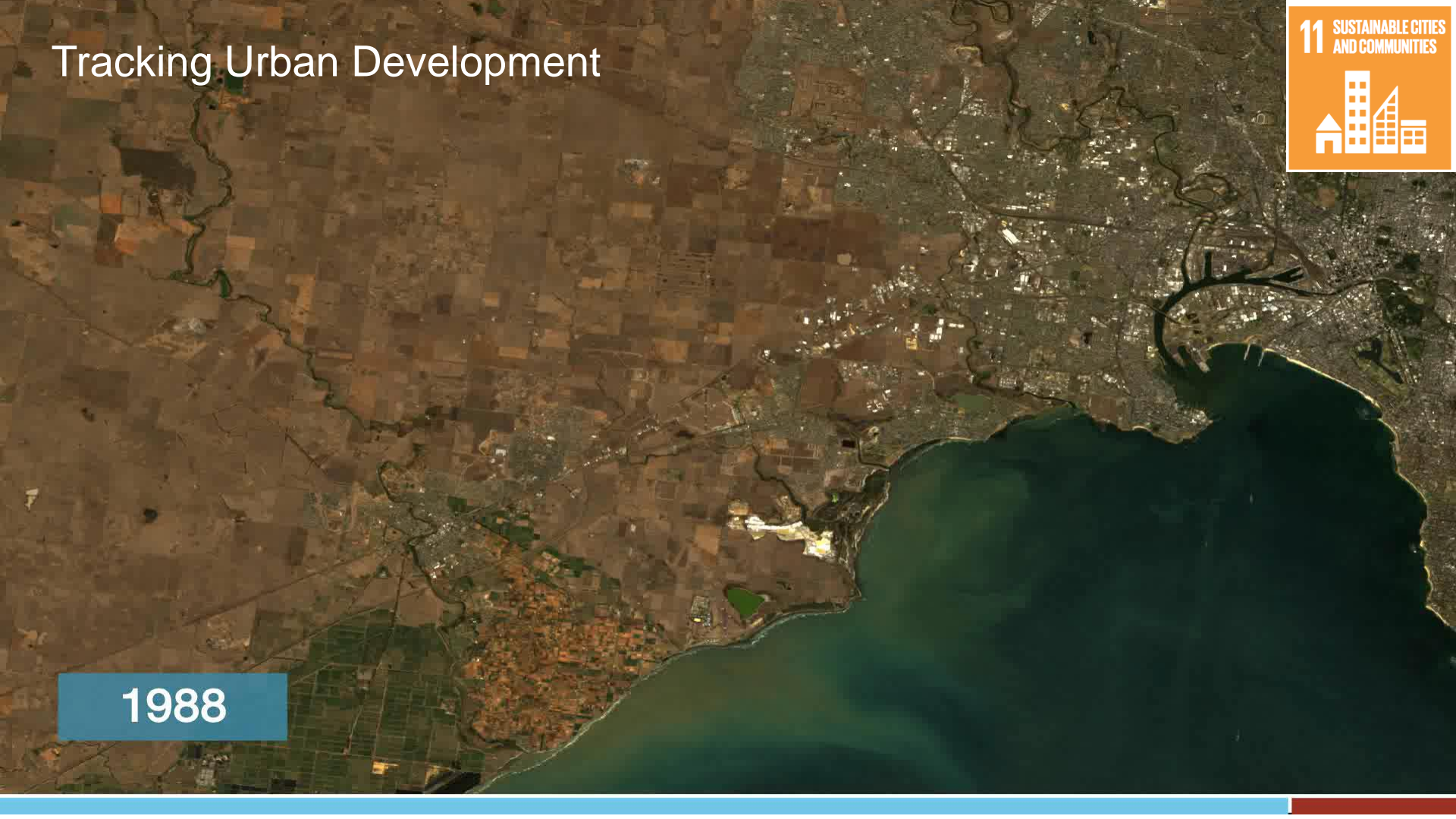
The icon shows a white water tap with a single drop of water falling from it, set against a blue background.

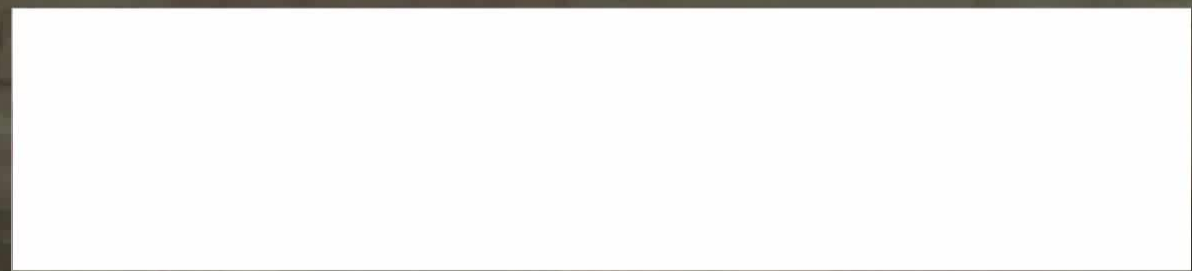
# Tracking Urban Development

11 SUSTAINABLE CITIES  
AND COMMUNITIES



1988





- green
- dry
- soil

1988 2000 2006 2014

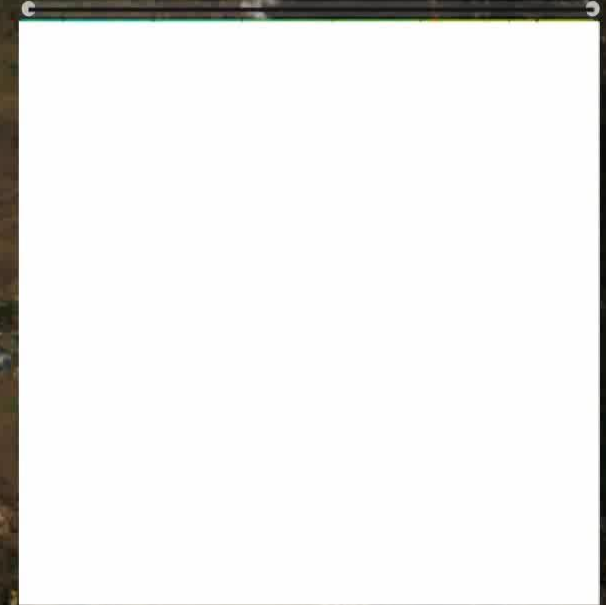


# Local Scale Water Quality Monitoring: Lake Burley Griffin

1987

2001

2013



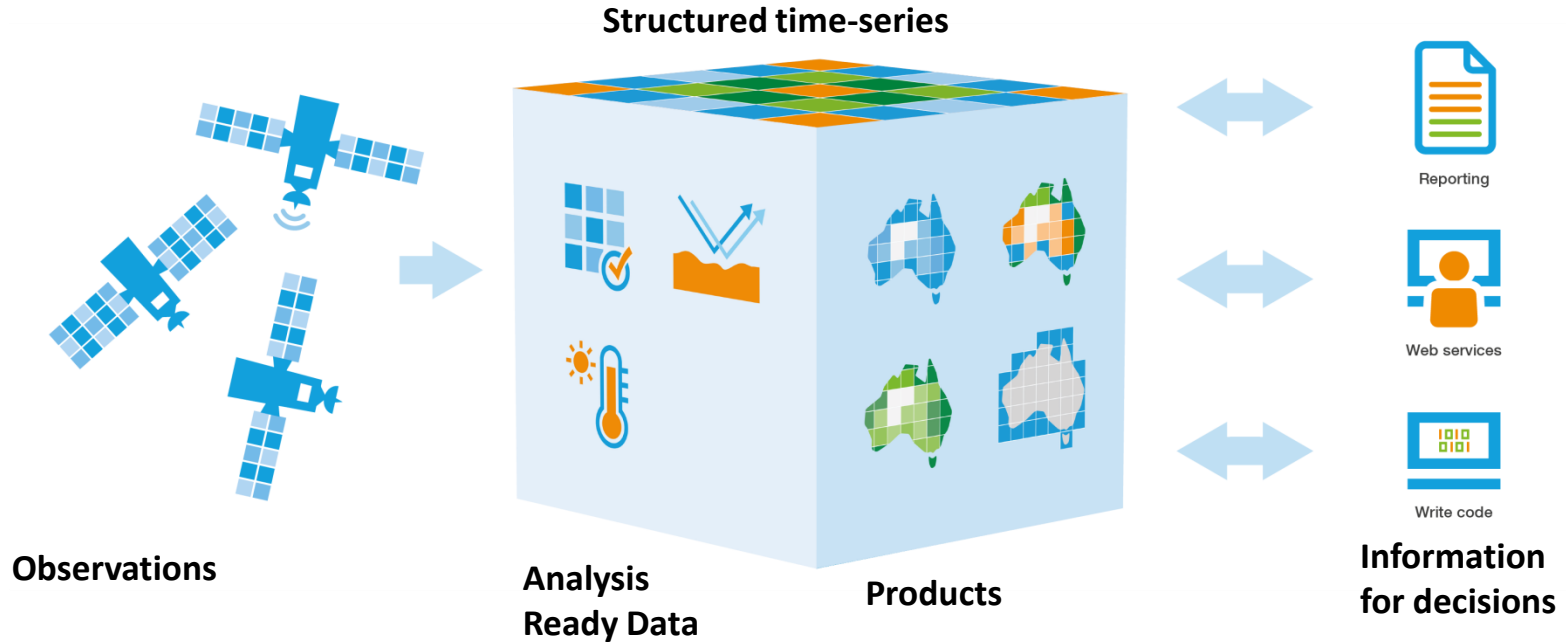
325

0

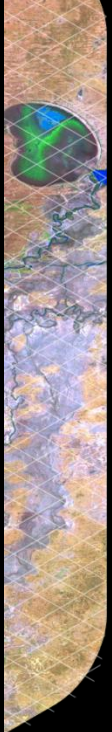




# Digital Earth Australia



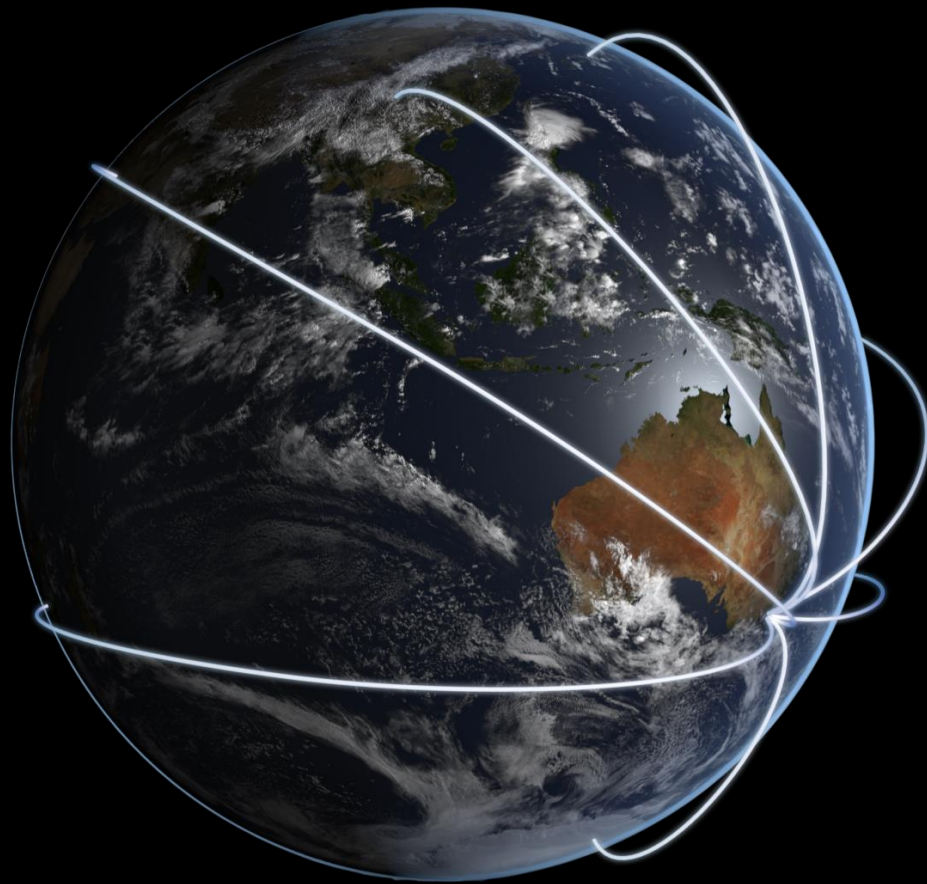




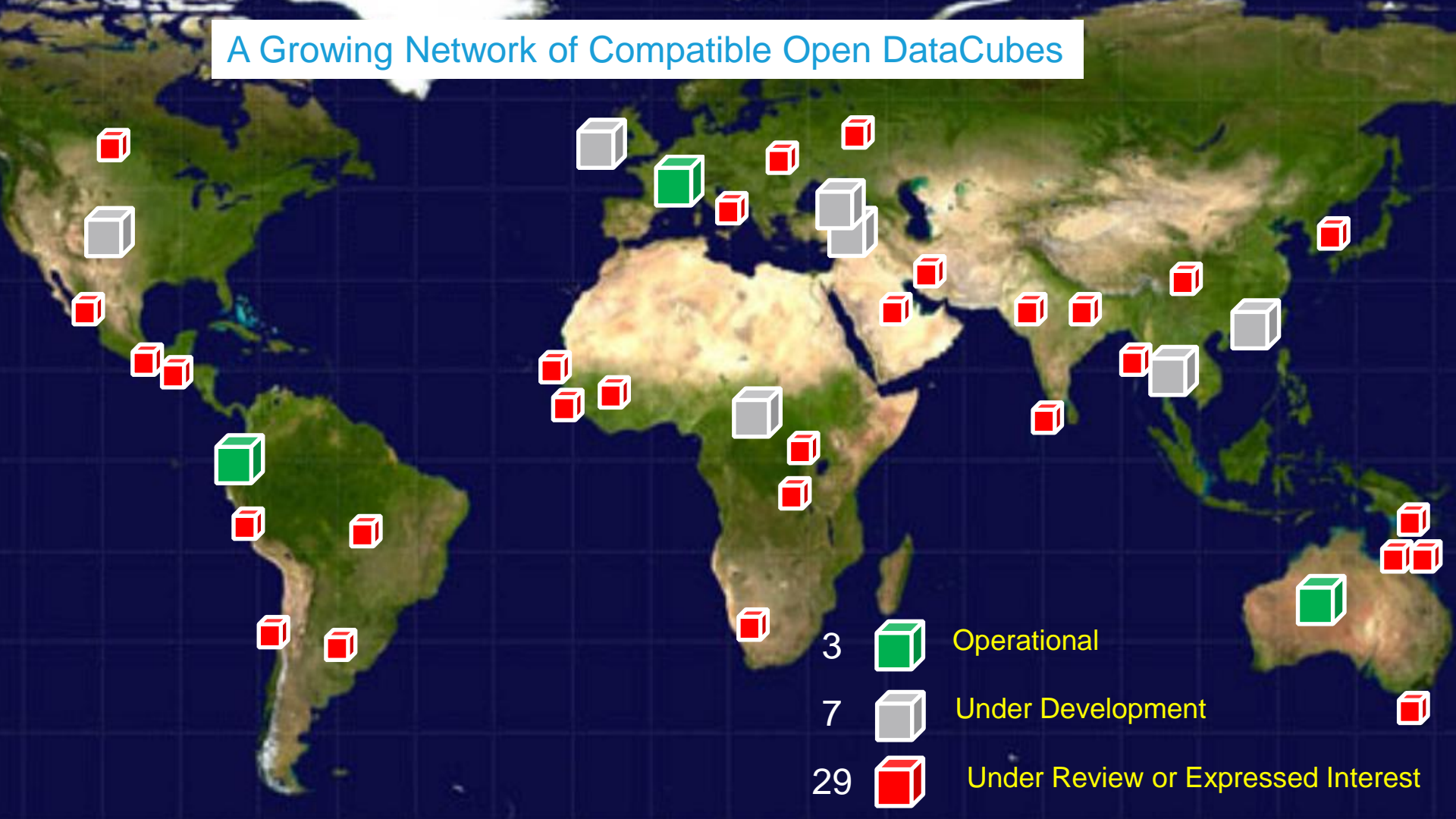
## Data Cubes for:

Africa, Antarctica, China, India,  
Europe, North America, ...

Connecting the EO, Spatial and Statistical  
world to support global SDGs?



# A Growing Network of Compatible Open DataCubes





Countries have expressed a need for better access and capacity for applying Earth observation data to national priorities, in relation to national development objectives and the 2030 Agenda.

Digital Earth Africa will provide an operational data infrastructure deployable in the cloud or locally that gives the government control over its management. The project will support a multi-stakeholder and data ecosystem approach.



## Countries

- Tanzania
- Kenya
- Senegal
- Sierra Leone
- Ghana
- Uganda
- South Africa
- Rwanda
- Botswana
- Cote d'Ivoire
- Malawi
- Gabon
- Ethiopia

## Use Cases

- Agriculture
- Land degradation
- Water quality and extent
- Disease/pests
- Deforestation
- Illegal mining
- Urban growth
- Flood risk
- Unplanned settlements
- Wildfires
- Mangroves
- Landslides
- SDG indicators

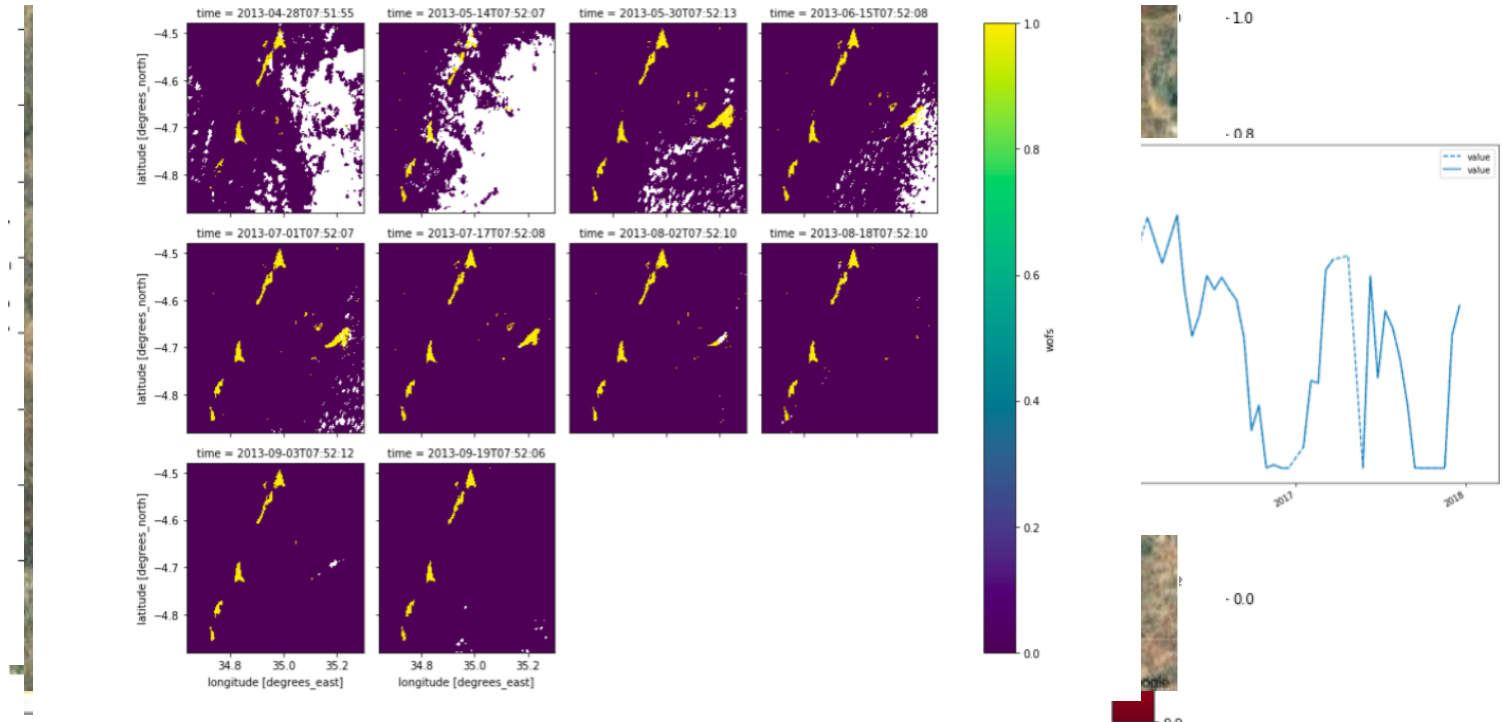
## Stakeholders

- Geoscience Australia
- Group on Earth Observations (GEO)
- Committee on Earth Observations (CEOS)
- World Economic Forum
- South Africa National Space Agency (SANSA)
- Kenya Office of the Deputy President
- Global Partnership for Sustainable Development Data
- CGIAR
- UNECA
- Africa Union
- AfDB
- RCMRD
- AGRHYMET

Phase 1 Steering Committee

# Drought resilience workflow- Tanzania

## 3. System analysis and diagnosis 3.1. System analysis and diagnosis of water body

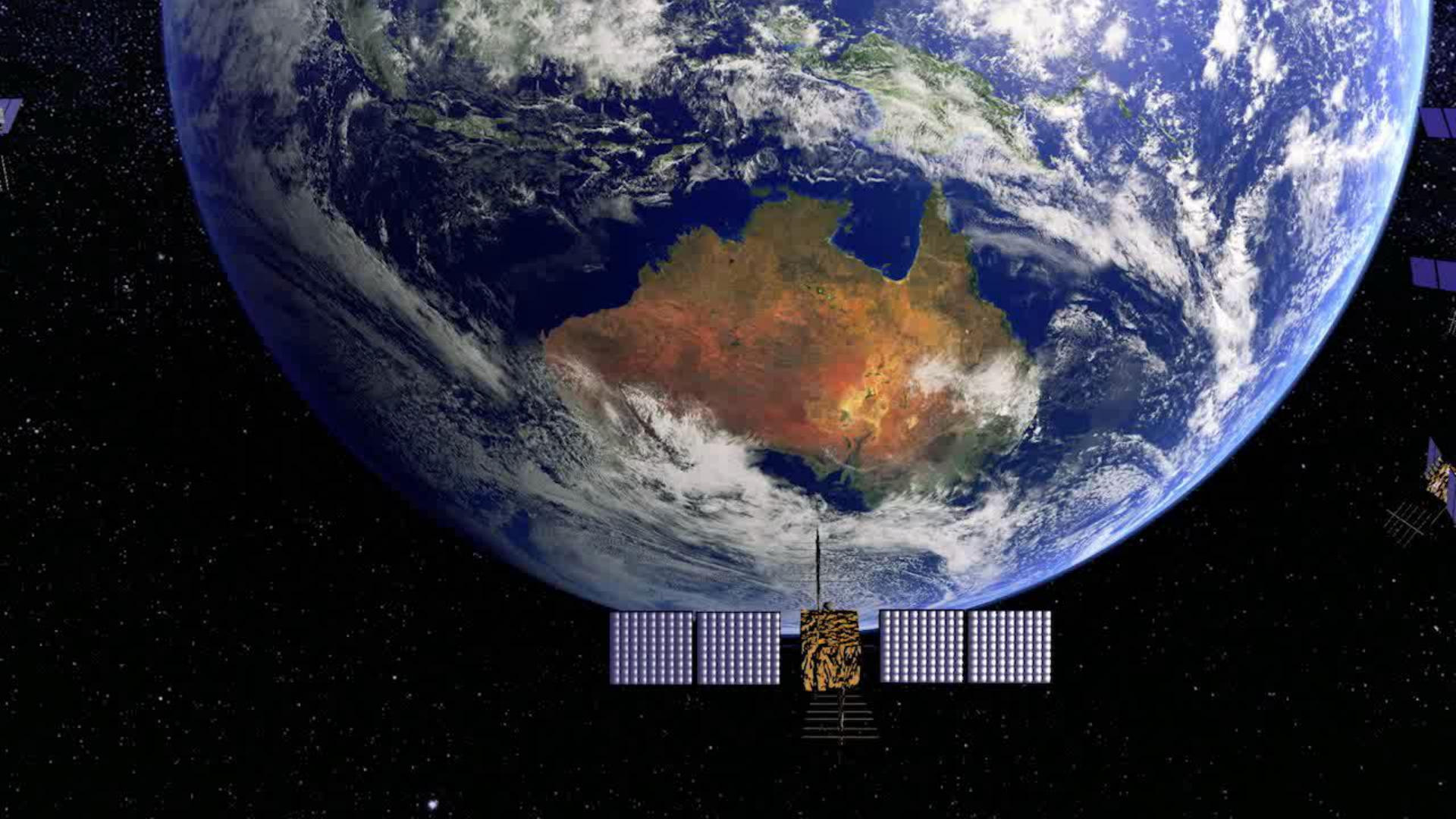


## Operational Data Cube for all of Africa



- Operational Data Cube for whole of Africa
  - Regular decision ready product / not research
  - Automated, run for every pixel for entire continent
  - Levering off other ODC developments
- New institutional home- (Host TBD)~30 staff
- Flexible cloud/HPC Infrastructure
- Funded for production of product and capacity building/App development
- Multilateral effort, not owned by one country
- Products free and open and available to every African







## How can we make this a global story?

- Through the Group on Earth Observations we have global free and open EO data (notably Landsat and Copernicus)
- Open Data Cube provides an open source tool to create data cubes and generate this geospatial value anywhere on the planet. Join the global ODC effort and contribute!
- By all means develop your own national data cube, but don't just stop there!...we must work together to bring operational data cubes to the world and deliver value to every region, country and citizen. Leaving no-one behind!

Australia, Africa.....where next?





Australian Government



Digital Earth  
AUSTRALIA

[www.digitalearthafrika.org](http://www.digitalearthafrika.org)

