Digital Earth Australia, Africa and Pacific: Big Earth Data for Sustainable Development

Dr. Stuart Minchin
Director General, SPC
Developing Digital Earth Australia

Orthorectification

Calibration

Time series
Digital Earth Australia

Structured time-series

Observations
Analysis Ready Data
Decision Ready Products

Information for decisions

Reporting
Web services
Write code

GEOSCIENCE AUSTRALIA
There are 295,902 mapped waterbodies across Australia (58,493 in the Murray Darling Basin)
Local Scale
Water Quality Monitoring: Lake Burley Griffin
Tracking Urban Development

1988
ACT urban expansion from 1998 to 2017

Bonner, 2010

Development near Googong foreshores, 2013 to 2015

Wright, 2011
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 Data Cubes
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
- Ghana National Statistics Office
- Global Partnership for Sustainable Development Data
- CGIAR
- UNECA
- Africa Union
- AfDB
- RCMRD
- AGRHYMET

Phase 1 Steering Committee
Digital Earth Pacific

Operational EO for the Pacific

- Climate Change impacts
- Coastal change/inundation
- Coral bleaching
- Maritime surveillance
- Marine water quality
- Agriculture
- Water
- Vegetation
Digital Earth Pacific: Vanuatu pilot

Vegetation change
Digital Earth Pacific: Vanuatu pilot

Coastal change
Digital Earth Pacific: Vanuatu pilot

Coastal WQ

Total Suspended Matter (Blue=Low, Green=Medium-Low, Orange=Medium-High, Red=High)

TSM = Leo Lymburner

TSM = Zhongfeng Qui

TSM = NDSSI (Hossain)

TSM = Quang Pham
Thankyou

Stuartm@spc.int