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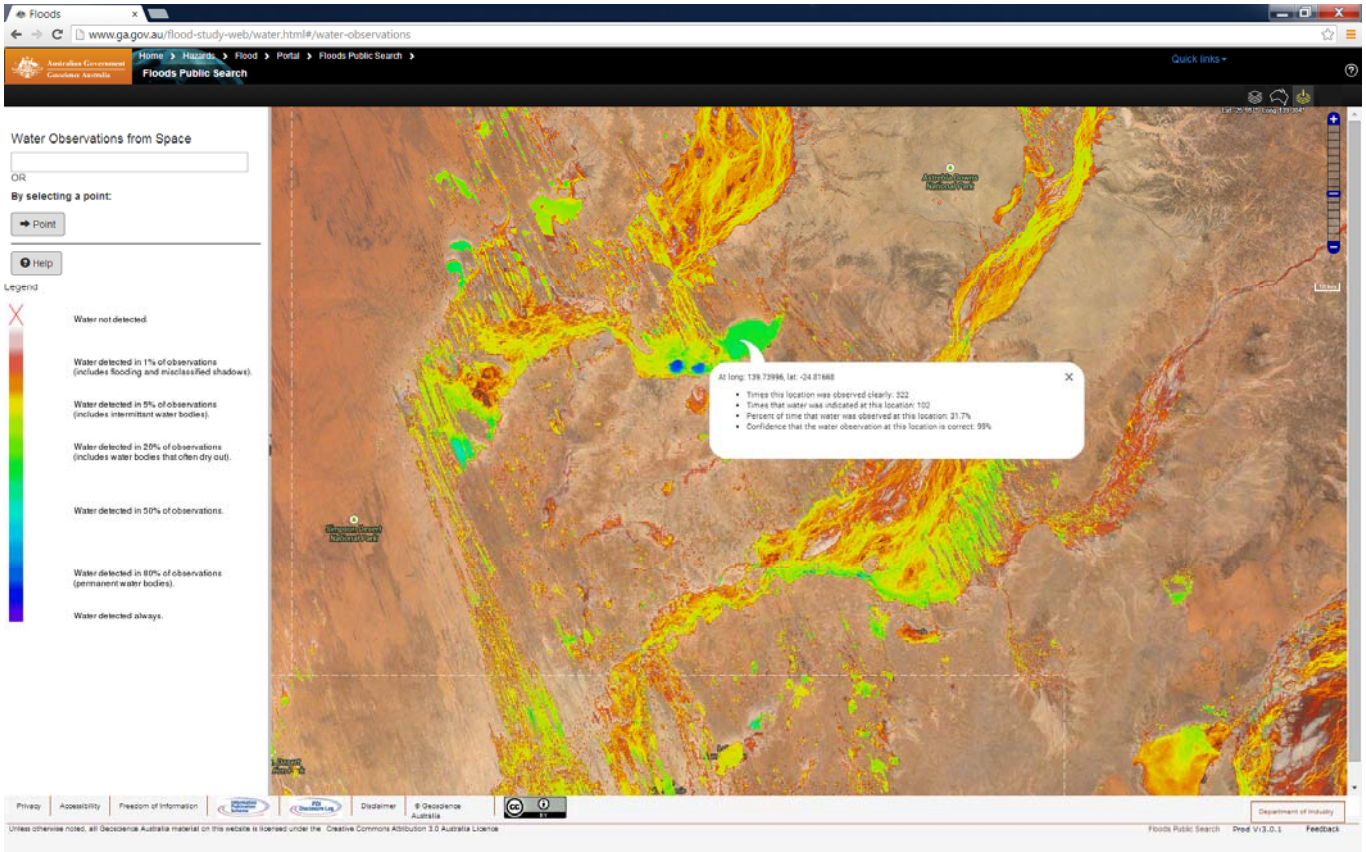
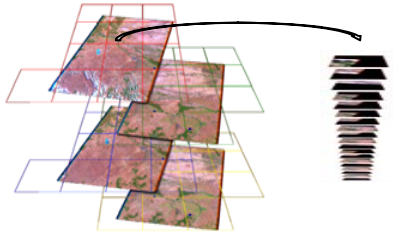
Land cover over time. Copernicus sentinel data 2015, ESA

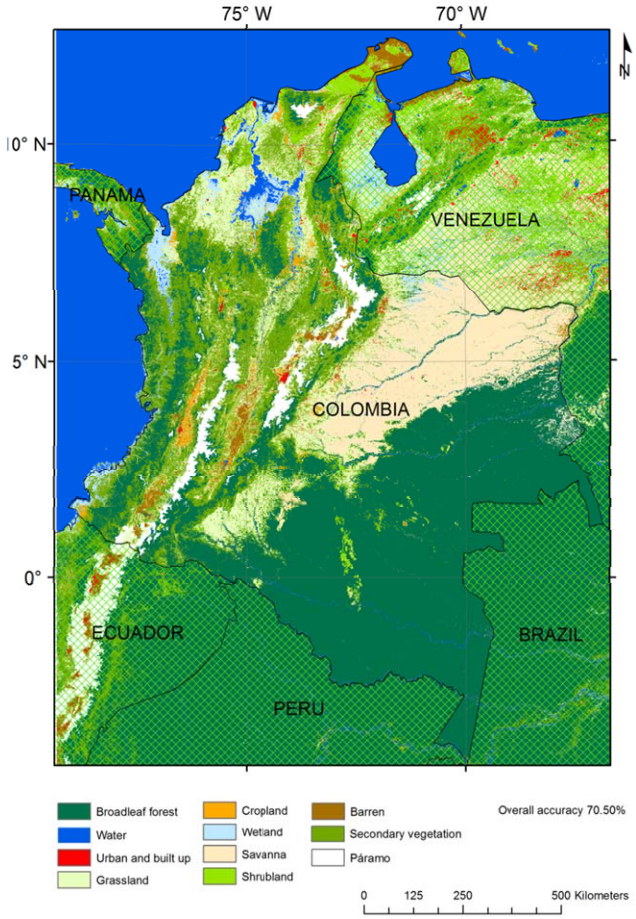


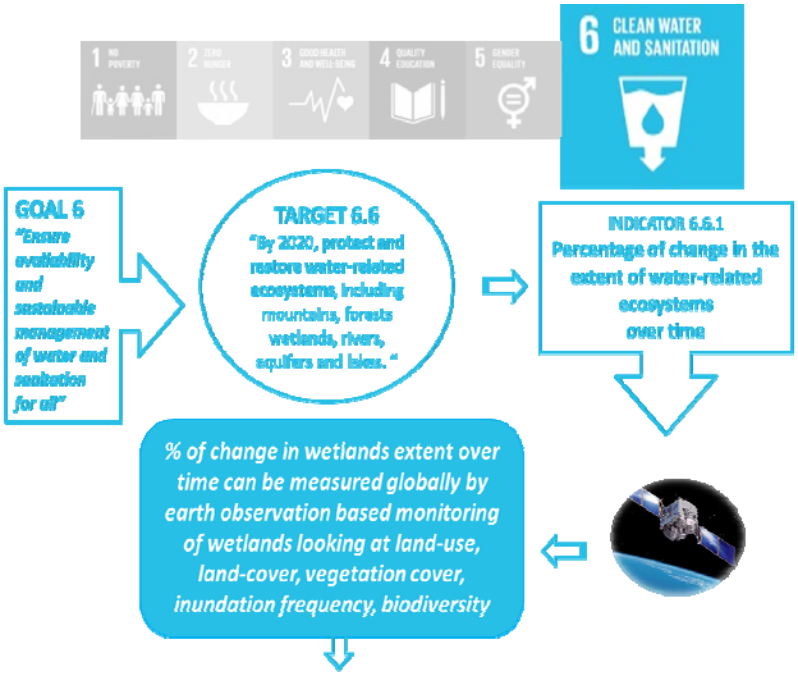


Water observations over Australia based on the Australian Geoscience Data Cube

Land cover map for Colombia using 2011 ± 2 years of MODIS NDVI and surface reflectance MOD13A1 data, filtered for low-quality observations and adding elevation (TS-F-C2-E)

http://www.mdpi.com/2072-4292/7/12/15833/htm

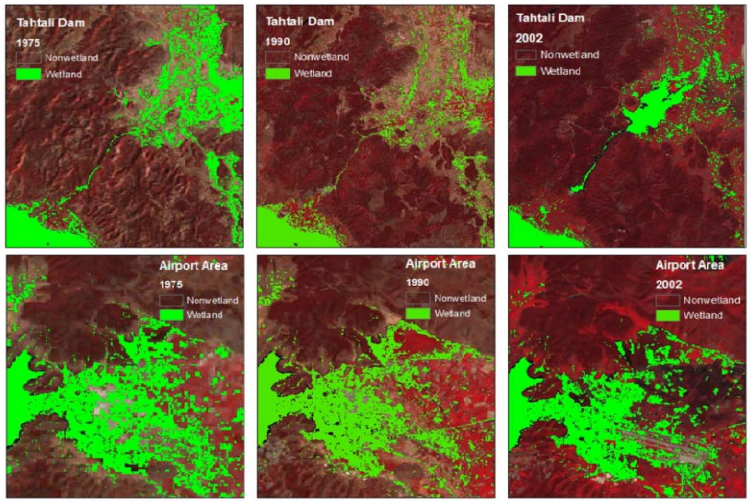


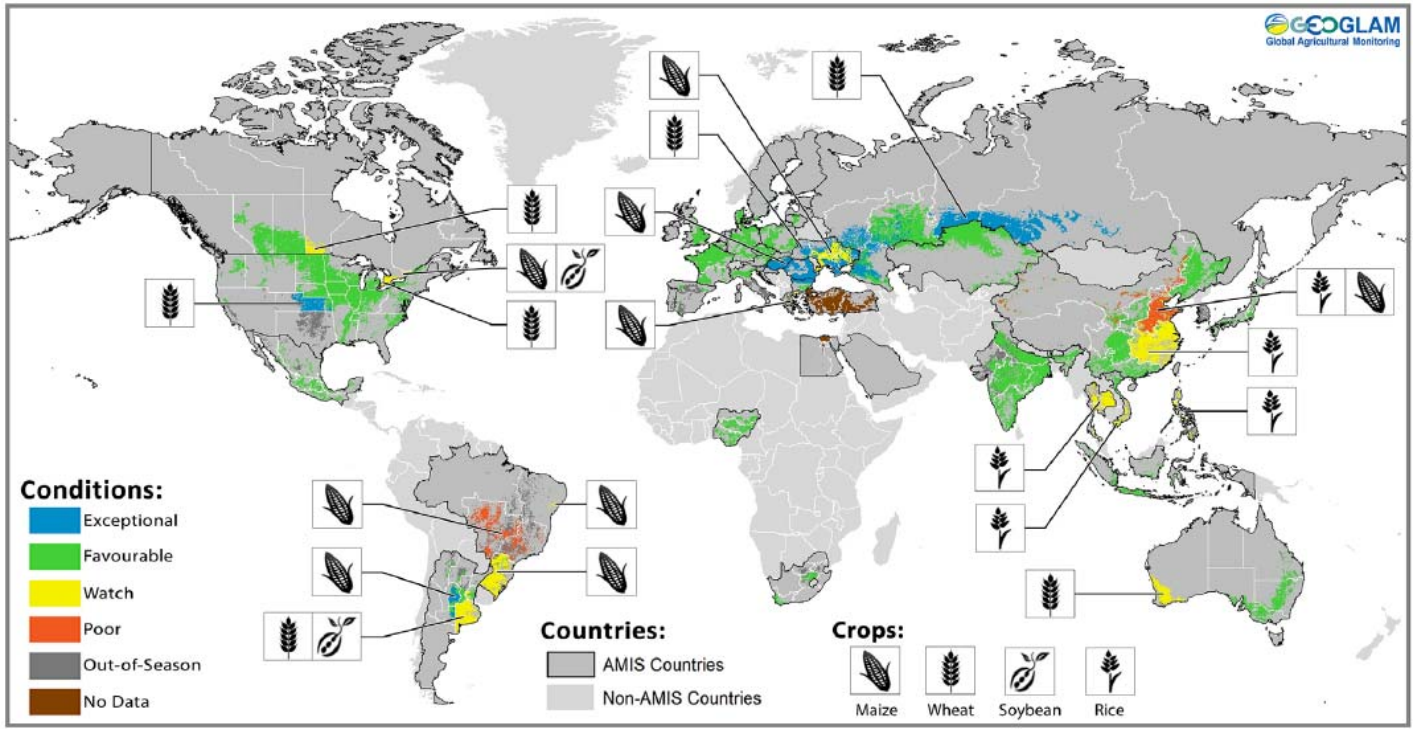


6 CLEAN WATER AND SANITATION

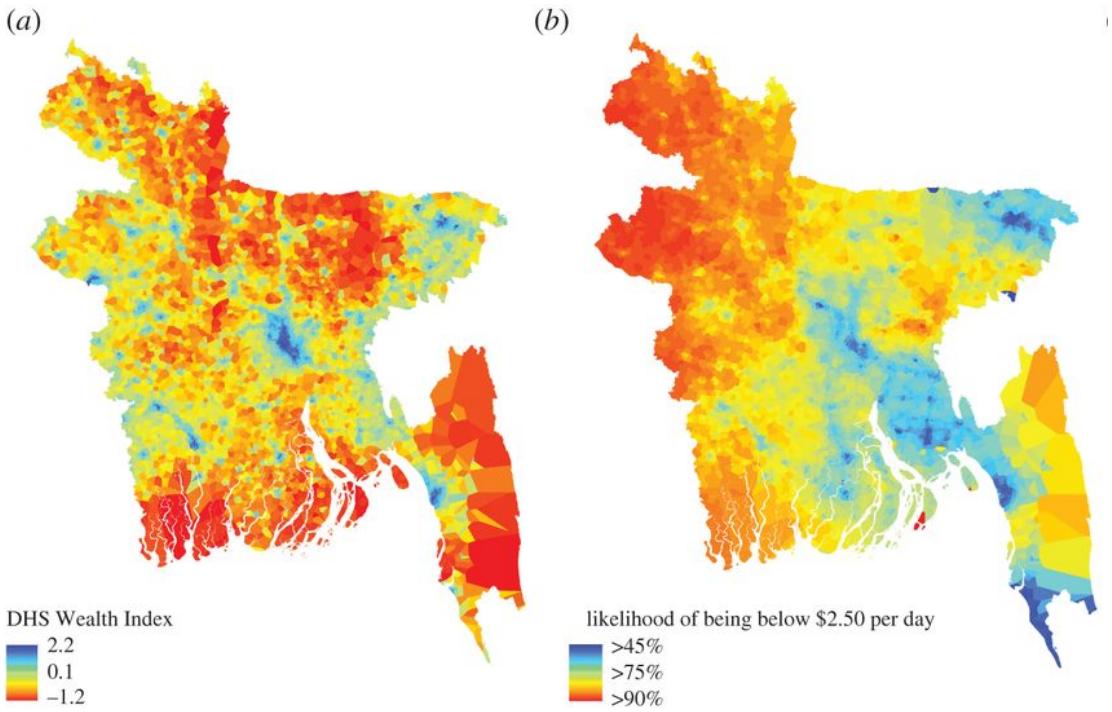
Multi-temporal Wetland Identification and Delineation products (Landsat 1975, 1990, and 2002) for exemplary sites between Izmir and Bodrum (upper part: region around Tahtali Dam; lower part: Bodrum airport area).

http://www.earthzine.org/wp-content/uploads/2011/12/Figure-3.jpg





GeoGLAM Crop Monitoring.
EO in Service of the 2030 Agenda for Sustainable Development. Anderson *et al.* 2017



Combining EO and mobile phone data to obtain poverty estimates. Steele *et al.* 2017

Combining EO, Virtual Reality and drones

SDGs and EO data: satellite data used in a varied range of applications (GEO document)

UN Satellite Imagery and Geo-Spatial Task Team

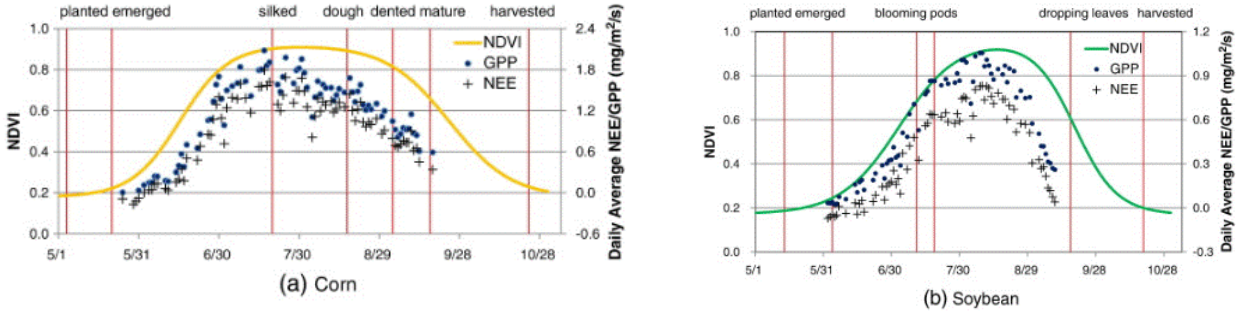
Handbook

- Introduction to the use of earth observations data for official statistics
- Types of sources available
- Examples of using satellite imagery to measure the SDGs
- Methodologies for producing statistics from EO data
- Summaries of results of four pilot projects produced by the UN Task Team to investigate the feasibility of using satellite imagery data for official statistics
- Guidelines for National Statistical Offices when considering whether to implement EO data sources into their statistical production process

TT Handbook: Case Studies

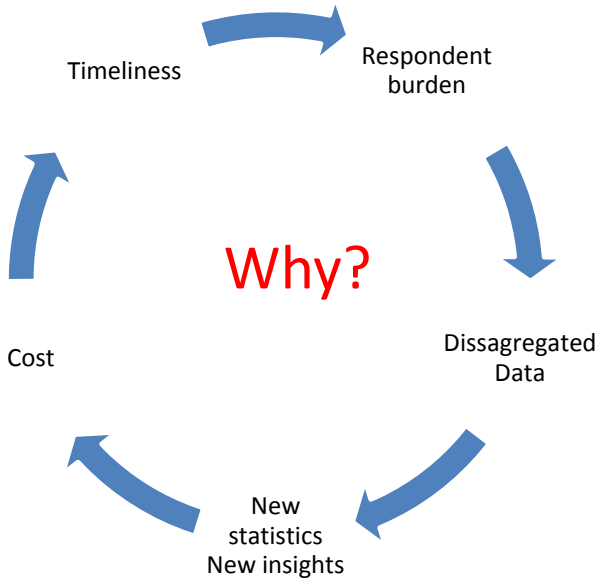
1. Identify reliable and accurate statistical methods for estimating quantities of interest;
2. Suggest approaches for collecting representative training and validation data of sufficient quality;
3. Research, develop and implement assessment methods for the proposed models including measures of accuracy and goodness of fit;
4. Establish strategies to reuse and adapt algorithms across topics and to build implementations for large volumes of data.

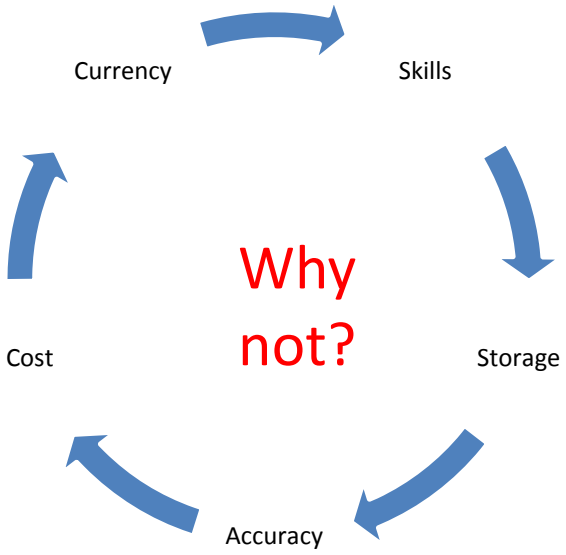
- **Australia**
- **Colombia**
- **Canada**
- **USA**
- **South Korea**
- **Others**



Gao et al. 2017

Value Proposition for Official Statistics





Addressing the “why not”

Takeup

Collaboration

Training

Trust

Academic & Research Community Support

Takeup

- How-to
- Innovation

Training

- Capability
- Students

Collaboration

- Networks
- Secondments

Trust

- Credibility
- Review

International Research Engagements

Australian Research Council Centre of Excellence

Mathematical & Statistical Frontiers:

Big Data, Big Models, New Insights

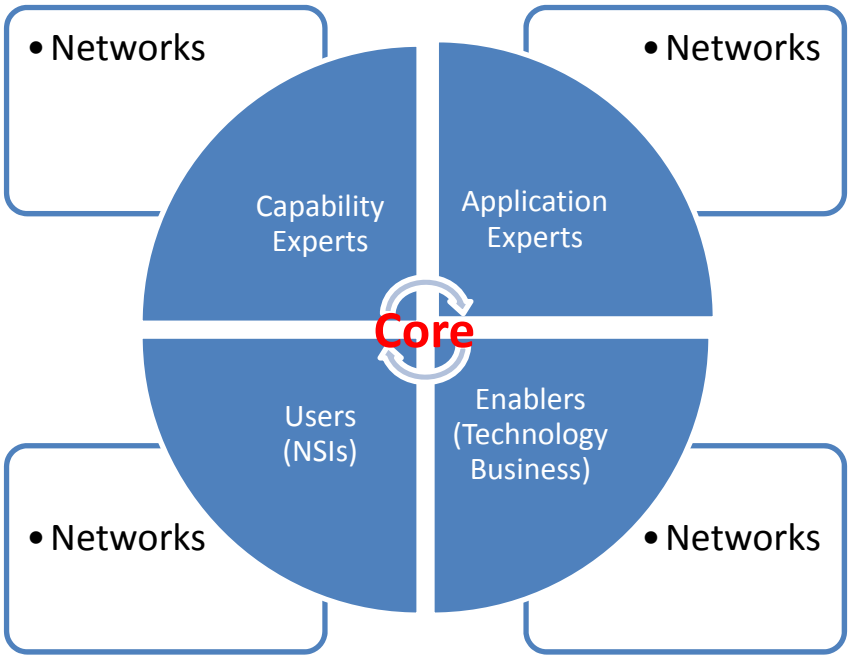
Advisory Committee

Applications

Capabilities

	EO	Phone	Scanner	Other
Providers				
Processors				
Analysts				
Users				

Advisory Committee



Task Teams

THE UNITED NATIONS GLOBAL WORKING GROUP ON BIG DATA

#UNBIGDATA2017

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