

Satellite data for official statistics

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Assistant Director

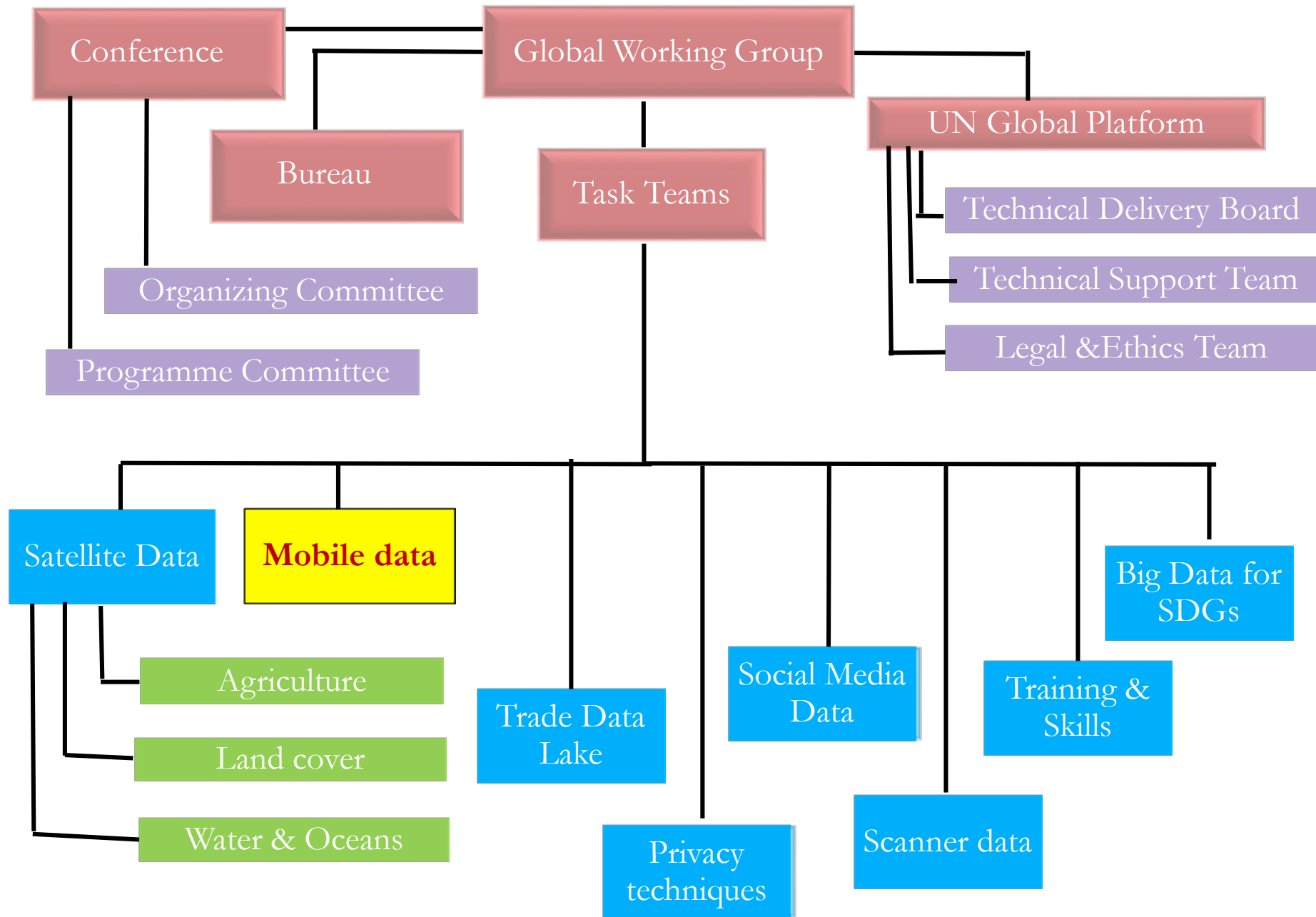
Chief of Data Innovation and Capacity Branch
United Nations Statistics Division



Big Data

UN Global Working Group

- Created in March 2014 by the UN Statistical Commission
- Mandated to give direction to the use of Big Data for Official Statistics
- Consisting of 28 countries and 16 international organizations



**Task Team on
the use of
Satellite and
remote sensing
data for official
statistics**



- **Accomplishments:**
 - Handbook on the use of Satellite data for official statistics
 - Workshops in Bogota and Bangkok
 - E-learning course
 - Algorithms and methods

Deliverable	Milestone	Due Date	Status
Trusted Learning	Material Finalised, learning Delivered and access to data sources to support learning	December 2019	On going
Trusted Application	Open source code available for review	December 2019	On going
Trusted Methods	Guidance material – short-term deliverables	December 2019	On going
Determine scope of Phase 2	Through consultation, determine priorities and deliverables for Phase 2	December 2019	

Key Players in GWG Task Team

- Statistics Canada
- DANE Colombia
- INEGI Mexico
- Statistics Netherlands
- Statistics Poland
- NISR Rwanda
- Queensland University of Technology (Australia)
- FAO
- UNSD
- UNEP



Learn

02/09/2020

The technology and what it means for policy



Engage

United Nations Statistics Division

Participate and collaborate in upcoming events



Support

Realising the benefits of decision ready

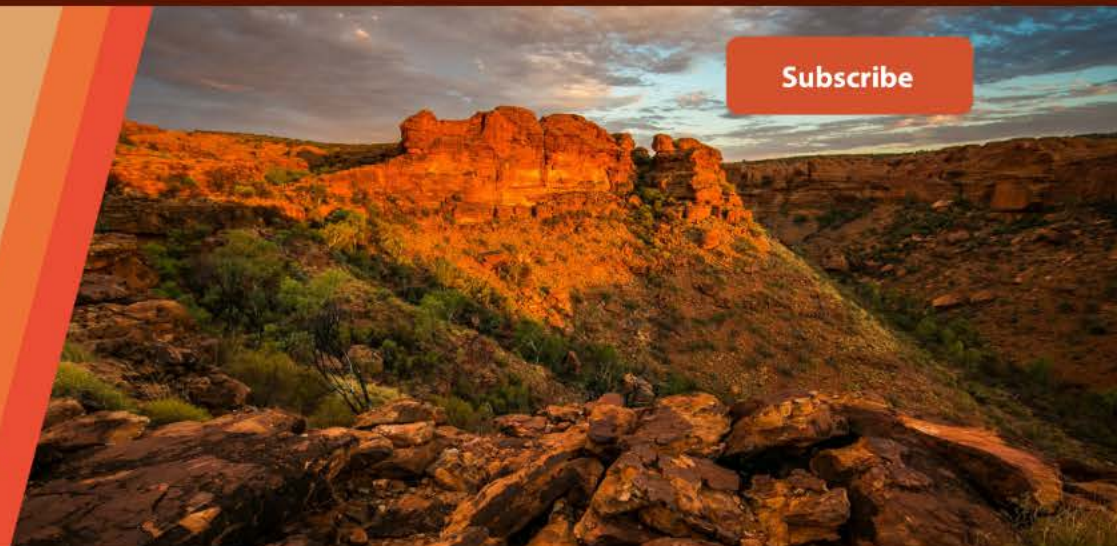


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EARTH OBSERVATIONS FOR ASIA-OCEANIA
AOGEO SYMPOSIUM 2019

2-4 November 2019 / Canberra, Australia

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EO4SDGs

Task Stream II: Application of satellite EO data for the SDG indicators

Task II:

Document national experiences and good practices (case studies)

Deliverables

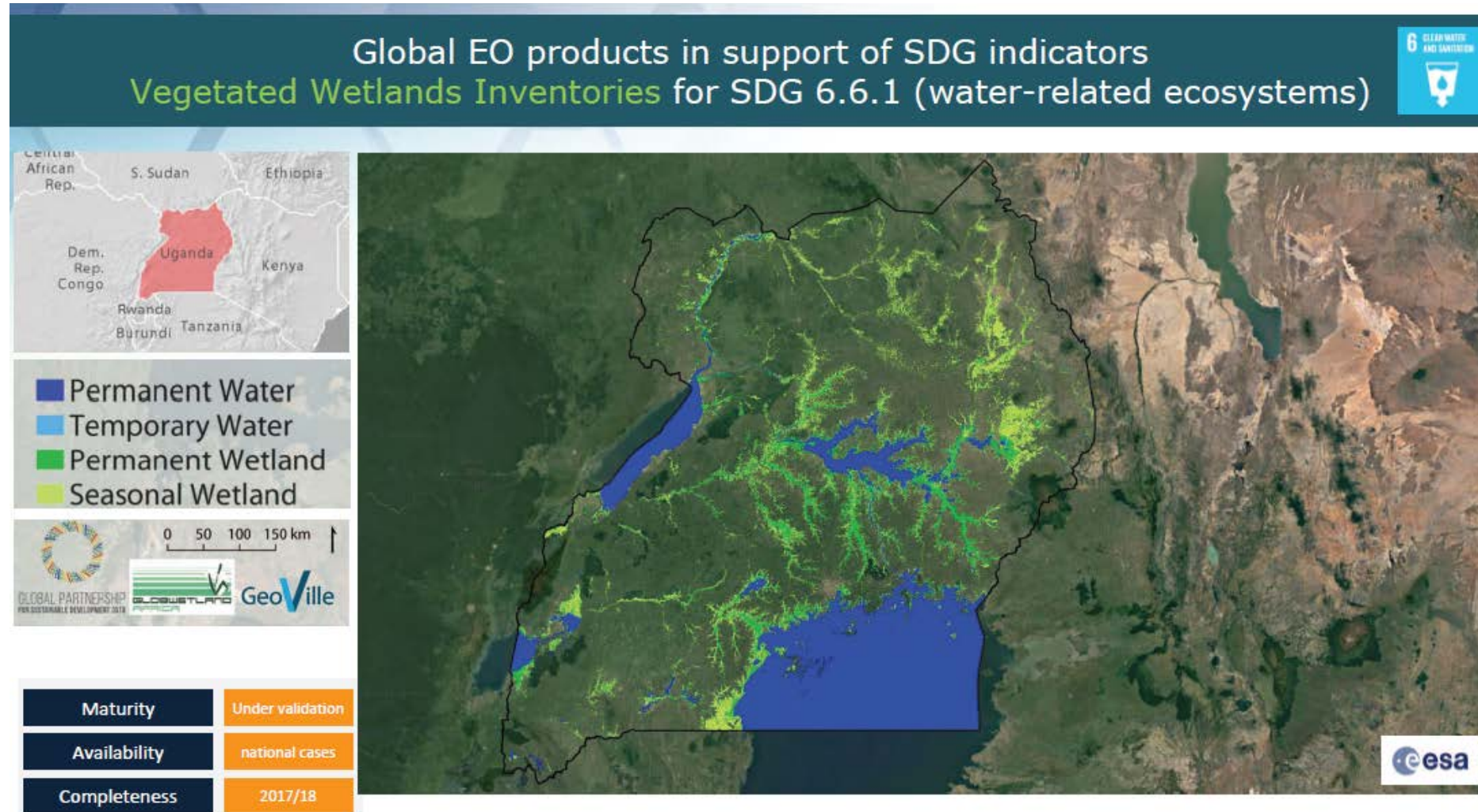
- Primers and Technical guidelines, with national good practices, on the integration of EO data streams into the production of SDG indicators.
 - 6.3.1 (wastewater management)
 - 6.3.2 (ambient water quality)
 - 6.6.1 (spatial extent of water-related ecosystems)
 - 9.1.1 (rural population within 2 km distance from all-season roads)
 - 11.3.1 (land consumption per population growth)
 - 15.3.1 (proportion of degraded land per total land).



EO4SDGs



EO4SDGs



EO4SDGs

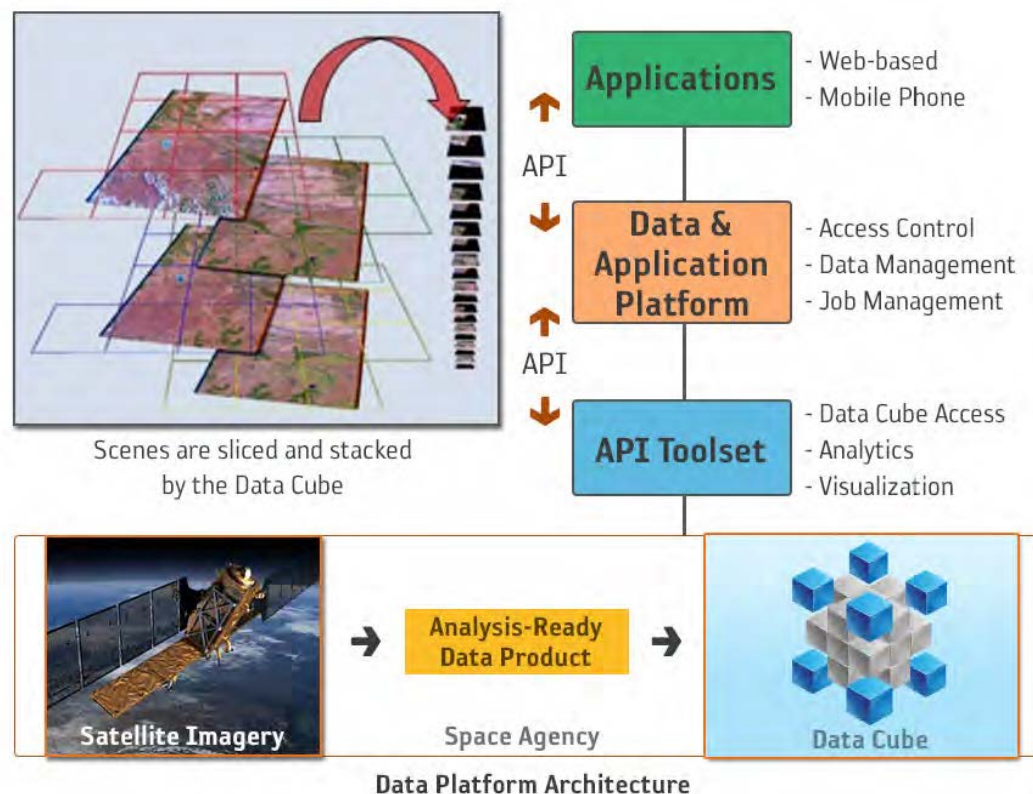
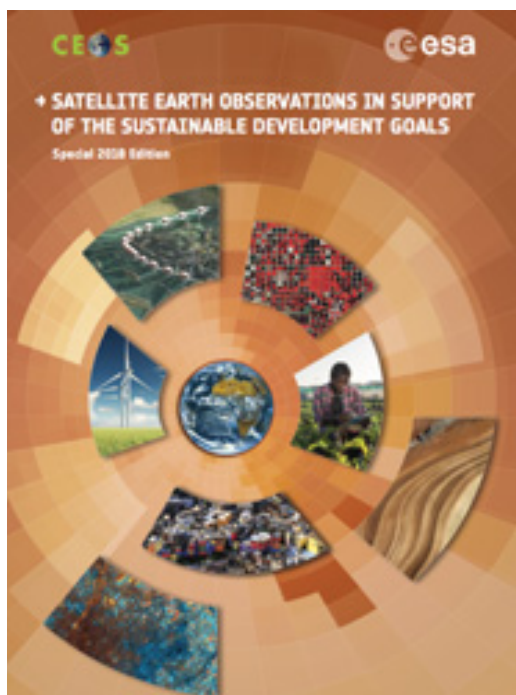
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CLEAN WATER AND SANITATION

SDG 6.6.1

Custodian	UN Environment, Ramsar	Global Datasets	<ul style="list-style-type: none"> •Global Surface Water Explorer (GSWE), EC/JRC •Global Mangrove Watch (GMW), JAXA •Copernicus Global Land Service, Lake Water Quality, EC
Indicators	Change in extent of water-related ecosystems over time	EO good practice examples	<ul style="list-style-type: none"> •Examples from SWOS (EC), GW Africa (ESA), EO4SD Water (ESA), other projects •GPSSD project in Uganda (wetlands) •NASA pilot projects
Sub-Indicators	<ul style="list-style-type: none"> •Spatial extent of open water bodies •Spatial extent of vegetated wetlands •Lake Water Quality •Other not relevant for EO 	Platforms (with data analytics)	<ul style="list-style-type: none"> •GSWE (global-surface-water.appspot.com) •ESA TEP Hydro (hydrology-tep.eo.esa.int)
Custodian's expert group	ESA, NASA, EC/JRC (GSWE), JAXA (GMW)	S/W Toolbox	<ul style="list-style-type: none"> •Open Data Cube (free, open source) •SWOS Toolbox (free) •GlobWetland Africa Toolbox (free, open source)
EO in Custodian guidelines	Level 1 includes 2 Sub-Indicators based on EO global data from which will be validated by countries against their own methodologies and datasets.	GEO Initiative	•GEO Wetlands
EO products	<ul style="list-style-type: none"> •Dynamics of surface waters •Vegetated Wetland inventory (with high level classification) •Surface Water quality (Chl-a /Trophic State Index, TSM / Turbidity) 	Knowledge Hub	<ul style="list-style-type: none"> •GEO Wetlands Portal (in construction) http://portal.swos-service.eu/mapviewer/
Source of EO	<ul style="list-style-type: none"> •Landsat, Sentinel 1, Sentinel 2, ALOS-2 Palsar-2 (ScanSAR) •Palsar-2, Landsat-8, S1, S2 •MODIS, VIIRS, S3 OLCI & S2 + L8 	National Experience	<ul style="list-style-type: none"> •Colombia •Australia •Others?

CEOS Earth Observation Handbook presents the main capabilities of satellite observations and their applications



Thank you