GEO *EO4SDG Initiative Updates & Outcomes from GEO Ministerial Summit*

By: Argyro Kavvada, Ph.D., NASA

@EO4SDG

6th WGGI Meeting
March 09, 2020

Earth Observations for Sustainable Development Goals

EARTH OBSERVATIONS FOR THE SUSTAINABLE DEVELOPMENT GOALS

GEO GROUP ON EARTH OBSERVATIONS

Initiative Purpose:

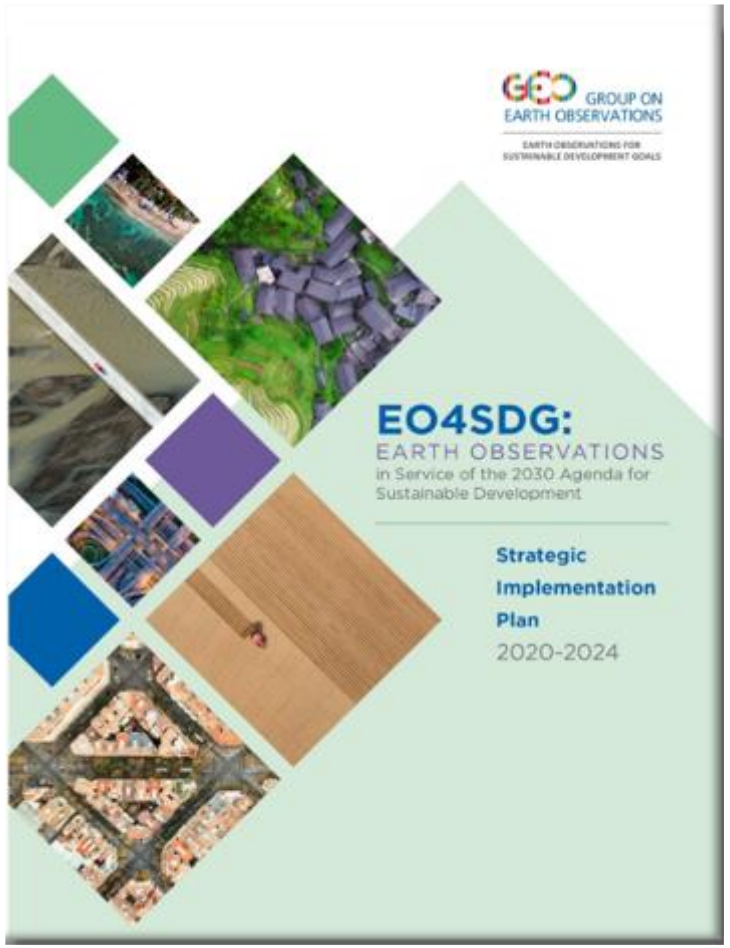
Organize and realize the potential of Earth observations and geospatial information to advance the 2030 Agenda and enable societal benefits through achievement of the SDG.

Key Emphasis:

Collaboration with national statistical offices, line ministries, national mapping agencies, UN Agencies, international initiatives

Scalability & replicability of EO methods for SDG targets & indicators

http://eo4sdg.org/ ***Twitter: @EO4SDG***



http://eo4sdg.org,

GOALS

I. Demonstrate how EO, geospatial information, and socio-economic and other data contribute in novel and practical ways to support sustainable development efforts and the SDG.

II. Increase skills and capabilities in uses of EO for SDG activities and their broader benefits.

III. Broaden interest, awareness, and understanding of EO support to the SDG and contributions to social, environmental, and economic benefits

Four Lines of Business

- Projects
- Capacity Development
- Information & Data Products
- Outreach & Engagement

2019 EO4SDG Annual Meeting

» Workflows for packaging good practice examples of methods for measuring and reporting on SDG indicators (including new indicators)

» EO4SDG Federated Approach

» Approaches to structure country examples (ensuring geographic breadth, broad distribution)

» EO4SDG Toolbox

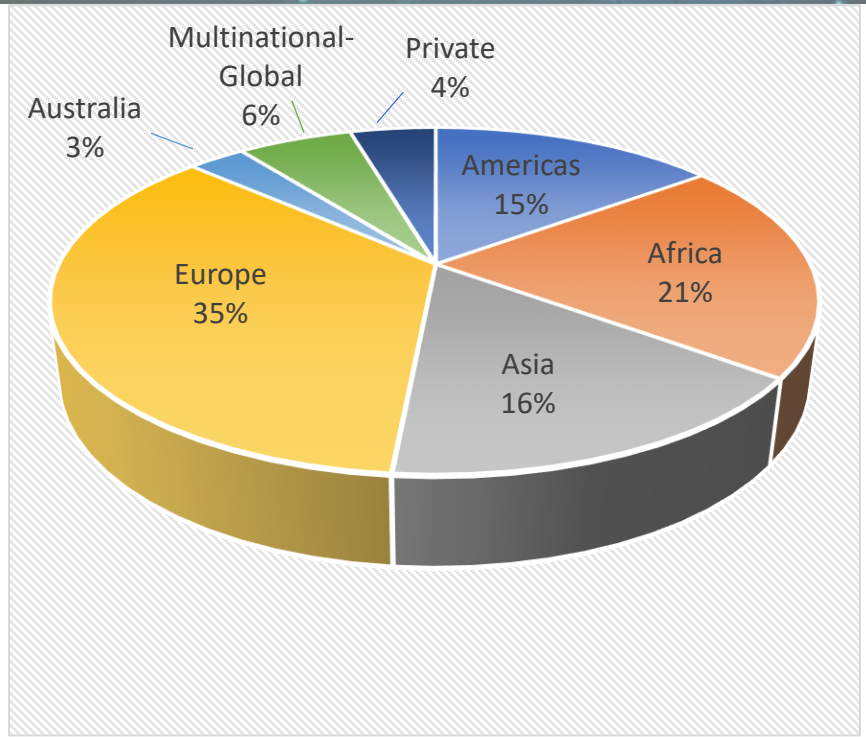
» GEO Sec. SDG Expert: Profile & Roles

» Additional resource mobilization & partnerships

Survey on EO Uses for SDGs by GEO Member Countries

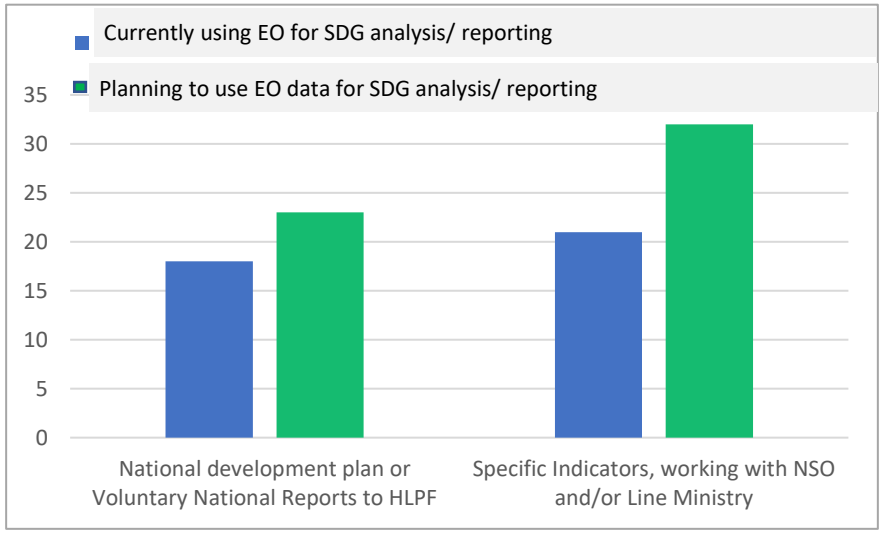
69 Unique Responses

Government, Multinational Research or Conservation Entities



Current Use of EO for SDGs

- SDG 15 most commonly addressed, 15.1.1 (forest area), 15.3.1 (degraded land)
- **25 country examples** of use of EO for analyzing and reporting on SDG Indicators
- Additional good practice use cases



Led by EO4SDG Co-Chair / Japan [JAXA]

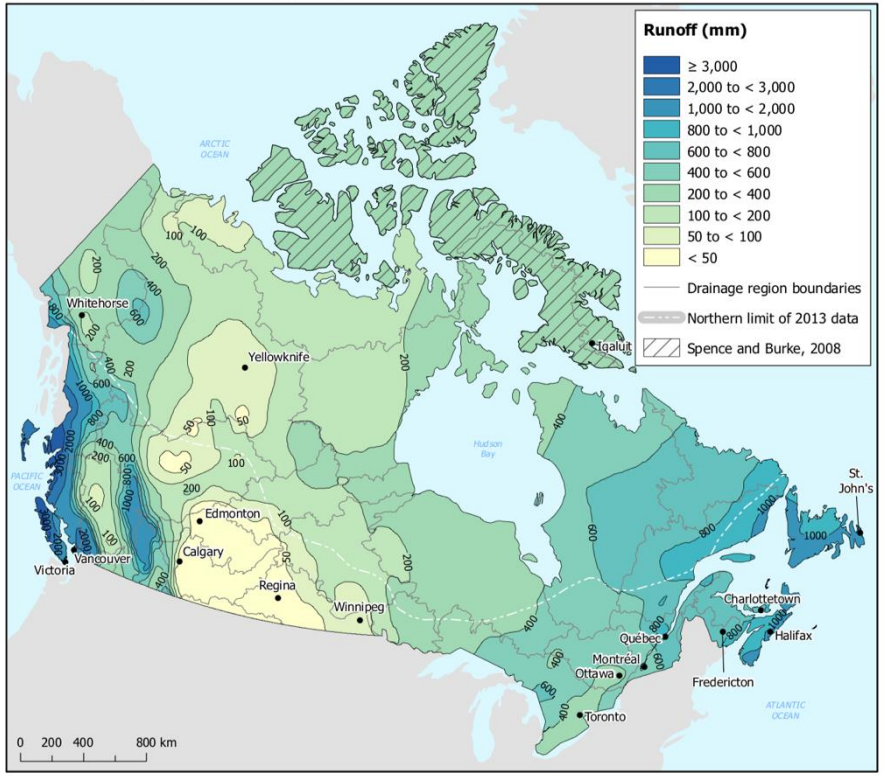
Country Example: Canada

Indicator 6.4.2. - Level of water stress : freshwater withdrawal as a proportion of available freshwater resources

- Country PoC: Statistics Canada
- In situ measurements based on streamflow gauging stations, survey data on drinking water plants, industrial and agricultural water use, other
- Based on System of Environmental-Economic Accounts (SEEA) Water Accounts
- Being used in official SDG Indicator reporting

POC:
Francois Soulard, Statistica Canada,
francois.soulard@canada.ca

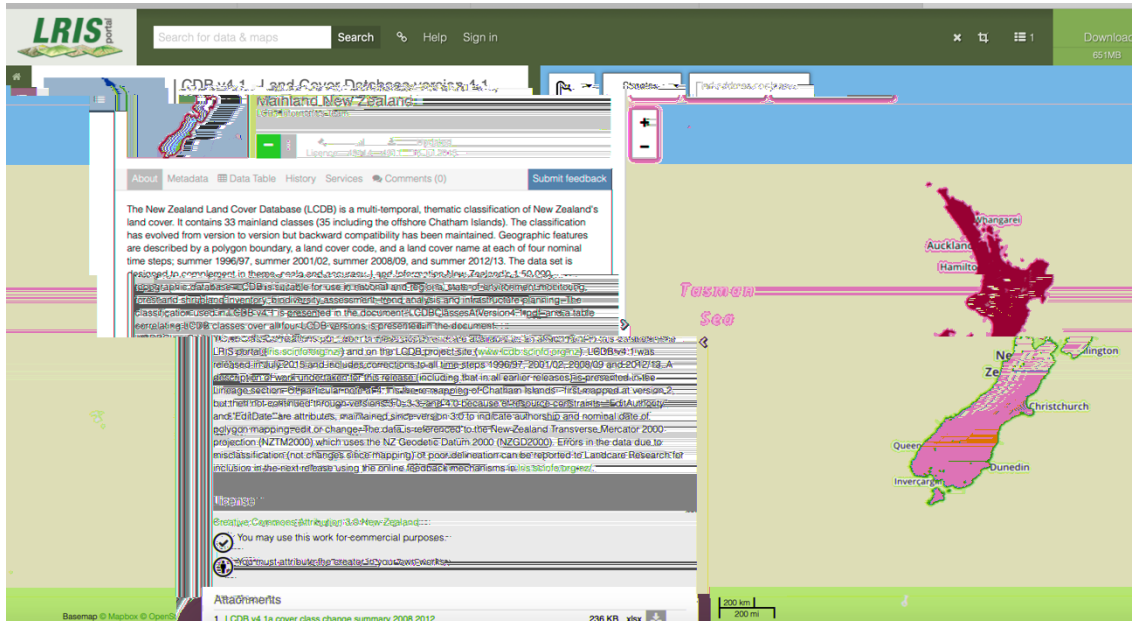
Map 2.1 Average annual runoff in Canada, 1971 to 2013



Source: Statistics Canada, Environment, Energy and Transportation Statistics Division

Country Example: New Zealand

Indicator 15.1.1 - Forest area as a proportion of total land area
Indicator 15.4.2 - Mountain Green Cover Index

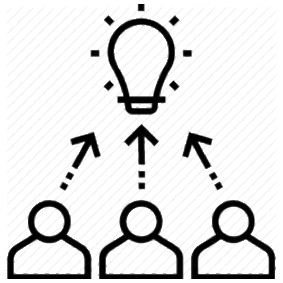


The New Zealand Land Cover Database (LCDB) is a multi-temporal, thematic classification of New Zealand's land cover.

- Country PoC: New Zealand Ministry for the Environment
- Landsat 7/8, Sentinel 2 to inform: Land Cover database & LUCAS Land Use Map for international greenhouse gas reporting
- Temporary forest loss needs to be identified though field checking
- Resolution (spectral and spatial) needs to be fit for purpose & match granularity of land use activity
- Detection & removal of clouds, terrain effects

POC:
Deborah Burgess, New Zealand Ministry for the Environment,
Deborah.burgess@mfe.govt.nz

Survey on EO Uses for SDGs by GEO Member Countries



Recommendations for Action

– **Harmonization** of global best practices of EO uses with the SDGs
– **Toolkit of workflows** between EVs and SDG Indicators with **concrete examples and country use cases, including testimonials** about impact on cost, time, other resources
– Guidance on how to handle and process EO data (for different levels of geospatial expertise)
– A universal platform to enable use of EO for SDG monitoring, including **a library of workflows ready to replicate**
– A dedicated forum between countries to exchange EO best practices and address technical issues
– A process that demonstrates how EO data are used to achieve the Goals
– Workshops at national level to help promote local cross-institutional collaborations and promote skills to apply EO for SDG monitoring, analysis, and reporting
– At the GEO Ministerial Summit 2019, **showcase country success stories** of indicators and targets measured using data generated from EO

Acknowledgements:
This survey was conducted by EO4SDG Co-Chair Japan [JAXA] & S ymbios in cooperation with the GEO & EO4SDG Secretariat.

Promote and Leverage International Collaboration: GEO-XVI Week, Plenary, and Ministerial Summit

GEO-XVI Activities: Nov. 4-8, 2019
- Plenary & Ministerial Summit
- Side Events
- Industry Track
- 12th Asia Oceana (AOGEO) Symposium
- Hackathon
- Pacific Island Programme

Over 1500 representatives from 57 countries.

13 Ministers and Deputy Ministers and
15 Ambassadors from countries, such as
Ethiopia, Georgia, Iran, Uganda and others

Key Highlights

> First-ever GEO Industry Track. >50 reps from companies, including Planet, Google, Amazon Web Services, Esri, Maxar and e-GEOS

> Earth Science Data Operational Readiness Levels to Empower Disaster Responders. ESIP announced Operational Readiness Levels to improve data-driven decision making during disaster response and recovery.

> EO Worth $2T by 2030. The Asia-Pacific Economic Cooperation (APEC) released a new report highlighting that Earth and marine observing technologies will be worth $2 trillion by 2030. Australia highlighted the current and future economic value of EO to the Asia-Pacific region.

> **Digital Earth Africa**: DE Africa is enabling African nations to track changes across the continent in unprecedented detail by making EO data more easily accessible. As part of the Amazon Sustainability Data Initiative, Amazon Web Services (AWS) announced it will be supporting Digital Earth Africa.

GEO-XVI: 3 Notable Announcements

"Japan will provide free and open access to the wide-swathe observation data from the L-band radar satellites, such as ALOS (ALOS/AVINIR-2, PALSAR) and ALOS-2 (ALOS-2/ScanSAR)."

Ms. SASAKI Sayaka
Parliamentary Vice-Minister of Education, Culture, Sports, Science and Technology of Japan

- Up to 25 licenses for Google Earth Engine, accessible to any GEO Member State and Participating Organization, with a value of US$ 3 million over the next two years.
- Working with GEO to develop a allocation process

Helping to operationalize their work, helping to bridge the gap between science and application, in order to produce tangible products that engage with end users and decision makers

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China has developed an open data policy for Gaofen satellites which allows free and open data access by the global community. Registered users around the world, without restrictions as long as they cite the source of the data, can freely discover and download the WFV data from the data platform CNSA-GEO, hosted by Huawei Cloud.

https://youtu.be/SvbbCGInWqc

"For the first time, China will share global data with 16-meter resolution from Gaofen-1 and Gaofen-6 satellites. We will share three types of such data with coverage outside China: historical records, daily updated Wide-Field-of-View images and global coverage data.

As a contribution from China, we just started the journey of open data. We really appreciate your feedback to help us improve this platform constantly. "This has been an expectation of the global community. … Now it comes true as a direct result of Dr. Gilberto Camara, [GEO Secretariat Director's] visit to CNSA in April this year.

Ms. Wenbo Zhao
Deputy Director of Earth Observation System and Data Centre, China National Space Administration

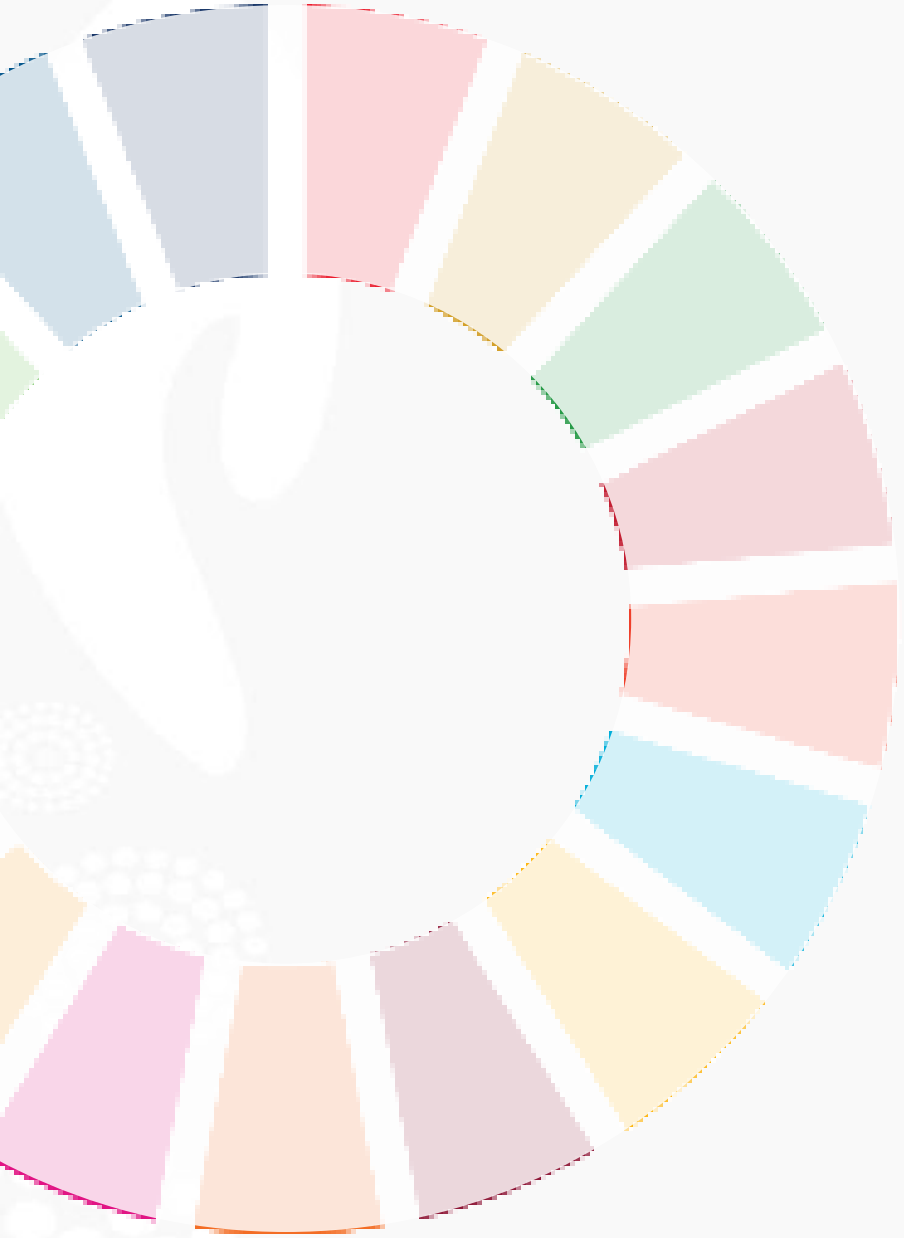
2019 GEO SDG Awards

Recognize excellence and innovation, generating examples that users can consider and pursue

2019 GEO SDG Award Winners:

- GEO Member Country Award: Uganda
- GEO Participating Organization: Conservation International
- SDG Custodian Agency: UN Environment
- Innovation Award: CSIRO, Australia
- Testimonial Award: SANSA, South Africa
- Statistical-Geospatial Integration Award: Federal Agency for Cartography and Geodesy, Germany

More information: http://eo4sdg.org, @ EO4SDG



Thank you!

Argyro.Kavvada@nasa.gov
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