



GLOBAL PARTNERSHIP  
FOR SUSTAINABLE DEVELOPMENT DATA

# Geospatial and Earth Observation Data for the SDGs

**The 2030 Agenda for Sustainable Development  
UN-GGIM Side Event – “Where’s the Data”**

Aditya Agrawal  
Director, Data Ecosystems Development  
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# The Global Sustainable Development Goals



Developing country  
focused



Universal

Social



Social, Economic, and  
Environmental

Foreign Aid



Domestic Investment,  
Private Flows, and Aid

Official Statistics and  
Administrative Data



Big Data, Citizen Generated  
Data, Geospatial and Earth  
Observation Data, Open  
Data, and more



- 17 Goals, 169 Targets, 230 Indicators = Huge Data Needs

## ***THE CHALLENGES:***

**Data are not available, dynamic, disaggregated, high quality, useable, accessible, open, or used effectively.**

- Data on entire groups and key issues are unavailable.
- Data are not dynamic or disaggregated.
- Data quality is poor and major gaps remain.
- Data that exist are often not useable.
- Data that are useable are not accessible or open.
- Data that are accessible are often not used effectively.

***DATA CHALLENGES LEAVE TOO MANY BEHIND***

# ***DATA FOR WHAT?***

**Improved Decision-Making and Policy**

**Increased Citizen Empowerment**

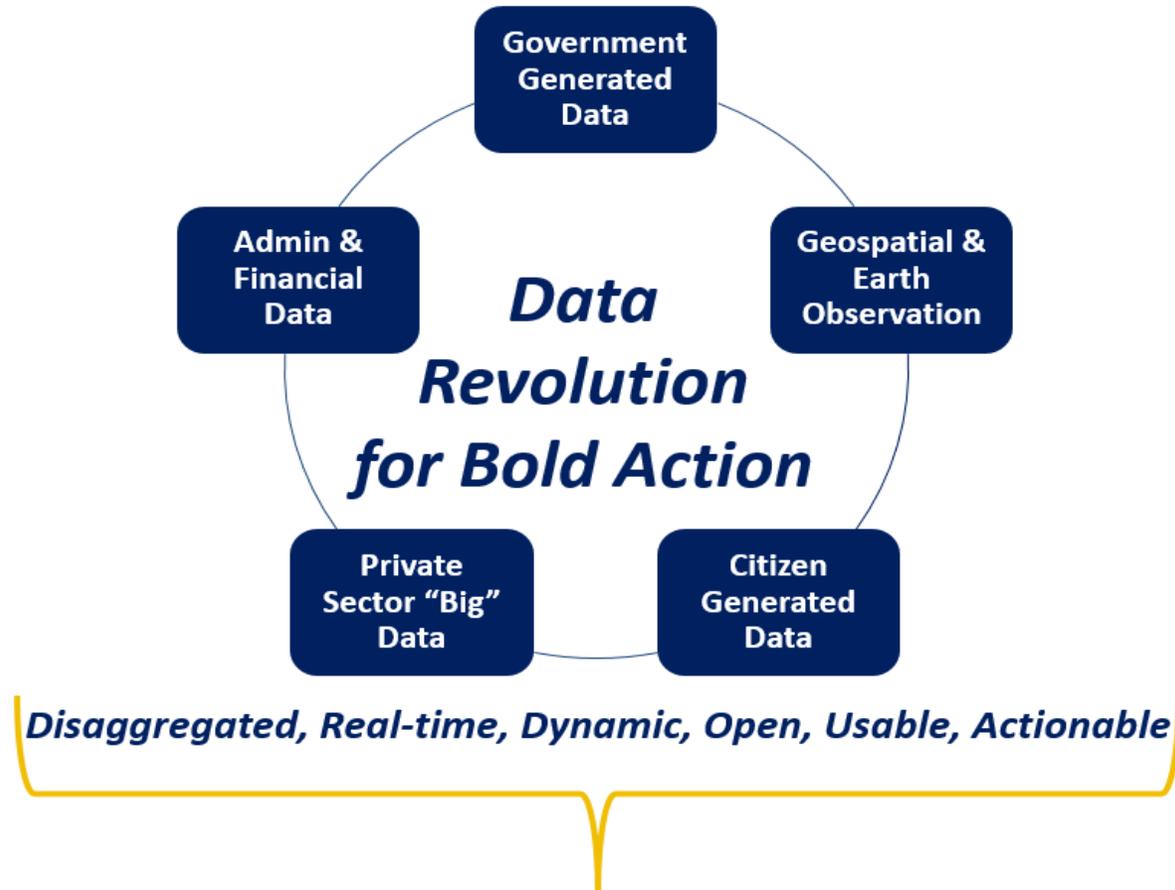
**Increased Innovation and Entrepreneurship**



**To Achieve and Monitor  
Sustainable Development**

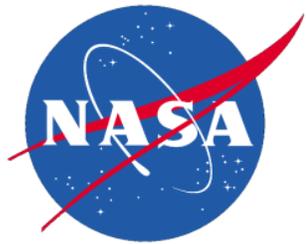
# Harnessing the Data Revolution

*“Data is the Oil of the 21<sup>st</sup> Century”*

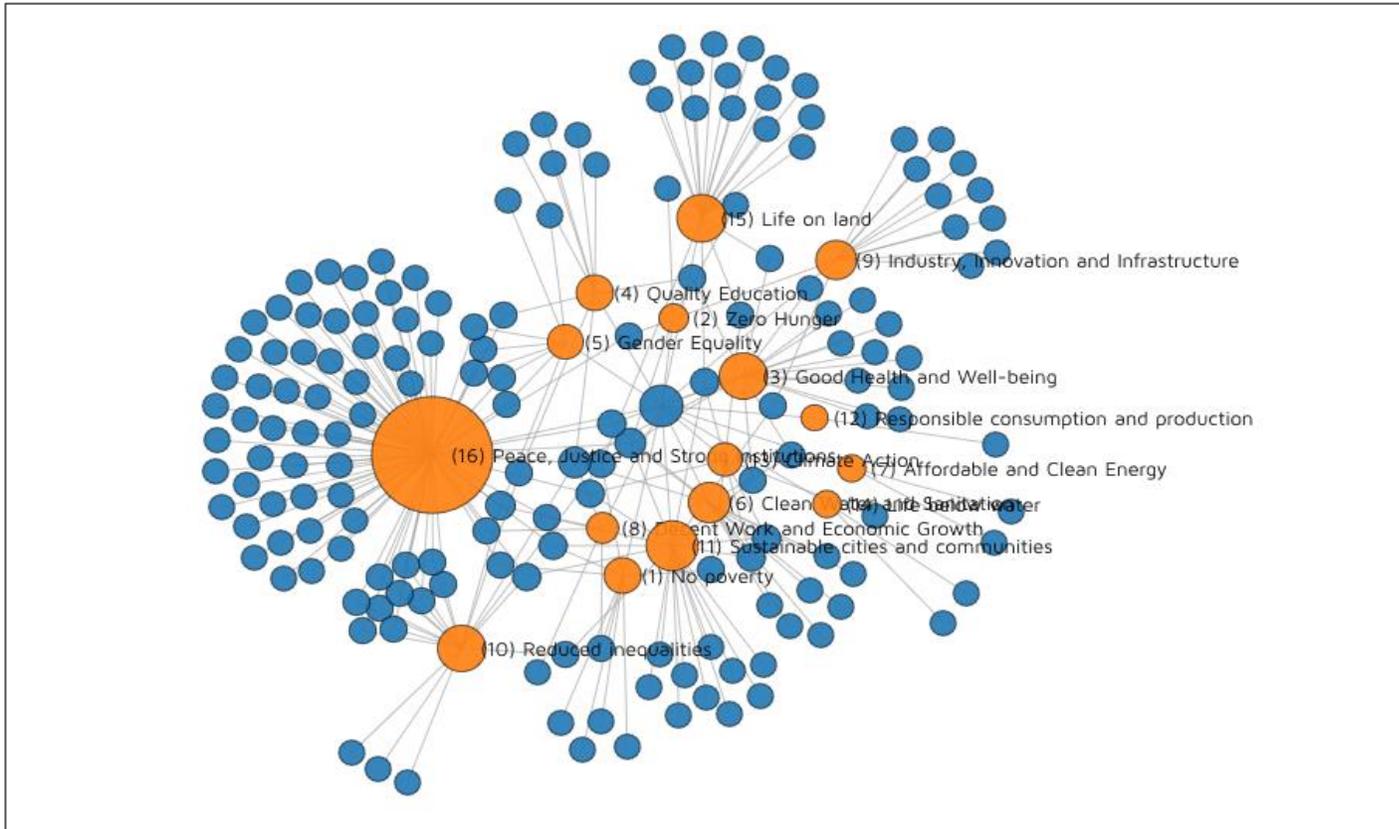


- Supporting and complementing government and civil society efforts to generate data for statistics for the formal SDG monitoring framework
- Unleashing innovation in production, **accessibility and use of real-time, dynamic, disaggregated data** from multiple sources

# Earth Observation Data



# Citizen-Generated Data



<http://staging.winguweb.org/2015/datashift/>

# Privately Held (Big) Data

*Customer Time (Velocity)*

« Real Time »  
Operation  
Management

Policies &  
Consulting

<p>ex: Provide mobility information every hour for security staffing</p>	<p>ex: Provide real-time personal health risk to users in mobility</p>
<p>ex: Optimise hospital location for density of population</p>	<p>ex: Optimise distribution of drugs in function of diseases geography, calendar events,...</p>

Single Data  
source

Multiple data  
sources

Faster:  
monthly...daily...



SLOWER  
Data refresh  
(yearly, quarterly)

*Variety of Sources for Data Analysis*

# Open Data



-  1. Open by Default
-  2. Timely and Comprehensive
-  3. Accessible and Usable
-  4. Comparable and Interoperable
-  5. For Improved Governance and Citizen Engagement
-  6. For Inclusive Development and Innovation

[opendatacharter.net](http://opendatacharter.net)



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***WE CONVENE***

***WE CONNECT***

***WE CATALYZE...***

**better, more accessible, and usable data** to help end poverty, fight inequality and injustice, and combat climate change.

# The Global Partnership has 200+ Data Champions



# Harnessing the data revolution for sustainable development

## Enablers: Political Environment



Showcase how data can remove political and social barriers, and address data gaps



Stimulate collaboration between public-private actors in support and tracking of the SDGs

## Demand Side



Drive awareness and political buy-in on how and why data makes a difference



Ensure visibility and understanding of data for filling gaps and decision making



## Supply Side



Harness real time data flows for sustainable development



Ensure access to data in public domains; including open data



Catalyse data innovations for the delivery of the SDGs

## Enablers: Structural Environment that fosters trust



Forster private sector engagement to address market failures by providing expertise and knowledge



Support the establishment of fair use of data



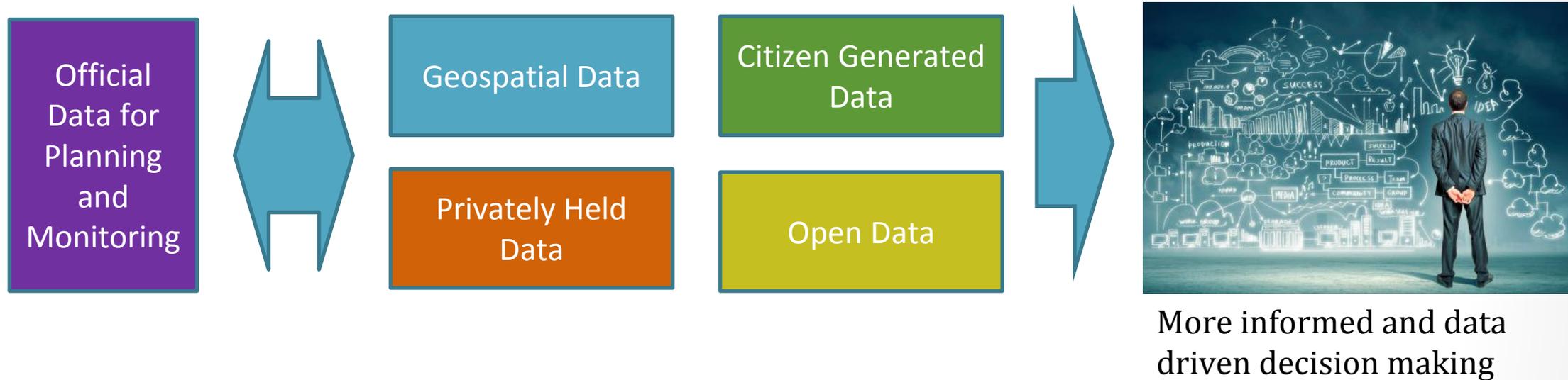
Foster mechanisms to improve access and interoperability that enables widespread usage of SDG data

# Data Roadmaps for Sustainable Development

Support countries at national and sub-national levels to develop and implement **whole of government** and **multi-stakeholder** data roadmaps for harnessing the data revolution for sustainable development, with particular emphasis on the SDGs and local priorities articulated in national plans.



# Data for Action



- Fill data gaps more efficiently, frequently and cost effectively
- Real-time, dynamic, disaggregated data
- Official and non-official data
- Use innovative approaches and range of stakeholder to solve problems

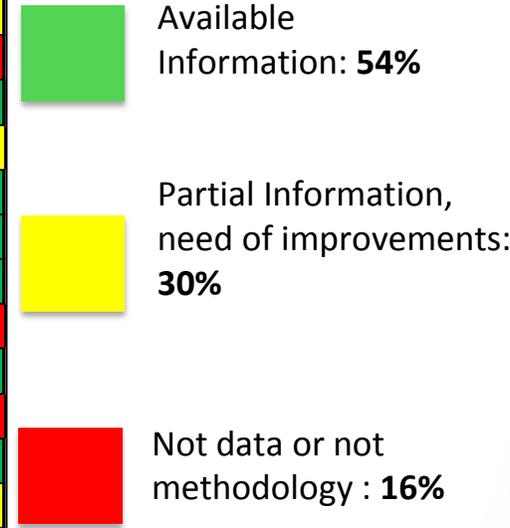
# Data Collaboratives: Environment, LNOB and Interoperability

- **ENVIRONMENT:**
  - Working with GEO, NASA, ESA and others on earth observation data applied to the SDGs
  - Working with WRI, IODC and CODE on climate change open data
  - Working with World Bank on open energy data
  - SDGs applied at subnational level
- **LEAVE NO ONE BEHIND**
  - Data disaggregation
  - Gender data
  - Marginalized groups
- **INTEROPERABILITY**
  - Standards and principles
  - Data packages
  - APIs

# Assessment on Colombia's information availability for global SDG indicators



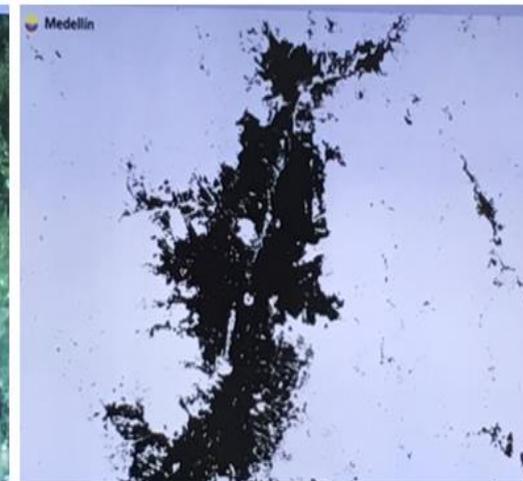
		OBJETIVOS																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
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1		Green	Yellow	Green	Green	Green	Yellow	Yellow	Green	Yellow	Green	Yellow	Green	Yellow	Red	Green	Yellow	Yellow
2		Green	Green	Green	Yellow	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Red	Green	Red	Yellow	Yellow	Green
3		Yellow	Yellow	Green	Green	Yellow	Red	Green	Green	Yellow	Red	Yellow	Green	Red	Green	Yellow	Yellow	Yellow
4		Yellow	Red	Yellow	Yellow	Green	Yellow	Yellow	Red	Green	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Green
5		Yellow	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Green	Yellow	Yellow	Green
6				Green	Red	Green	Red	Green	Green	Yellow	Yellow	Yellow	Yellow	Red	Green	Yellow	Yellow	Green
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B		Green	Green	Yellow	Yellow	Green	Yellow	Yellow	Green	Yellow	Green	Yellow	Green	Green	Yellow	Yellow	Red	Green
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D			Yellow															



Source: DANE.

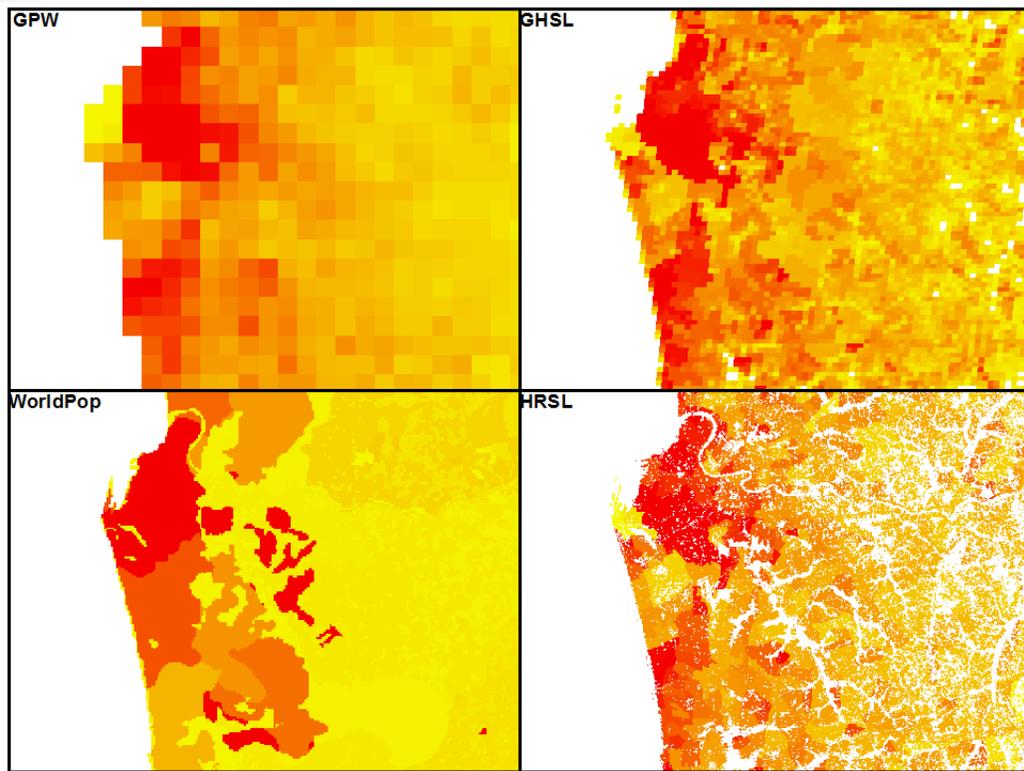
# Colombia – Priorities for EO Data

- Sustainable cities and urban resilience
- Deforestation and forestry management
- Land use/cover change
- Water resources
- Biodiversity



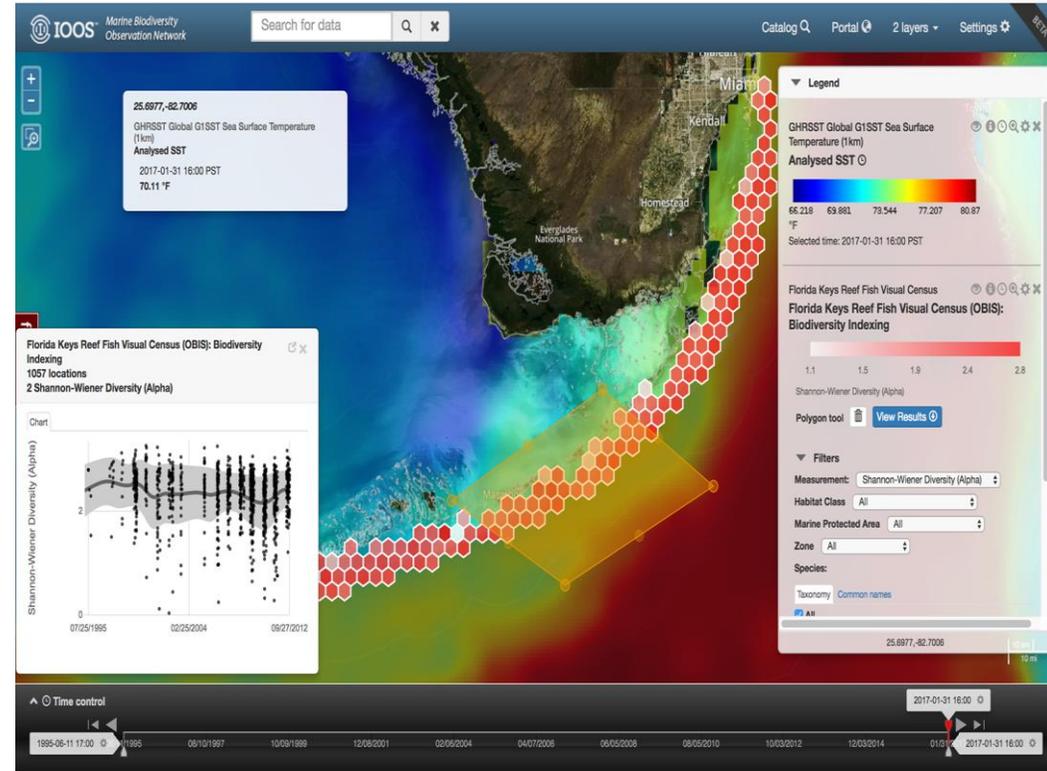
M Paganini, European Space Agency

# Geospatial/EO Applied to SDG Problems



Alex de Sherbinin, CIESIN

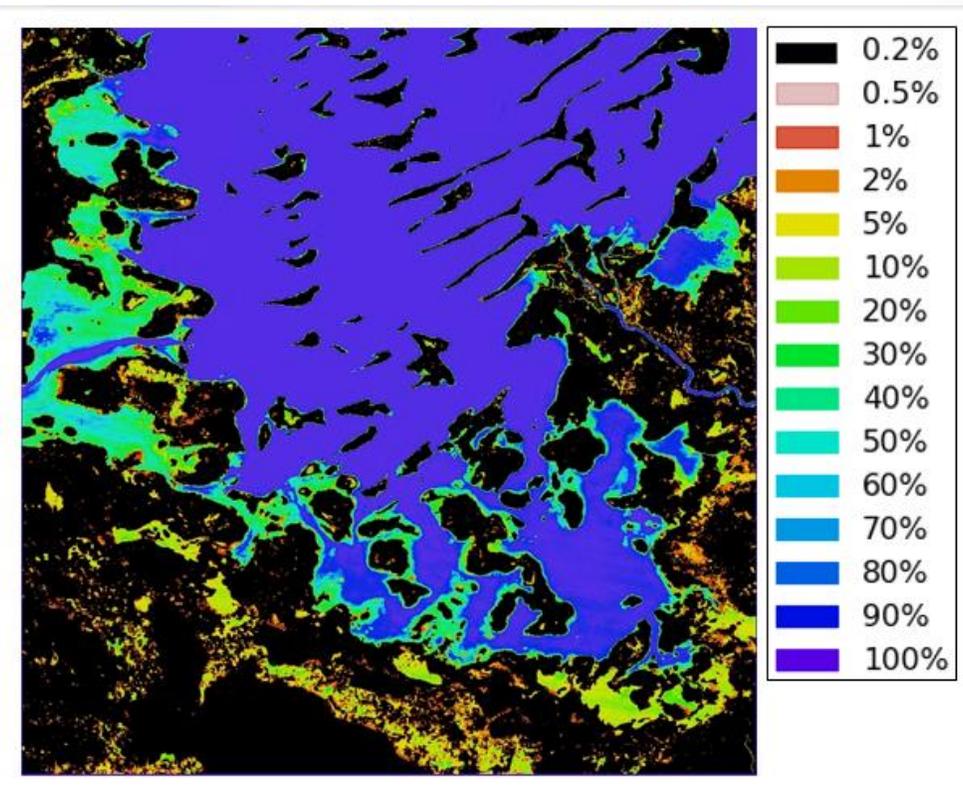
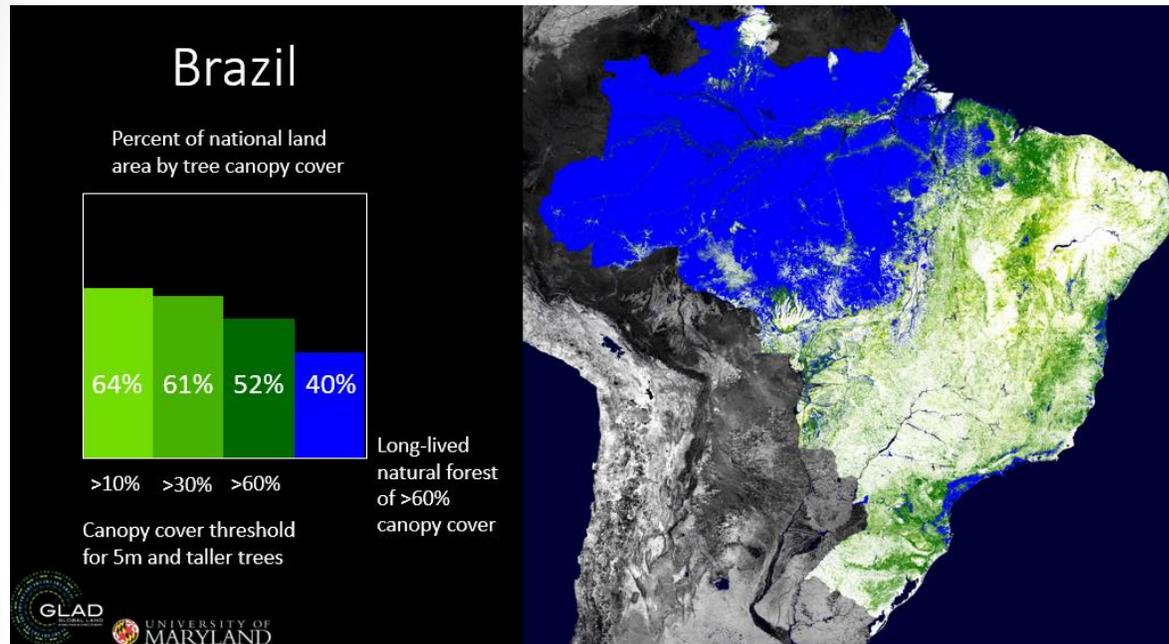
Population estimate results at various resolutions from multiple methods



Frank Muller-Karger, University of S Florida

Marine Biodiversity Observation Network

# Geospatial/E0 Applied to SDG Problems



Matt Hansen, University of Maryland

Brian Killough, CEOS/NASA

Percent canopy cover and deforestation mapping

Data Cubes – Water observations over a 17 year timeframe (Lake Chad, Cameroon)

# Data4SDGs Toolbox:

<http://www.data4sdgs.org/toolbox>

## Data for Action

■ Currently Available ■ In Development ■ Planned

- Getting Started with Data Roadmaps for Sustainable Development
  - Data Roadmaps for Sustainable Development Guidelines
  - Getting Started with the Sustainable Development Goals
  - Mapping Data Ecosystems

- Data for Action
  - Earth Observation Data for the SDGs
  - Making Use of Citizen Generated Data
  - Youth and SDGs Data Revolution
  - Mobile Data for Sustainable Development
  - Subnational Data for Sustainable Development
  - Open Data for Sustainable Development
  - Open Mapping for the SDGs
  - Geospatial Data and Planning for the SDGs
  - Data Visualization and Analytics
  - Decision Support Systems

- Official Statistics for SDGs
  - Minimum Essential Data Package
  - Advanced Data Planning Tool (ADAPT)
  - Aligning and Modernizing the NSDS in the Context of the Data Revolution
  - CRVS Digitization Guidebook
  - Administrative Data to Achieve the SDGs in Production of Official Statistics

- Institutional, Financial and Capacity Foundations
  - Demand-Driven, Cost-Effective Integrated Information Systems
  - Policy and Legal Frameworks
  - Business Models for Public-Private Partnerships
  - Data Literacy Workshops and Knowledge Platform for Professionals
  - Data Financing and Mutual Accountability Pact
  - Global Philanthropy Data Charter

**Data for Action**

- Earth Observation Data for the SDGs
- Making Use of Citizen Generated Data
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- Open Mapping for the SDGs
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[apihighways.data4sdgs.org](https://apihighways.data4sdgs.org)



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# **Initial Metrics for success.**

**1. Reduce the time it takes to discover and use data in an application.**

**2. Make it as easy as possible to connect existing data.**

Transform data on SDGs into effective applications and visualisations

## DATA4SDGS DEVELOPER PLAYGROUND



### Increase openness and leverage existing data.

By bringing together high-value data sets across sectors for achieving the SDGs.



### Improve the effective use of data.

By providing robust APIs to empower data to be combined in new ways for further insights.



### Enable data for action and decision making

By empowering the developer community to create rich applications and visualizations.



**FILTER**

poverty|

Poverty gap at national poverty lines (%)

Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)

Poverty headcount ratio at national poverty lines (% of population)

## RECENT DATASETS

**Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)**

WORLD BANK GROUP

**Poverty headcount ratio at national poverty lines (% of population)**

WORLD BANK GROUP

**Poverty gap at national poverty lines (%)**

WORLD BANK GROUP

## FEATURED DATASETS

**VIIRS Active Fire – Global**

NASA

**World Database on Protected Areas – Global**

IUCN & UNEP-WCMC

**Inflation, consumer prices (annual %)**

WORLD BANK GROUP

**Poverty gap at national poverty lines (%)**

WORLD BANK GROUP

**GDP per capita (current US\$)**

WORLD BANK GROUP

**Adolescent fertility rate (births per 1,000 women ages 15-19)**

WORLD BANK GROUP

Conflicts related to protected areas

Regions with greatest water risks

