



Regional Initiative and Community Platform Overview

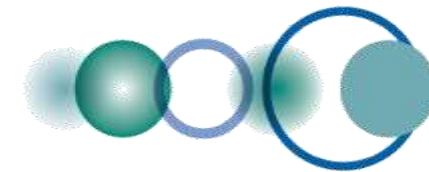
*Fifth UN-GGIM: Americas Committee Session
Session V (b) Organizations/Initiatives/Regional Networks
November 8, 2018*



UN-GGIM:Américas
COMITÉ REGIONAL DE LAS
NACIONES UNIDAS SOBRE
LA GESTIÓN GLOBAL
DE INFORMACIÓN GEOESPACIAL
PARA LAS AMÉRICAS

Ivan DeLoatch, Executive Director, Federal Geographic Data Committee, USA





GEO: An intergovernmental body that promotes open Earth Observation data availability, access and use.

MISSION

GEO's mission is to connect the demand for sound and timely environmental information with the supply of data and information about the Earth.

Vision

To realize a future where decisions and actions, for the benefit of humankind, are informed by coordinated, comprehensive and sustained Earth observation information and services.

Together, the GEO community is creating a *Global Earth Observation System of Systems (GEOSS)* to better integrate observing systems and share data by connecting existing infrastructures using common standards.



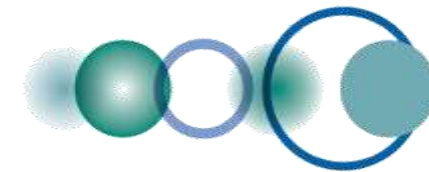
Countries have borders
Earth Observations don't

115 participating organizations

165 data providers

400,000,000
Earth observations

AmeriGEOSS / Background



Conceived in October 2014, launched in November 2015

Is a cooperative effort of the 16 GEO member countries in the Americas that:

Reflects **local, national, and regional interests** of the **GEO country-members** for short and long-term planning, development, and implementation aligned with GEO activities.

Is **entrenched in the institutional and technical capabilities of its country members** and in the resources of other global initiatives available for the benefit of the region.

Seeks to increase institutional and personal capacity and engage experts, stakeholders, and decision makers **in the process of decision making.**



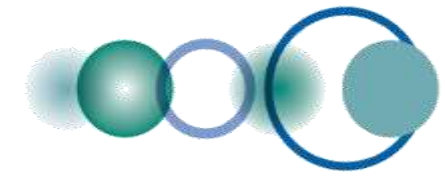
AmeriGEOSS Members
 Non-AmeriGEOSS Members

- | | | | |
|--|-------------------|--|----------------------|
| | Argentina | | Ecuador |
| | Bahamas | | Honduras |
| | Belize | | Mexico |
| | Brazil | | Panama |
| | Canada | | Paraguay |
| | Chile | | Peru |
| | Colombia | | United States |
| | Costa Rica | | Uruguay |

16 Member Countries

Observers: Bolivia, Guatemala





AmeriGEOSS / Background



The AmeriGEOSS initiative focuses its efforts in the four Societal Benefit Areas (SBA's) selected and prioritized by the Americas Caucus





Collaborative mechanisms and capacity building frameworks are necessary to advance the use of Earth observations.

Capacity Building

An example in the Americas

1 Building Partnerships



National

Regional



Global



2 Engaging Users

Needs Assessment and Gap Analysis

3 Delivering Solutions

Mobilizing Resources

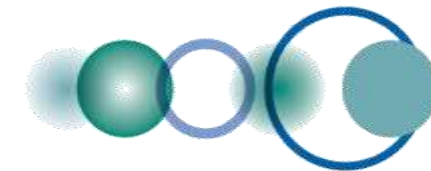
	Data	Tools	Products	Services
Data	<ul style="list-style-type: none"> • Share • Curate • Harmonize 	<ul style="list-style-type: none"> • Visualize • Mapping • Modeling 	<ul style="list-style-type: none"> • Publication • Reports 	<ul style="list-style-type: none"> • Acquisition • Reports • Training
Tools				
Products				
Services				



Community Platform



Partner > Mobilize > Implement



The AmeriGEOSS initiative is a framework that seeks to promote collaboration and coordination among the GEO members of the American continent.

The AmeriGEOSS initiative focuses its efforts in the four Societal Benefit Areas (SBA's) selected and prioritized by the Americas Caucus

- Biodiversity and Ecosystem Sustainability
- Disaster Resilience
- Food Security and Sustainable Agriculture
- Water Resources Management

Implementing GEOSS in the Americas

- Capacity Building
- Address User Needs
- Actionable Data & Information

Together, the Americas are advancing use of Earth Observations

Amerigeoss.org

Facebook page for AmeriGEOSS (@AmeriGEOSS) showing a post from SOSTENIBILIDAD.SEMANA.COM with 715 likes and 724 follows. The post features a video titled "Pondré la lupa en la erosión del suelo y la contaminación de las aguas": directora del Ideam.

100% response rate, 2 days response time

715 likes 1 this week

724 follows

80 post reach this week

715 people like this and 724 people follow this

AmeriGEOSS Week 2018 Highlights

- 1 Americas Caucus & AmeriGEOSS Coordination Working Group (CWG) Meeting
- 5 Training Sessions
- 5 Side Events
- 24 Total Institutions
- 65 People Trained

PEOPLE BY COUNTRY:

1	2	3	4
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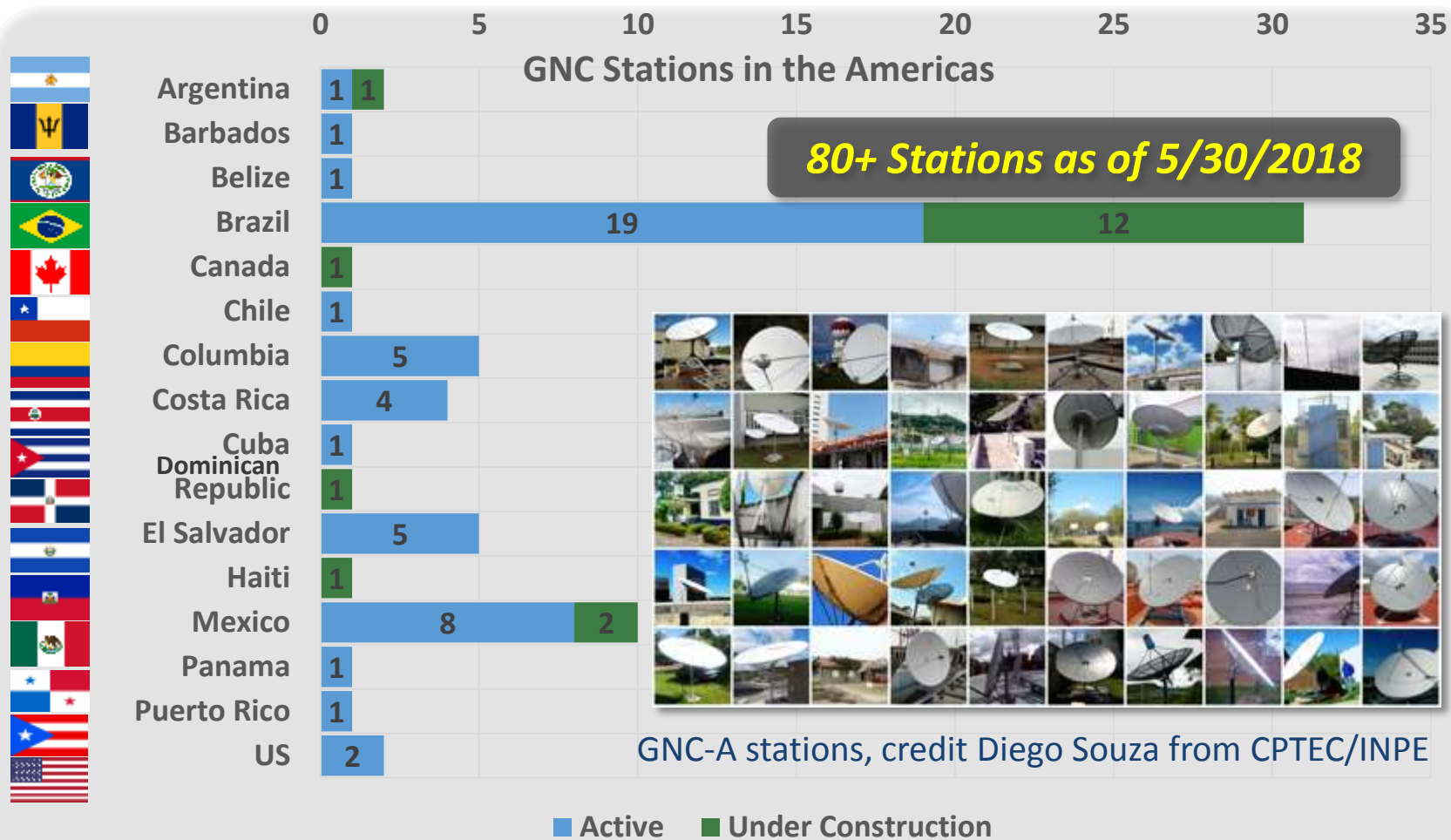
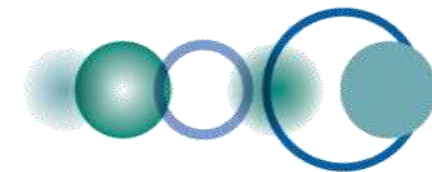
TOP OUTCOMES:

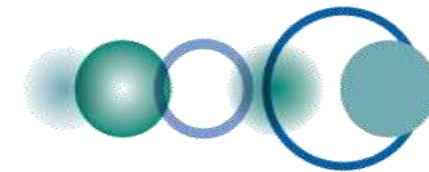
- GEO-Chile joined USGEO to co-chair the CWG
- GEO-Peru initiated development of Peru-SAT1 Platform & will host AmeriGEOSS Week 2019
- GEO-Brazil and USGEO agreed on further collaboration to strengthen the GEONETCast-Americas system
- GEO Participant Organizations (UN Environment & Open Geospatial Consortium) were invited to join the CWG
- Data-curation activities in the AmeriGEOSS platform were initiated with participants
- USGEO scientists from NASA-ROSES's projects supporting AmeriGEOSS participated

148 PARTICIPANTS

Space Agency	49
Government	40
Academic/Research Institution	38
Private	10
Intergovernmental Organization	6
NGO	5

Communication, Outreach, Training and Development





AmeriGEOSS / Platform Purpose / Vision

1



The AmeriGEOSS Platform is a regional community resource to *promote collaboration and coordination* among the GEO members of the American continent.

2

Data

Tools

Products

Services

Resources

Share, find, discover, learn and participate



Explore news, upcoming events, what's new and other topics.

3

Communities



Agriculture



Biodiversity & Ecosystems



Disasters



Water



AmeriGEOSS / Platform Overview

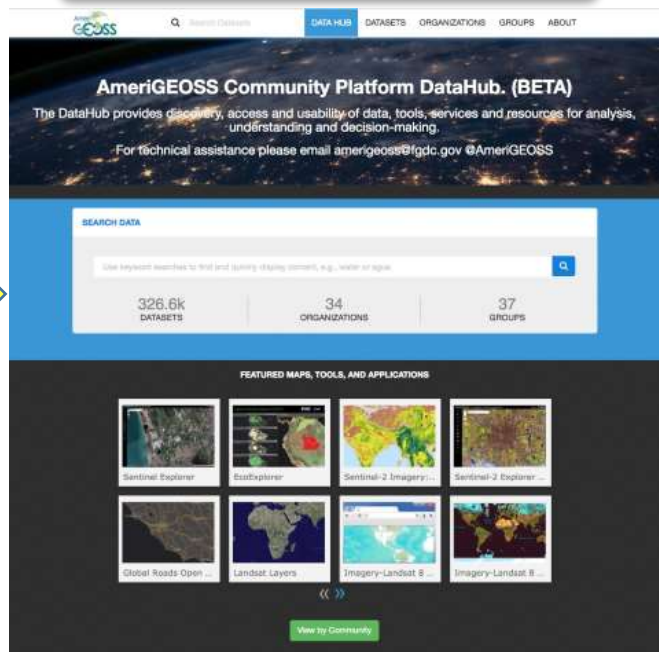
Webpage



Information about AmeriGEOSS



Data/Knowledge hub



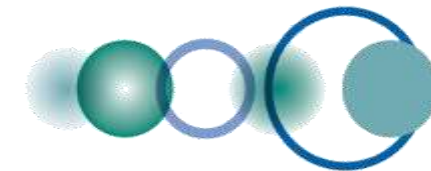
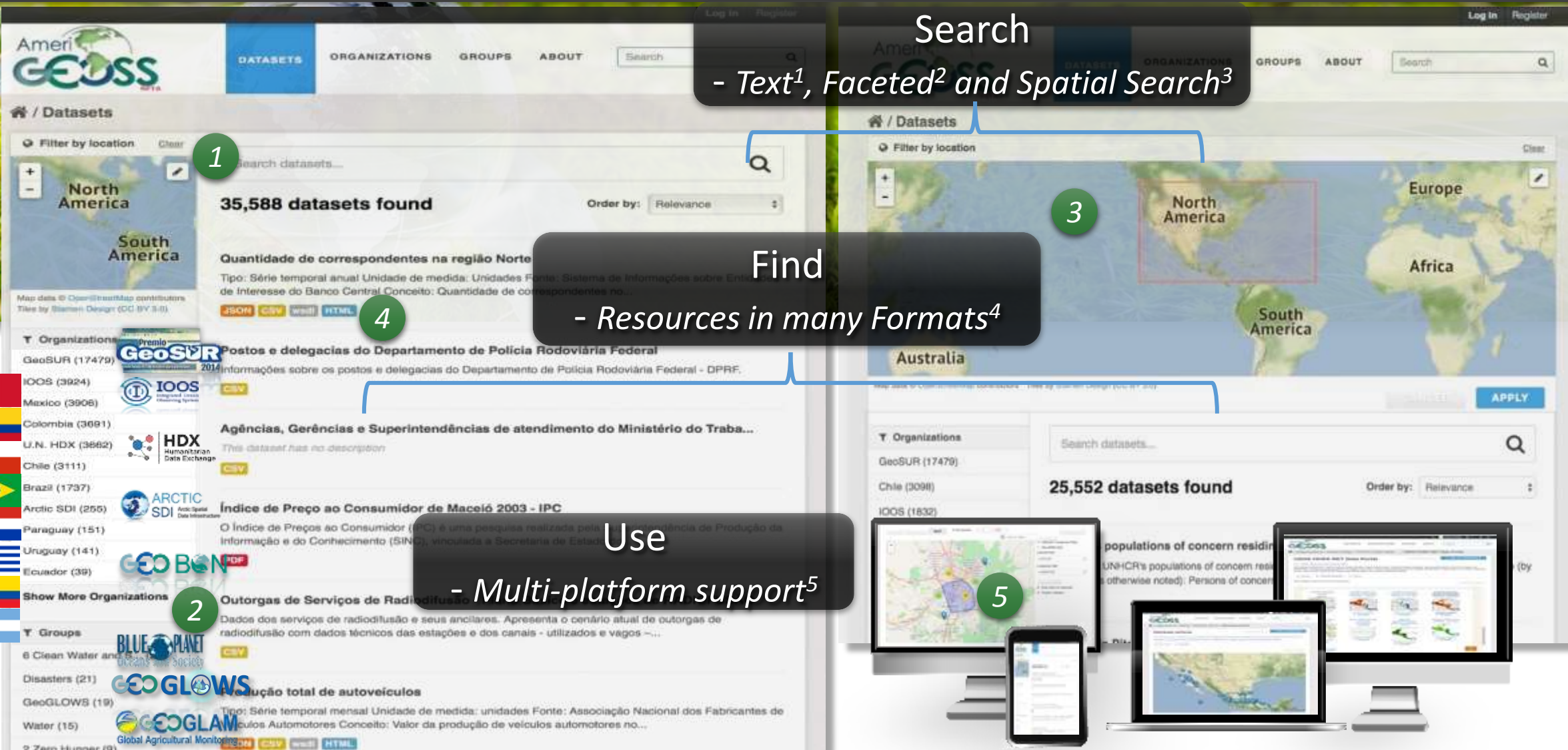
Find and Use Data & Knowledge 

Collaboration Analytics and Tools



Develop Products & Services

The AmeriGEOSS Community Platform a suite of *resources and tools* for integrating, synthesizing, analyzing, problem-solving and visualizing geographically enriched data to *accelerate understanding* and *decision-making*.

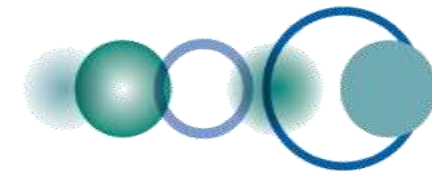



Search
 - Text¹, Faceted² and Spatial Search³

Find
 - Resources in many Formats⁴

Use
 - Multi-platform support⁵

The image shows two side-by-side screenshots of the AmeriGEOSS website. The left screenshot shows a search for '35,588 datasets found' with a list of organizations and groups. The right screenshot shows a search for '25,552 datasets found' with a map overlay. A vertical list of flags on the left side of the image represents various countries. At the bottom right, there are icons for a desktop monitor, a laptop, and a smartphone, illustrating multi-platform support.



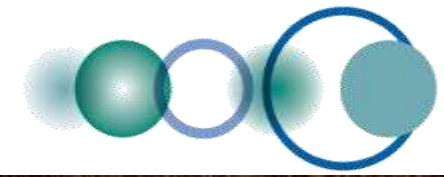
About AmeriGEOSS | Initiatives | Data | Tools | Products | Services | Resources | 🔍

1 Interact With Data and Tools

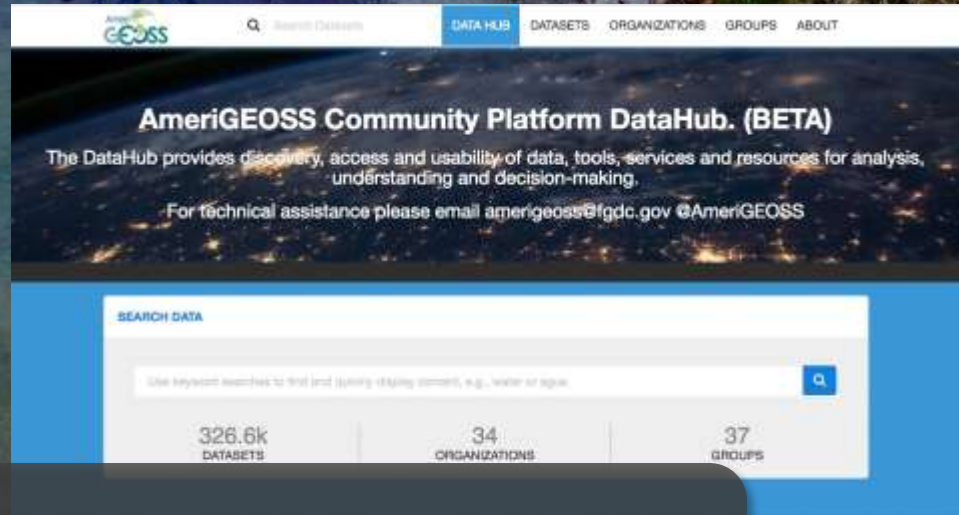
2 Create Graphs, Charts, Maps and More

3 Use Reports and Tools

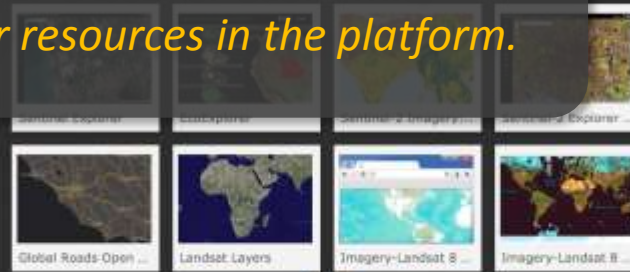
Nome d...	Tipo de ...	Nome d...	Número...	Co...	Bairro	CEP	Estado	Município	Longitu...
Casa Ac...	Estrada	BR - 364	S/N						
Instituto...	Rodovia	BR - 364	S/N						
Obras S...	Rua	Alberto							
Obra So...	Colônia	Bor...							
Desafio j...	Alameda								
Desafio ...	Ru...								
OBRAS ...									
OBRAS ...									
Casa Ter...	Estr...								
Associa...									



Exploitation Platform



Sustainable Development Goals: *Discover Economic, Social, Environmental and other resources in the platform.*



Communities of Practice



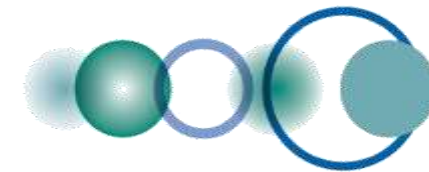
Training & Education



Essential Variables & Indicators



Pilots and Use Cases



About AmeriGEOSS | Initiatives | Data | Tools | Products | Services | Resources | 🔍

GEOGLOWS

Explore Social, Economic and Environmental, Reports, Information, Indicators.....and More



Find Water Data

428 datasets found for "agua"

Order by: Relevance

- Características Calidad del Agua - SIVICAP
- Hacer uso responsable del agua
- Indicadores Básicos del Desempeño Ambiental - Agua - Caucau
- Indicadores Básicos del Desempeño Amb...

Water Variables

- Regional (2380)
- sea_water_temperature (1200)
- Air Temperature (1200)
- Salinity (1200)
- Water Temperature (1200)
- Winds (1200)
- Water Level (1130)
- Barometric Pressure (1132)
- Conductivity (1132)
- Currents (1132)
- Datum (1132)
- Harmonic Const...
- Rain Fall (1132)
- Relative Humidity (1132)
- Visibility (1132)
- Water Level Predict... (1132)
- sea_water_speed (790)
- direction of sea wa... (790)
- platform_orientation (775)
- platform_pitch_angle (775)

Water Quality Characteristics - SIVICAP

The following report on the physical, chemical and microbio...

Basic Indicators of Environmental Performance - Water - Availability

Water availability at national level

Water quality of use and human consumption.

Table with total of points sampled, % chlorination efficiency, % surveillance coverage, % population with surveillance coverage, % samples suitable for consumption, % in and ...

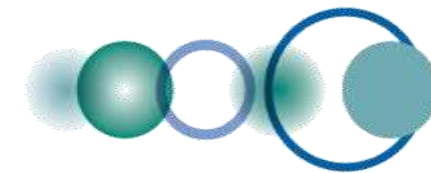
Rates for Water and Wastewater Services - EPM

The tariff fixing process for each of the services is as follows: The Commission for the Regulation of Drinking Water and Basic Sanitation -CRA- establishes the formulas ...

Use maps, applications and other analytical tools

- WRI Aqueduct Country and R...
- Agricultural Exposure to Wate...
- Brazil: Extreme Events (1980...
- CEOS Water Portal





Community Site

Water Accounting Services for the Americas

Welcome to GEOGLOWS Americas. The initiative provides the public resources of the hydrologic information tool that helps you understand the water cycle and its impact on the environment. This is the platform for exploring data, discovering and building apps, and engaging others to solve important water issues.

GEOGLOWS Tool Highlight

The Global Streamflow Forecasting tool helps you understand the GEOGLOWS forecasting tool. This tool uses satellite data, hydrology and other information to help you understand the water cycle.

Water Communities

Water Communities provide a central and secure place for you to connect with others who are interested in water and the environment.

- Water Use (Data Reporting, Community Website)
- Water Forecasting (Water Forecasting Community)
- Water Sanitation (GEOGLOWS Water Sanitation Community)

Links

- Home
- About
- Training Resources
- Partners

Contact Us

- Facebook
- GEOGLOWS YouTube
- Link

Water Community Topics

GEOGLOWS Americas Water Quality Community

The GEOGLOWS Americas community is a public platform for exploring and downloading open data, discovering and building apps, and engaging to solve important local issues. Here we will provide an explanation of the Open Data we are sharing for our community, how to understand it, and for what you might use it. Together we can make a great, well-connected community!

AmeriGEOSS Water Quality Community

Everyone has a story to tell about water. This is the description of a particular story that we will be sharing with you and the community behind it.

Where We're Going

The GEOGLOWS framework includes activities focusing on:

- Enhancing Global Water Sustainability (United Nations Development Goals, water security and access, climate change, solid regions, user engagement)
- Minimizing Basin and Regional Risk (Integrated water protection including floods and droughts, transboundary issues and Integrated Water Resources Management, Water Energy-Food Environment-Health Nexus, Climate Change Adaptation)
- Shared Water Variables (SWV) Understanding (water quality and use, water cycle, metadata)
- Open Observations, Integrated Data Products and Applications, and Tool Development
- Data Sharing, Dissemination of Data, Information, Products, and Knowledge
- User Engagement, Capacity Building, and AmeriGEOSS

Supporting SDG's

6 CLEAN WATER AND SANITATION

Is our water safe?

Click the link to see how to use the tool in the video.

Projects and Tools

Spotlight on GEOGLOWS Projects

Here you will find highlighted projects we have completed or that are underway.

You can search our project history to learn more about the GEOGLOWS efforts in the Americas.

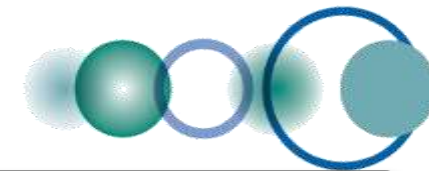
Browse our App Store

Search, Visualize, Download, Create

Water App Store Highlights

Apps provide simple access to information and tools for you to collect data and help your users understand your data. We recommend exploring the apps below for helping engage around specific goals and initiatives.

- Global Streamflow Forecasting (GEOGLOWS: Global Streamflow Forecasting Plot)
- CEOS Water Portal (CEOS Water Portal)
- GEOGLOWS



Imagery Analytics – Build Capacity in the Region to use Imagery as a resource in Decision Making



Land Use Change Imagery Date: January 4, 2000 vs October 10, 2017

Layer Selector

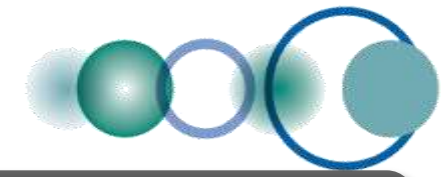
- Result: g
- Active Layer: Short-wave Infrared with DRA on AWS
- Comparison Layer: Short-wave Infrared with DRA on AWS-January 4, 2000

Compare

- Horizontal Swipe: Result_Change_4 v5 Short-wave Infrared with DRA on AWS-October 10, 2017
- Vertical Swipe: Short-wave Infrared with DRA on AWS-October 10, 2017 v5 Short-wave Infrared with DRA on AWS-January 4, 2000

Domo Planas

How has the environment changed 1997 – 2017?



AmeriGEOSS Imagery Analysis Tool - Transforming Earth Observations into Actionable Information

AmeriGEOSS Imagery Analysis Tool

- Access imagery on demand
- Integrate other data and services
- Conduct analysis
 - Compare Imagery
 - Detect Change
 - And More

Sample Imagery Layers

Geology

Bathymetric

Agriculture

Water

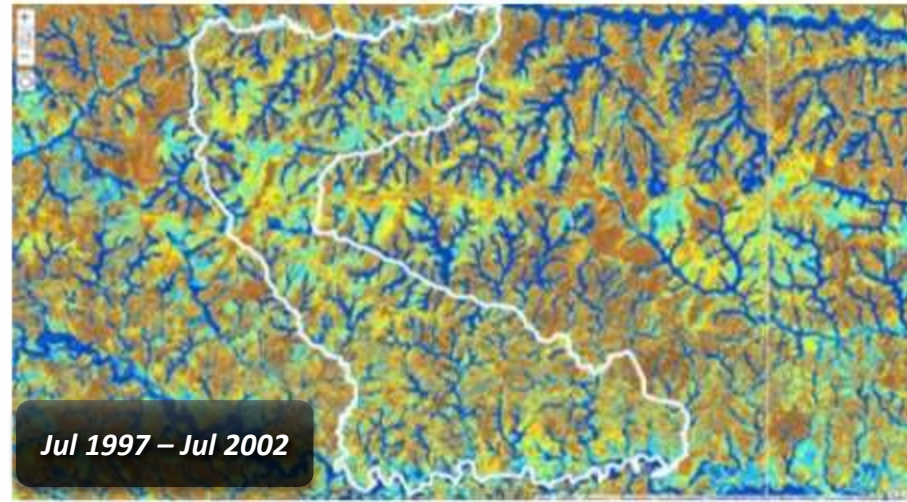
Vegetation



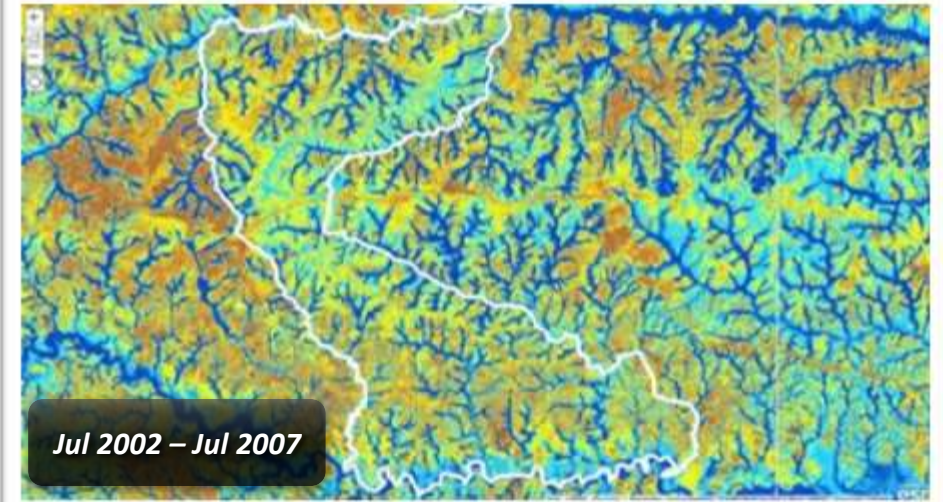
Example: Detecting change in *Moisture* using imagery (*Illustration Only*)

- Visualize
- Analyze
- Detect Change

Normalized
Difference Moisture
Index colorized maps.



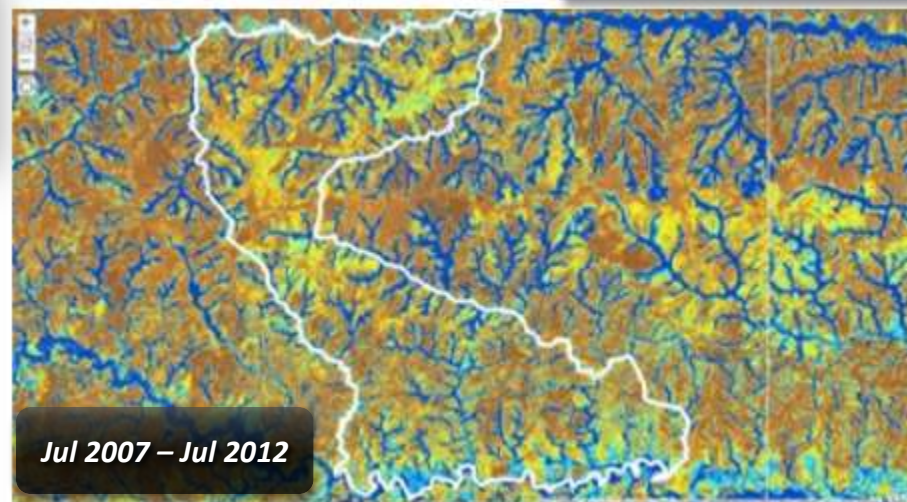
Jul 1997 - Jul 2002



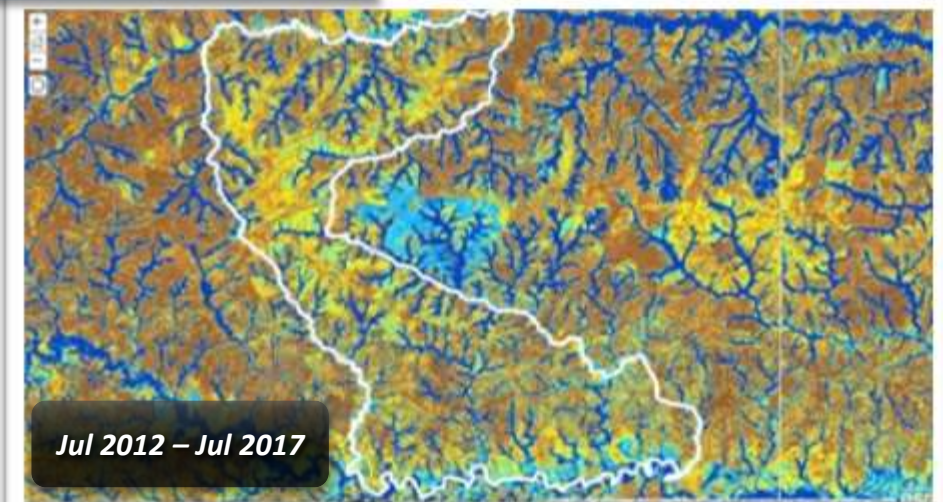
Jul 2002 - Jul 2007

Wet Areas

Dry Areas



Jul 2007 - Jul 2012



Jul 2012 - Jul 2017

Wetlands & moist areas
are blues, and dry areas
in deep yellow & Brown



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Example: Detecting change in *Moisture* using imagery (*Illustration Only*)

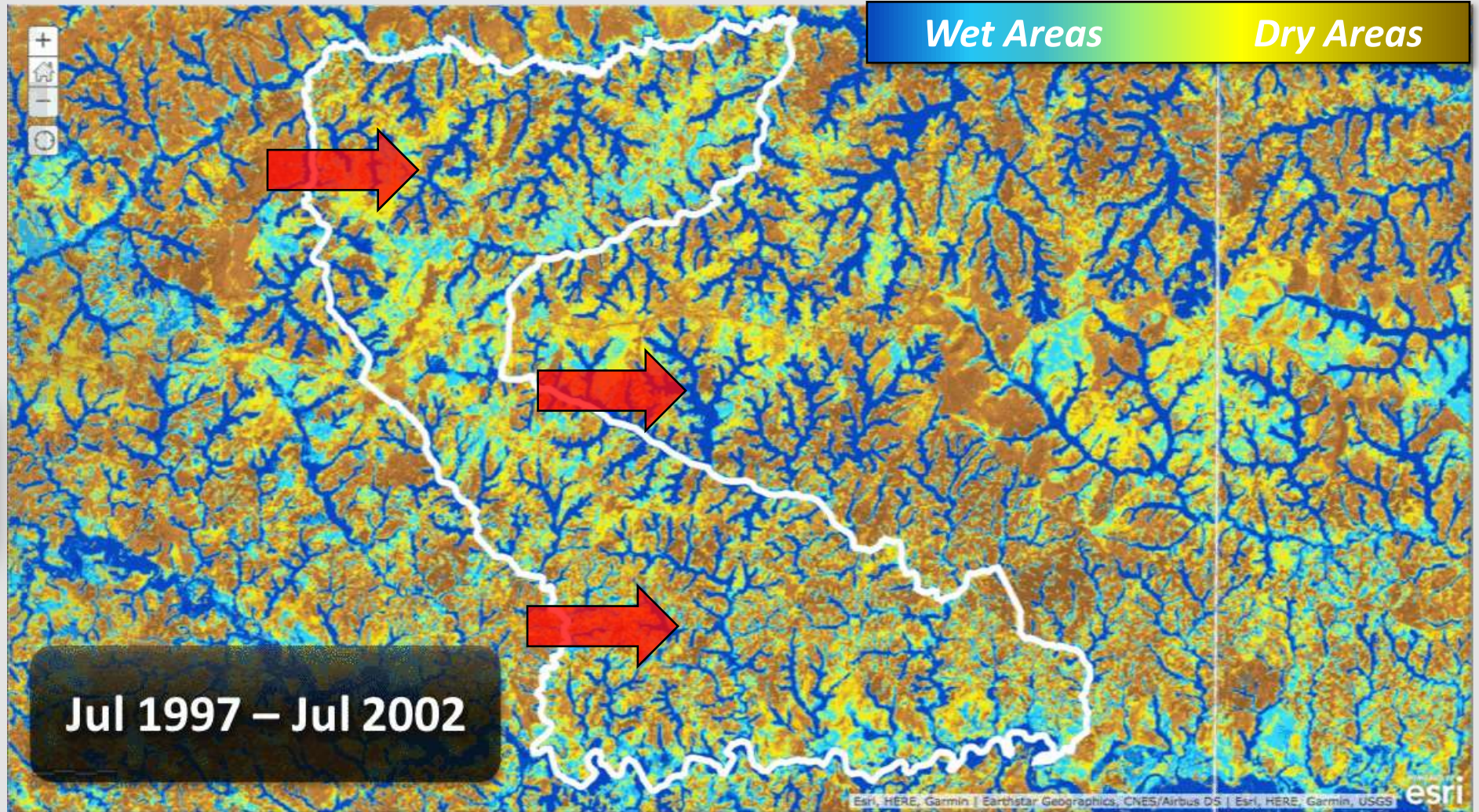
- Visualize
- Analyze
- Detect Change

Normalized Difference Moisture Index colorized maps.



Wetlands & moist areas are blues, and dry areas in deep yellow & Brown

Significant Change



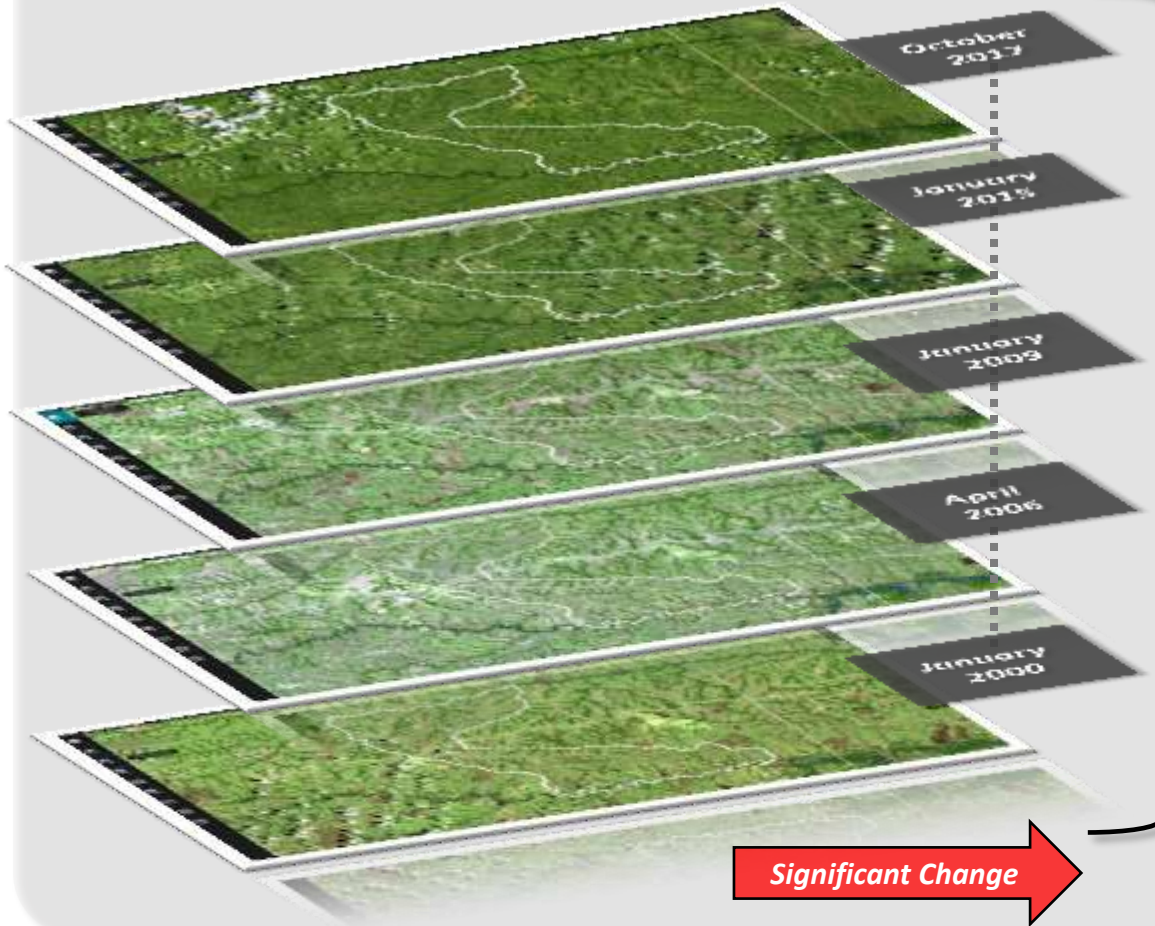
This service includes scenes from Landsat 8 and Global Land Survey (GLS) data



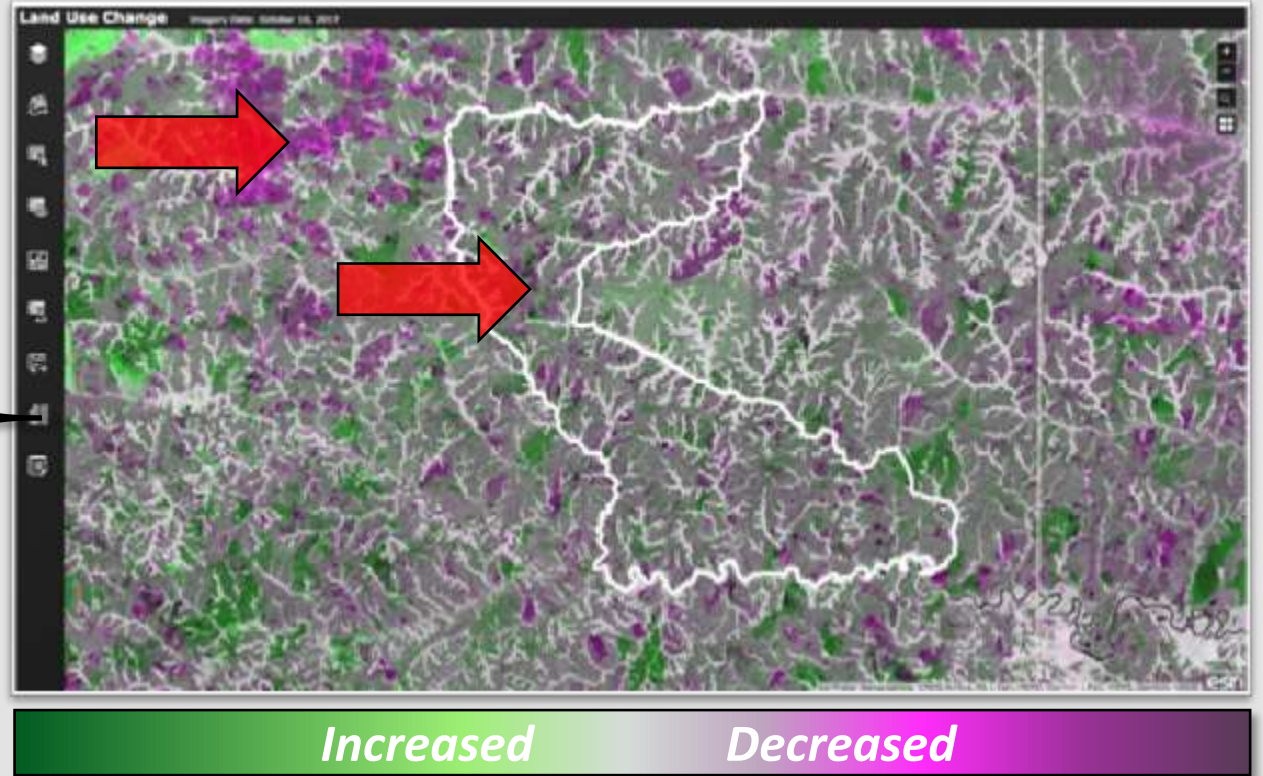
Example : Detecting change in Vegetation—January 1997 – Oct 2017 using imagery (*Illustration Only*)



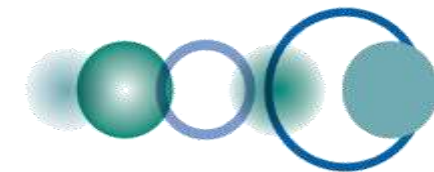
Sample Imagery Jan 2000 – Oct 2017



Change Detection Jan 2000 – Oct 2017



Areas that show up green increased in brightness, areas that show up in magenta decreased in brightness, while area in gray no change.



By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.



An AmeriGEOSS Use Case SDG 6.6.1: *Change in the extent of water-related ecosystems over time.*