

# USGEO Town Hall

*Science & Service with the Earth Observations Enterprise*

**AGU Fall Meeting | 15 December 2023**

Lawrence Friedl, USGEO Co-Chair

Barbara Ransom, NSF

Nancy Searby, NASA & AmeriGEO

Meredith Wagner, NOAA

Tim Stryker, USGS

Helena Chapman, NASA & OneHealth

## USGEO

**Who we are**  
**What we do**

## GEO

**International:**  
**Global and**  
**Regional**

## Town Hall

**Audience**  
**Comments**  
**Questions for**  
**Panel**

**Questions and  
Comments via Slido**



**Wall.sli.do**

**code: 1907746**

**or**

**[https://tinyurl.com/  
2p9tw5e3](https://tinyurl.com/2p9tw5e3)**

**Town Hall**

**Audience  
Comments**

**Questions for  
Panel**



## Who we are

Interagency committee enabling collaboration across agencies and coordinating engagement with the international community

Founded in 2005

15 US Federal departments and agencies

3 components of the Executive Office of the President

*Co-chairs* White House Office of Science & Technology Policy (OSTP)

Agencies: NASA, NOAA, USGS





## *What we do*



[usgeo.gov](https://usgeo.gov)

Coordinate, plan, & assess federal Earth observations, research, and activities

Foster improved Earth system data management and interoperability

Identify high-priority user needs for Earth observations data

Formulate US positions for engagement with international Group on Earth Observations (GEO)

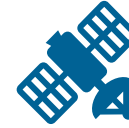


## ***Working Groups & Task Teams***

### ***Working Groups:***



***Assessments***



***Satellite Needs***



***Data  
Management***



***International  
Activities***

### ***Task Teams:***

*Innovation (Incubators & Accelerators) – completed 2021*

*Wildfires Rapid Assessment – completed 2022*

*Commercial Data – completed 2022*

*National Plan Writing Teams – completed 2023*

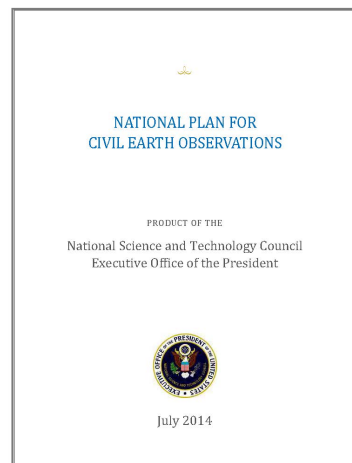
# U.S. National Plans for Civil Earth Observations



**National Plans:**  
**2014**  
**2019**

**2024** *in development*

**2014**

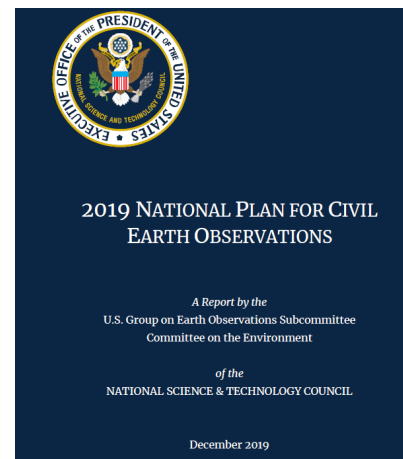


*Introduced Framework of Sustained and Experimental Observations*

**2014 Plan**

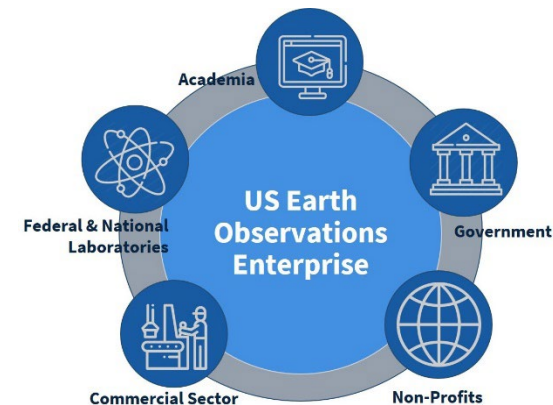


**2019**



*Three primary goals: Support the Portfolio of Earth Obs, Engage the Earth Observations Enterprise, and Improve the Impact of Earth Obs*

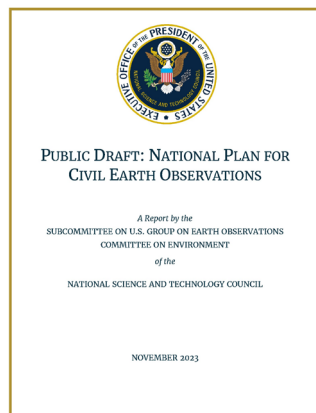
**2019 Plan**



# ***2024 National Plan for Civil Earth Observations – DRAFT***



***2024 Plan is  
in development***



This National Plan provides a vision for continued United States global leadership in enabling and leveraging civil Earth Observations to increase access to Earth data and address global changes.

Three Principles guided the Plan’s development:

- Improve the integration of Earth observing services across Federal agencies and the broader Earth Observation Enterprise
- Ensure integrity of Earth Observations data across the Earth Observations Enterprise
- Ensure the continued availability of foundational United States Government capabilities in atmosphere, land, ice, and ocean Earth Observations, while expanding the use of commercial data and services



# ***2024 National Plan for Civil Earth Observations – DRAFT***

## **Three Goals & Six Cross-Cutting Initiatives**

### **Goals**

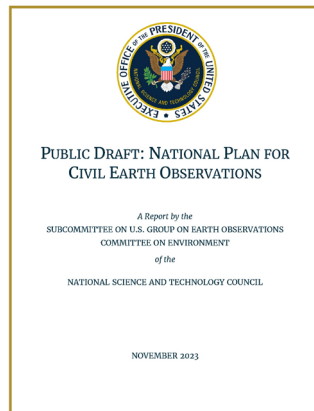
- Goal 1. Advancing Science-Informed Climate Mitigation & Adaptation Activities
- Goal 2. Strengthening Environmental Monitoring and Management
- Goal 3. Improving Human Health and Safety

### **Enterprise Initiatives**

- A. Sustained Observing and Monitoring System Capacity
- B. Equitable Access & Ethical Use of Earth Observations Data
- C. Increased Diversity and Expanded Stakeholder Engagement
- D. Domestic and International Partner Collaboration
- E. Institutional and Workforce Readiness
- F. Continuous Assessment of Earth Observation Systems



***2024 Plan is  
in development***

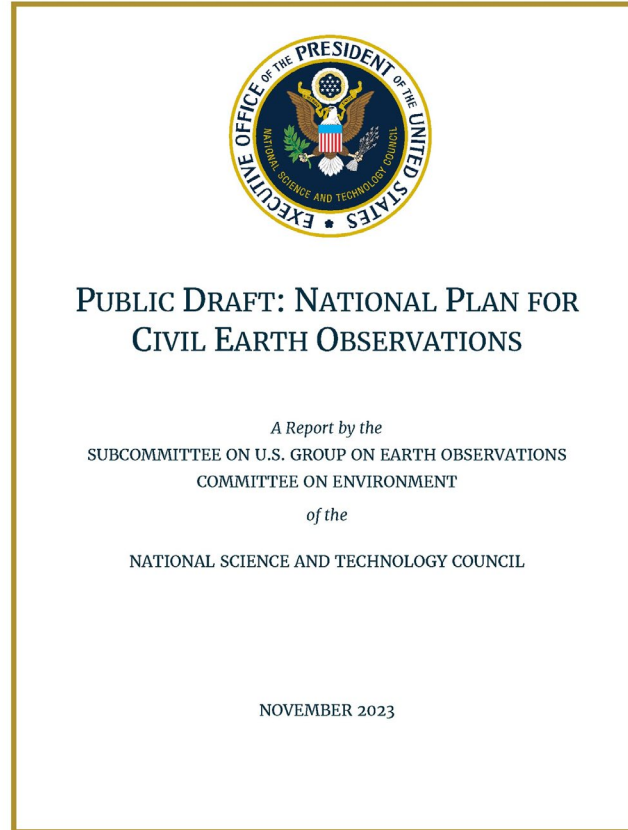


# 2024 National Plan for Civil Earth Observations

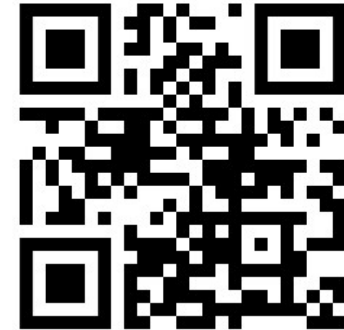


***2024 Plan is  
in development***

***Draft is available for  
Public Comment***



***Deadline for Public Comments:  
An extension to  
January 16 is pending***



**[https://tinyurl.com/  
vvj8sfzy](https://tinyurl.com/vvj8sfzy)**



## Satellite Needs



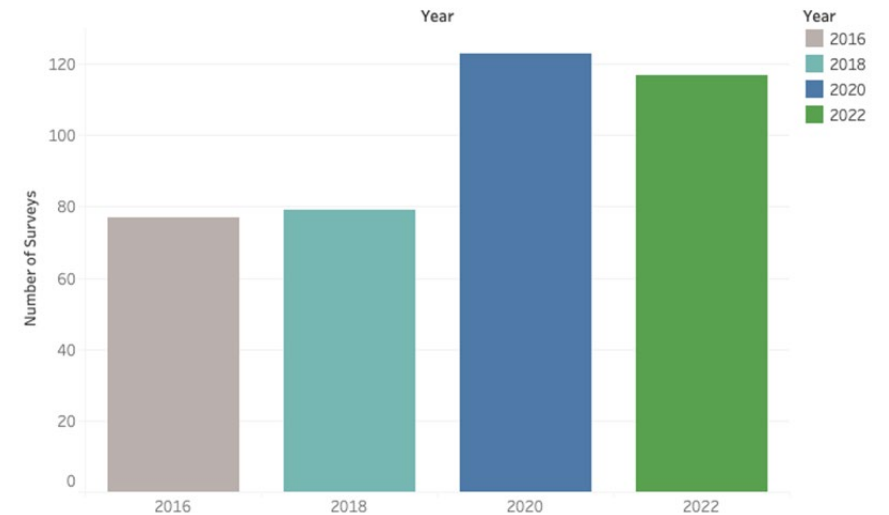
### Biennial USGEO process assessing Federal agency needs for satellite data

- Agencies identify data and information needs
- NASA assesses inputs (plus NOAA and NSF)
- Analysis to determine which inputs NASA can satisfy through current activities, future plans, and/or with new investments

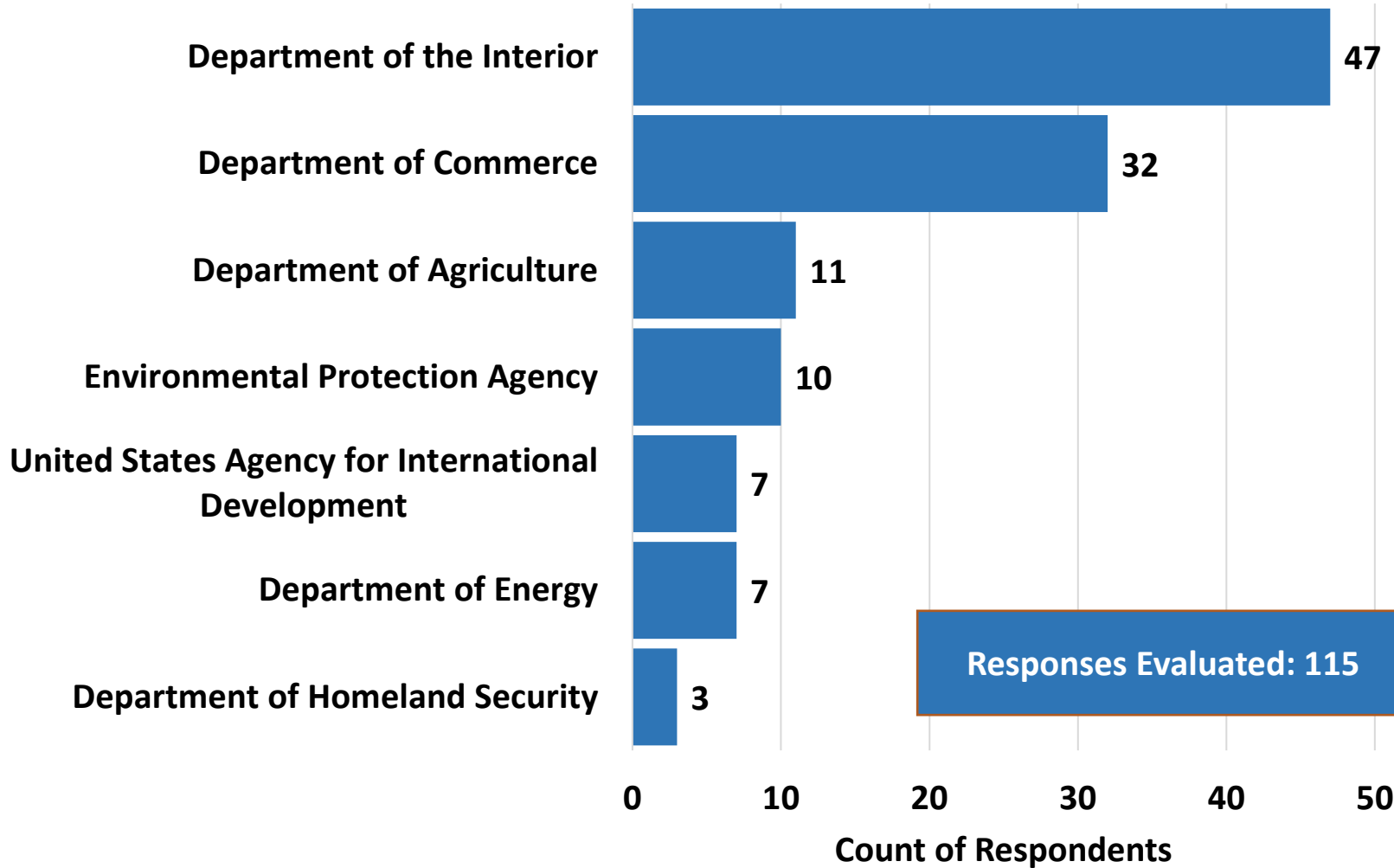
### NASA assessment goes to OMB, OSTP, and Agencies

- Round One: 2016-2017
- Round Two: 2018-2019
- Round Three: 2020-2021
- Round Four: 2022-2023

Number of SNWG Surveys Submitted



# Satellite Needs: Agency Submissions for Fourth Round



## First-time respondents:

- DOI Bureau of Safety and Environment Enforcement (BSEE)
- DOE Office of Energy Efficiency & Renewable Energy (EERE)

# *Satellite Needs: Fourth Round Priorities*

Recommended Science Activities  
Identified in the 2022 SNWG Analysis

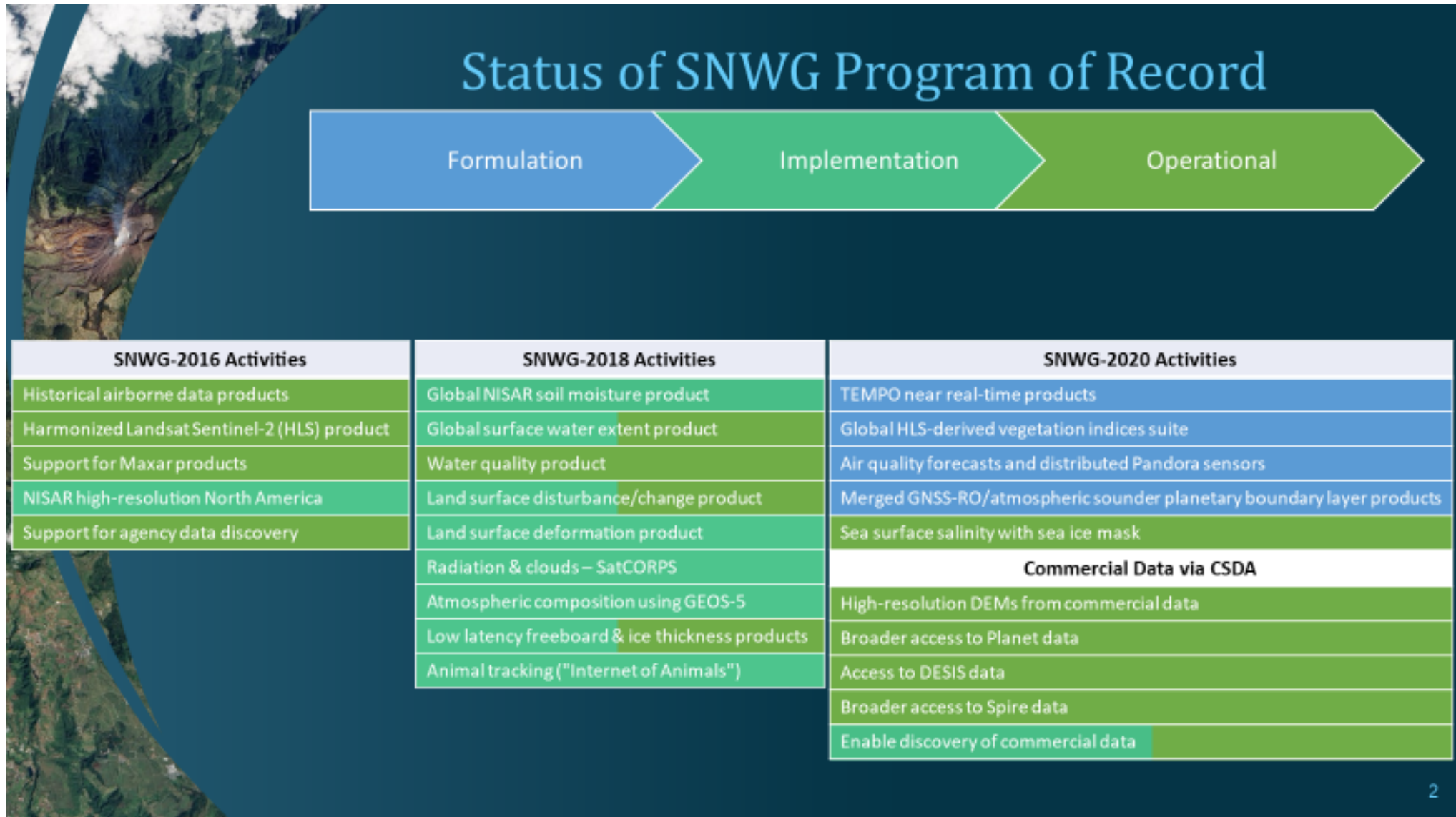
## **Prioritized Potential Activities**

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- # 1 Vertical Land Motion Product**
- #2 Low-Latency Harmonized Landsat Sentinel-2 (HLS) Products**
- #3 TEMPO Near Real-Time SO<sub>2</sub> and Enhanced Products**
- #4 ARSET Remote Sensing Training**
- #5 Multi-Sensor Ocean Surface Winds Product**
- #6 Harmful Algal Bloom (HAB) Hotspot Product**

The solutions implemented will be determined based on available funding and budget appropriations.

# Satellite Needs: Results of Rounds 1-3





## ***Earth Observation Assessments (previous)***

Periodic review of the nation's civil Earth observations portfolio.

The Assessments support efforts to coordinate and inform planning for EO systems. They can help identify connections among agencies and chains of information products.

### ***2013 Assessment:***

Pilot effort. Results used in crafting 2014 National Plan (see Appendix).

### ***2016 Assessment:***

Extensive effort. Results posted at USGEO.gov under Working Groups.

### **Societal Benefit Areas (SBAs)**

- Agriculture & Forestry
- Biodiversity
- Climate
- Disasters
- Ecosystems (Terrestrial & Freshwater)
- Energy & Mineral Resources
- Human Health
- Ocean & Coastal Resources & Ecosystems
- Space Weather
- Transportation
- Water Resources
- Weather
- Reference Measurements



***Earth  
Observation  
Assessment  
(current)***

**2023-2024 Assessment:** Focusing on two SBAs

- Climate (particularly service delivery)
- Agriculture/Forestry (particularly climate and wildfires)

Status: Data ingest nearing completion, shifting to analysis

**2023 EOA observations so far:**

- Limiting focus to 2 SBAs enables greater depth and fidelity
- Greater number of data categories relative to 2016 (120% more for Climate, 35% more for Ag/Forestry)
- New instruments, new platforms, new/improved products/services
- Expansion of focus from research to operational EO

**Future:** Proposal to conduct 3-4 SBAs each year on a rolling basis with an overall Assessment every 5 years (using results of the annual SBA assessments)





***Data  
Management  
Working  
Group***

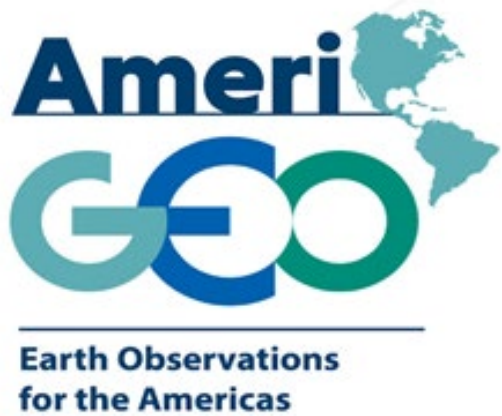
*Report: Recommendations and Future Challenges for Earth Observation Data Management in the Cloud*

*Main themes:*

- Open science and data accessibility
- Cloud-specific data management challenges
- Cost management strategies

*Key challenges:*

- Near-term and long-term cost management
- Data egress for cross-region / interagency sharing
- Upholding security mandates
- Anticipating future storage/egress needs and optimizing data structures to minimize cost and maximize ease of access



[amerigeo.org](http://amerigeo.org)

Regional framework promoting collaboration and coordination among GEO members in the Americas – founded in 2014

## 21 Member Nations

**Themes**    Food Security & Agriculture                      Disaster Resilience  
                  Public Health Surveillance                      Water Resources  
                  Biodiversity and Ecosystem Sustainability

Capacity Building/Strengthening

**2023 AmeriGEO Week** – hosted by Costa Rica  
844 participants (in person + virtual); 24 training sessions.  
Focus on equity, inclusion, and bridging traditional/scientific knowledge.

**2024 AmeriGEO Week** – hosted by Ecuador





[amerigeo.org](http://amerigeo.org)

## 2023 AmeriGEO Week – some highlights

Ecuador – GEO Global Water Sustainability  
Streamflow data services implemented mainly by women to strengthen food security in remote Azuay

Colombia, Ecuador, and Panama - GEO Land Degradation Neutrality  
Refining National land degradation estimations for decision making.

Co-development of 4 pilot efforts across the region:  
Water security, Disaster risk reduction, Indigenous people on land monitoring, and Risk atlas for climate adaptation decisions.

Interested in learning more?

GC53I Poster Session – Friday, 15-Dec, 2:10-6:30 PT

*Innovative Applications of EO to Mitigate Environmental Challenges in the Americas*





**EarthObservations**  
**.org**

Since 2005, GEO promotes open, coordinated Earth observation data-sharing and use for sustainable policy, decisions, and action

Strategic priorities & global policy drivers:

SDG 2030 Agenda, Paris Climate Agreement,  
Sendai Disaster Risk Reduction, New Urban Agenda

Membership: 116 Member Countries,  
152 Participating Organizations, 19 Associates, many  
private sector partners

GEO Work Programme:

Flagships, Initiatives, Community Activities, Nexus Projects



## ***GEO Week 2023 Cape Town Nov. 6 - 10***



GEO Week  
program

### **Flash talks, Plenary, Ministerial Summit**

- Approval of GEO's Post-2025 Strategy
- Adoption of Cape Town Ministerial Declaration
- 36 flash talks, 22 showcase events, 12 workshops



### **Post-2025 Strategy**

- Earth Intelligence: Comprises integrated Earth and social science derived knowledge and insights that inform strategic decisions, build capacities and empower society to address environmental, societal, and economic challenges
- Vision: A world where trusted Earth Intelligence is universally available and empowers society to achieve a sustainable future
- Increase global equity through accessible Earth intelligence
- Increase the participation of young people in the development of Earth intelligence



- What else do you want to know about USGEO?
- What do you want USGEO to know?
- What matters most to you? (datasets, collaboration opportunities, policy contexts, etc. )

**Lawrence Friedl:** USGEO, GEO, NASA

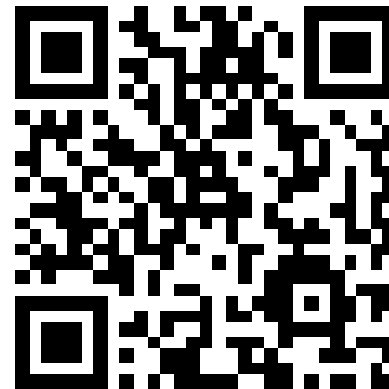
**Barbara Ransom:** USGEO, NSF

**Nancy Searby:** GEO, AmeriGEO, NASA

**Tim Stryker:** USGEO, USGS

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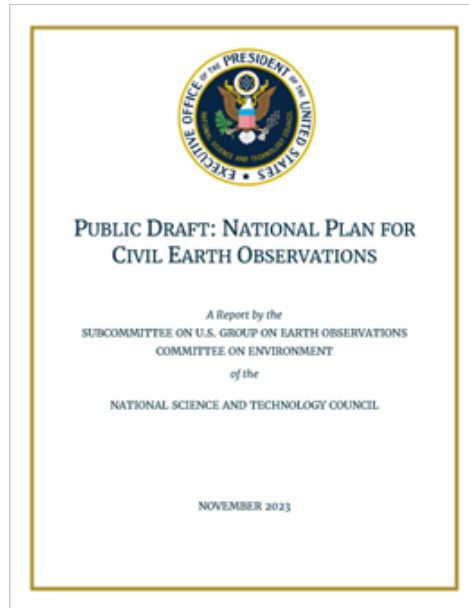
Slides will be available on [usgeo.gov](https://usgeo.gov) or by contacting [wade.price@noaa.gov](mailto:wade.price@noaa.gov)

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# U.S. NATIONAL PLAN FOR CIVIL EARTH OBSERVATIONS

*- DRAFT FOR PUBLIC COMMENT -*

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Deadline for Public  
Comments:

**16 January 2024**

## Make your views known about the direction of US Civil Earth Observations

The White House Office of Science and Technology Policy requests public inputs to inform the development of the National Plan – information to increase access to Earth data and address global challenges.

Inputs from all interested individuals and organizations are invited and welcomed.



[https://tinyurl.com/  
vj8sfzy](https://tinyurl.com/vj8sfzy)

Slides will be available on [usgeo.gov](https://usgeo.gov) or by contacting [wade.price@noaa.gov](mailto:wade.price@noaa.gov)



United States Group on Earth Observations

***Thanks for attending  
and  
Happy Holidays!***

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