**Event overview**

On Friday, December 15, 2023, the US Group on Earth Observations (USGEO) held a Town Hall at the American Geophysical Union (AGU) Annual Meeting. The USGEO Town Hall, entitled "Science & Service with the Earth Observations Enterprise", consisted of two complementary elements – a presentation and an AGU Community Q&A session with a USGEO Panel. The objectives of this 1-hour event were to help the AGU community better understand the diverse activities of the USGEO community across scales and to collect feedback on the AGU community's concerns and priorities. About 30 participants attended this USGEO Town Hall.

The 30-minute presentation gave an overview of the structure and functioning of USGEO, AmeriGEO, and GEO, and shared key achievements from the past year. Topics presented included:

- USGEO structure, history, objectives, working groups, products.
- National Plan – Principles, Goals, Initiatives, RFI (with QR code to facilitate comment submission).
- Satellite Needs Working Group 4th Round priorities, and results of Rounds 1-3.
- Activities/findings of the 2012, 2016, and 2023 Earth Observation Assessments.
- Status/findings of the Data Management Working Group report on cloud computing and data storage.
- Highlights from AmeriGEO, AmeriGEO Week, GEO, and GEO Week.

The 30-minute Q&A session with the USGEO Panel focused on the needs and concerns of the AGU community; the topics are summarized below, along with key points from the panelists' responses. A major theme emerging from the discussion was engagement beyond the Federal government, domestically and internationally, within and beyond "traditional" users of EO. USGEO panelist bios are also below, and a recording of the session can be viewed here.

**Audience/Panel discussion**

Below are the questions discussed during the Town Hall. The USGEO moderator asked the first question, and the audience asked all that followed. Attendees could ask questions either orally or via the Slido app. While all questions asked are included below, there was insufficient time to address some of the questions raised on Slido.

**National Plan**

- **How is USGEO engaging and incorporating state and local government interests and priorities into the National Plan for Civil Earth Observations and broader USGEO activities?** *Each US Federal agency has a constituency of state and local governments it regularly works with. State, local, and tribal governments are encouraged to contribute through the RFI process. NASA is also leading work in response to the CHIPS and Science act to assess state and indigenous government use of NASA EO data.*
- **How are new technologies like AI considered in the National Plan?** *We didn't have time to get to this question.*

**Earth Observations Assessment**

- **How does the Earth Observations Assessment working group identify gaps and prioritize strategies for datasets and observing systems?** *The EOA documents the value that Earth observing systems contribute to broad societal benefit areas, such as climate change or agriculture/forestry. While the EOA process cannot exhaustively document all needs and gaps, it can identify areas where deeper scrutiny might be useful. The first and second EOAs revealed how different EO datasets supported Federal agencies' activities in the service of the American public. The whole-systems approach helps broaden focus beyond traditional programmatic lines; agency requirements are derived from agency mission needs that are subsets of broader societal benefit areas. The EOA process is a useful complementary activity to the National Plan, which addresses the need for both new and continuing observations through calling for a formal continuity*

*framework to assess continuing measurements that must be sustained but are at risk, balanced against future experimental observations that may be needed.*

**Satellite Needs Working Group**

- **Does the Satellite Needs Working Group analyze capabilities across the entire Earth Observations Enterprise, or does it solely concern itself with Federally operated satellites?** *SNWG summarizes the observation/data/information products that Federal agencies report using, both Federal and non-Federal in origin. Results of past surveys have led to changes in what/how the Federal government purchases/license commercial EO data. The SNWG process identifies which critical systems need improvement plans, upgrades, better maintenance, etc. SNWG does not do a gap analysis of needed observations that are not currently collected. The Decadal Survey recommends what new observations need to be collected and informs the EO investments that NASA, NOAA, and USGS decide to make.*
- **Where can one find a report or document that summarizes the findings of previous Satellite Needs Working Group (SNWG) surveys? Is there a summary document showing gaps in science and priorities that industry could review?** *The SNWG has a website that describes their work and the results of each cycle. The raw results of the survey are not published. Numbers of inputs and summaries of products prioritized as shown in this presentation can be found in the slide deck posted to the library page of the USGEO website.*

**Earth Observations Enterprise engagement**

- **How can we better engage on Earth observations across the Americas, particularly in countries already having strong EO capabilities, such as Brazil, Argentina, Peru, Mexico, Bolivia, Paraguay, while avoiding duplication and missed opportunities for synergies?** *The Committee on Earth Observation Satellites (CEOS) coordinates satellite assets and data interoperability around the world. All NASA satellites are international partnerships. The CEOS working group for capacity building and data democracy (now led by South Africa and Mexico) encourages full, free, and open data sharing. Many Latin American space agencies are part of AmeriGEO, and some efforts are led independently and are more loosely connected. Argentina's National Space Activities Commission (CONAE) supports capacity building efforts and shares training programs. Brazil's National Institute for Space Research (INPE) has been less actively engaged. The national GEO construct, which AmeriGEO is helping more countries adopt, varies by country and in some, national space agencies play a role in convening all EO-relevant agencies within their country, connect domestically and internationally, and build resilience to change.*
- **How is USGEO is expanding the role of Earth observations in agencies that are not traditionally users of Earth observations?** *One example is our continuing engagement with the health/human services community by using Earth observations to help develop geospatial/mapping products that support public health activities. For example, vector-borne disease maps, which consider environmental observations like temperature and precipitation, can help identify and strengthen public messaging about potential disease hotspots. USGEO, AmeriGEO, and GEO are all useful platforms to expand networks with end-user communities. We also invite previously un-connected US departments/agencies like Housing and Urban Development to join USGEO meetings. The approach to date has been* ad hoc*, and there is interest in taking a more systematic approach moving forward.*
- **What role, if any, is there for commercial satellites to monitoring greenhouse gases like methane?** *We didn't have time to get to this question.*

**General**

- **How is the Decadal Survey connected to USGEO**? *The Decadal Survey is one of many sources of input for the US National Plan for Civil Earth Observations. The two documents differ in the author teams, the topics addressed, and the communities surveyed. The National Academies of Science,*

*Engineering, and Mathematics conducts the Decadal Survey on behalf of NASA Earth Science, NOAA, and USGS to document and summarize the scientific research and application needs of the broader scientific community on what primary activities these agencies should pursue in the coming decade, which the agencies then use to inform their individual strategic planning activities. The National Plan, drafted by USGEO, represents the views of the approximately one dozen Federal agencies who are members of USGEO on what they see as broader needs and priorities, ranging from research through to policy issues, workforce concerns, etc., and the public RFI process allows for input from a broader community beyond academia (e.g. the private sector, non-profits, state/local/tribal governments, etc.). In short, the two documents, and the processes to create them, are complementary.*

- **Has the pandemic shifted (or perhaps delayed or accelerated) the trajectory of the Earth Observation Enterprise since the last National Plan? If so, how?** *We didn't have time to get to this question.*

**Bios**

**Mr. Lawrence Friedl (presenter and panelist)** serves as the Senior Engagement Officer in the Earth Science Division at NASA Headquarters, enabling partnerships with philanthropies, foundations, companies, and nonprofit organizations. He serves as a Co-Chair of the interagency U.S. Group on Earth Observations (USGEO) and represents the United States on the global Group on Earth Observations (GEO).

**Dr. Barbara Ransom (panelist)** is a Program Director in the Office of the Assistant Director of the Directorate for Geosciences at the National Science Foundation (NSF). She is the past NSF Principal for USGEO, leads the Geoinnovation Hub in the NSF Directorate for Geosciences, and supports activities in the innovation space and the development of public-private partnerships.

**Dr. Helena Chapman (panelist)** is the Associate Program Manager for Health and Air Quality Applications at NASA Headquarters, where she manages related NASA-funded projects and program activities. She also serves as Executive Coordinator of the GEO Health Community of Practice and GEO Earth Observations for Health (EO4Health) Initiative.

**Ms. Meredith Wagner (panelist)** leads the Technology, Planning and Integration for Observations group at the National Oceanic and Atmospheric Administration (NOAA). Within USGEO, she co-leads the Earth Observation Assessment, which seeks to better understand Federal EO data usage and gaps to inform future investments.

**Dr. Nancy Searby (panelist)** is the Capacity Building Program Manager for NASA's Earth Action Program at NASA Headquarters. She champions applying Earth science data to improve society, building individual and institutional capacity both domestically and internationally, and is actively involved with AmeriGEO.

**Mr. Tim Stryker (panelist)** is Chief of the Outreach and Collaboration Branch of the U.S. Geological Survey (USGS) National Land Imaging Program. He works closely with internal and external stakeholders to advance the societal benefit of space-based and airborne land imaging systems. He is a former Executive Director of USGEO.

**Dr. Pamela Collins (facilitator)** is the Senior Advisor for Interagency & International Affairs in the Earth Science Division at NASA Headquarters. She supports coordination of NASA's engagement with the global Group on Earth Observations (GEO) and USGEO.

# 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
United States Group on Earth Observations

# 2023 AGU Town Hall

## USGEO

Who we are

What we do

## GEO

International:

Global and Regional

## Town Hall

Audience Comments

Questions for Panel

USGEO
United States Group on Earth Observations

# 2023 AGU Town Hall

## Questions and Comments via Slido

**Wall.sli.do**
**code: 1907746**
**or**
**https://tinyurl.com/2p9tw5e3**

## Town Hall

**Audience Comments**

**Questions for Panel**

USGEO
United States Group on Earth Observations

## *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

USGEO
United States Group on Earth Observations

***What we do***

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)

USGEO
United States Group on Earth Observations

## *Working Groups & Task Teams*

## *Working Groups:*

***Assessments***

***Satellite Needs***

***Data Management***

***International Activities***

## *Task Teams:*

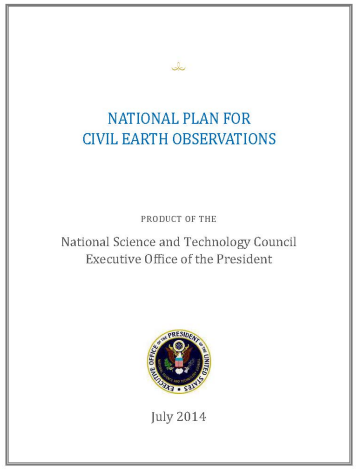
*Innovation (Incubators & Accelerators) – completed 2021*
*Wildfires Rapid Assessment – completed 2022*
*Commercial Data – completed 2022*
*National Plan Writing Teams – completed 2023*

# U.S. National Plans for Civil Earth Observations

USGEO
United States Group on Earth Observations

**National Plans:**
**2014**
**2019**
**2024** *in development*

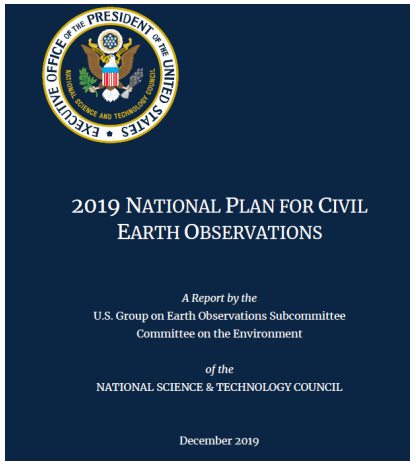
## 2014




*Introduced Framework of Sustained and Experimental Observations*

**2014 Plan**

## 2019





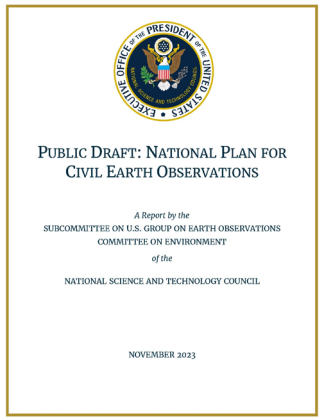
*Three primary goals: Support the Portfolio of Earth Obs, Engage the Earth Observations Enterprise, and Improve the Impact of Earth Obs*

**2019 Plan**

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

USGEO
United States Group on Earth Observations

***2024 Plan is in development***


PUBLIC DRAFT: NATIONAL PLAN FOR CIVIL EARTH OBSERVATIONS

*A Report by the*
SUBCOMMITTEE ON U.S. GROUP ON EARTH OBSERVATIONS
COMMITTEE ON ENVIRONMENT
*of the*
NATIONAL SCIENCE AND TECHNOLOGY COUNCIL

NOVEMBER 2023

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.

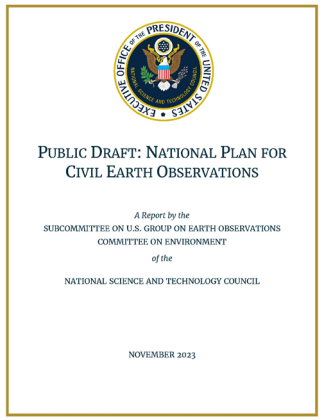
## Three Principles guided the Plan's development:

- 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*

United States Group on Earth Observations

***2024 Plan is in development***




## 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

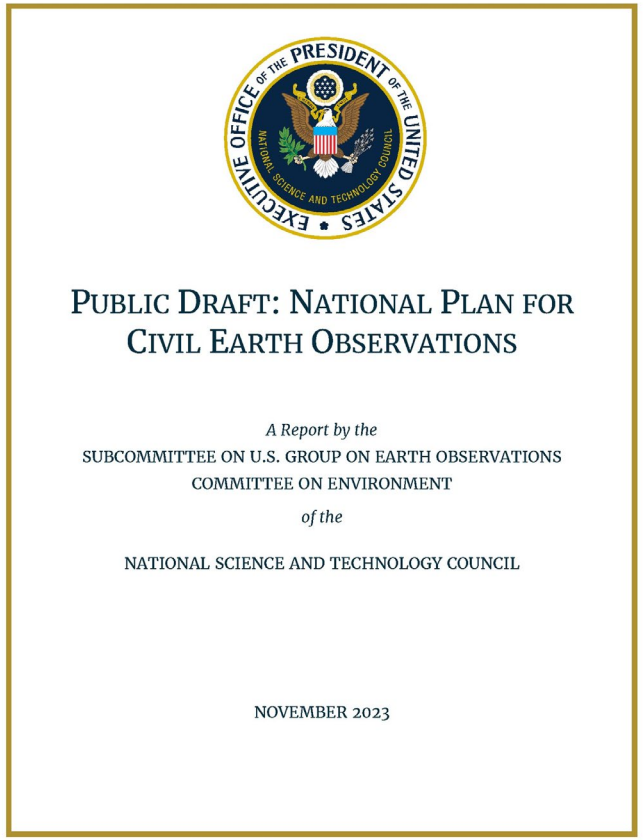
F. Continuous Assessment of Earth Observation Systems

# 2024 National Plan for Civil Earth Observations

USGEO
United States Group on Earth Observations

***2024 Plan is in development***

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



PUBLIC DRAFT: NATIONAL PLAN FOR CIVIL EARTH OBSERVATIONS

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*of the*
NATIONAL SCIENCE AND TECHNOLOGY COUNCIL

NOVEMBER 2023

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

**https://tinyurl.com/vvj8sfzy**

USGEO
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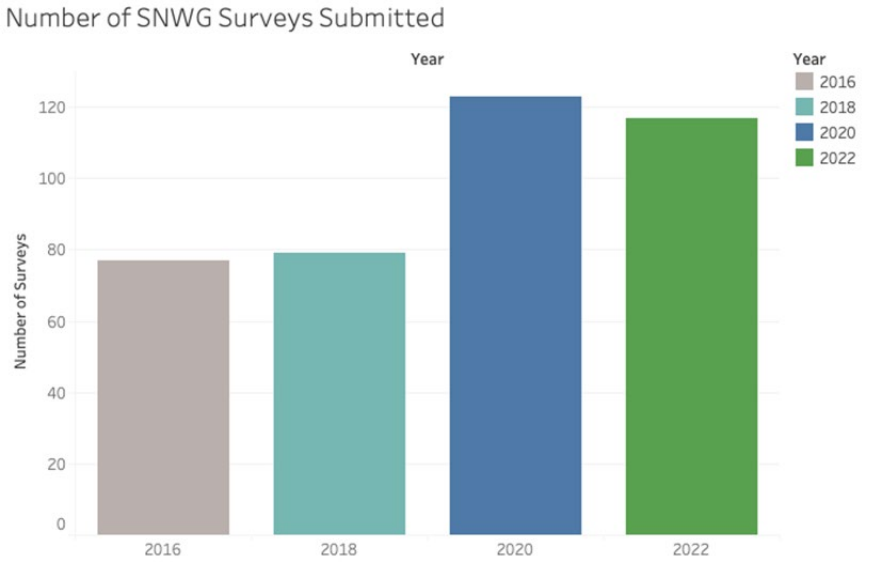
# *Satellite Needs*

Biennial USGEO process assessing Federal agency needs for satellite data

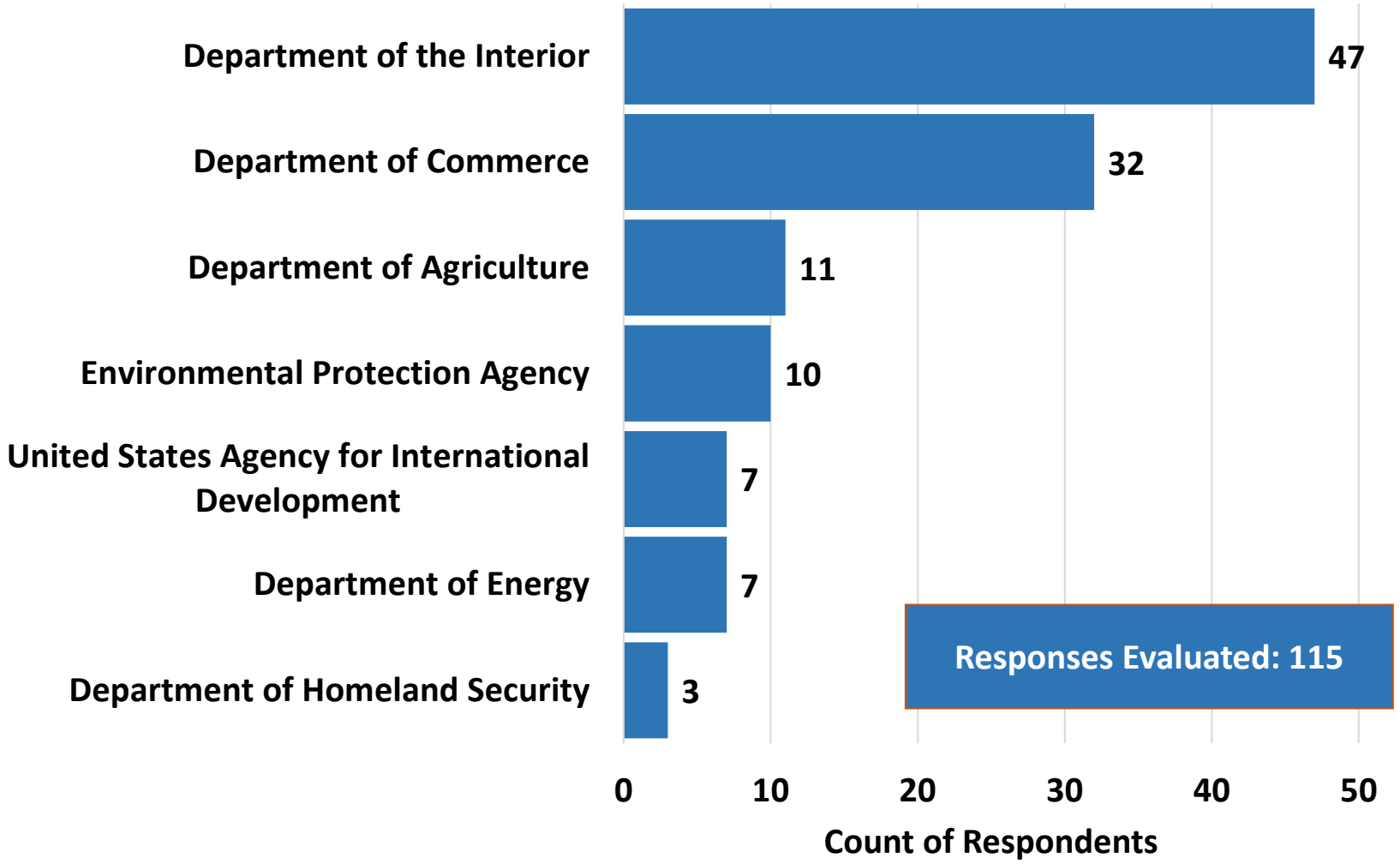
- Agencies identify data and information needs
- NASA assesses inputs  (plus NOAA and NSF)
- Analysis to determine which inputs NASA can satisfy through current activities, future plans, and/or with new investments

NASA assessment goes to OMB, OSTP, and Agencies

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



# *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)

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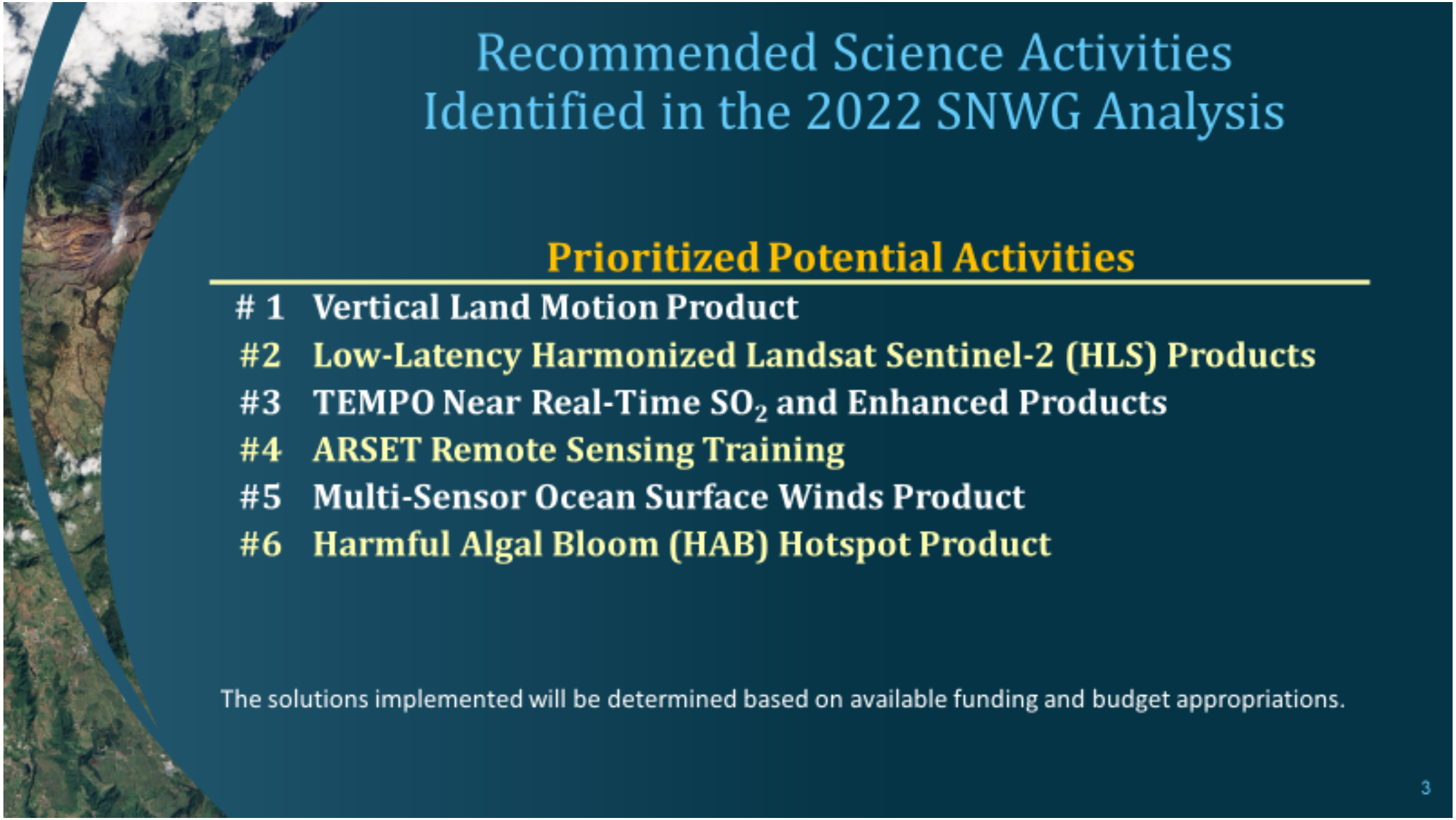
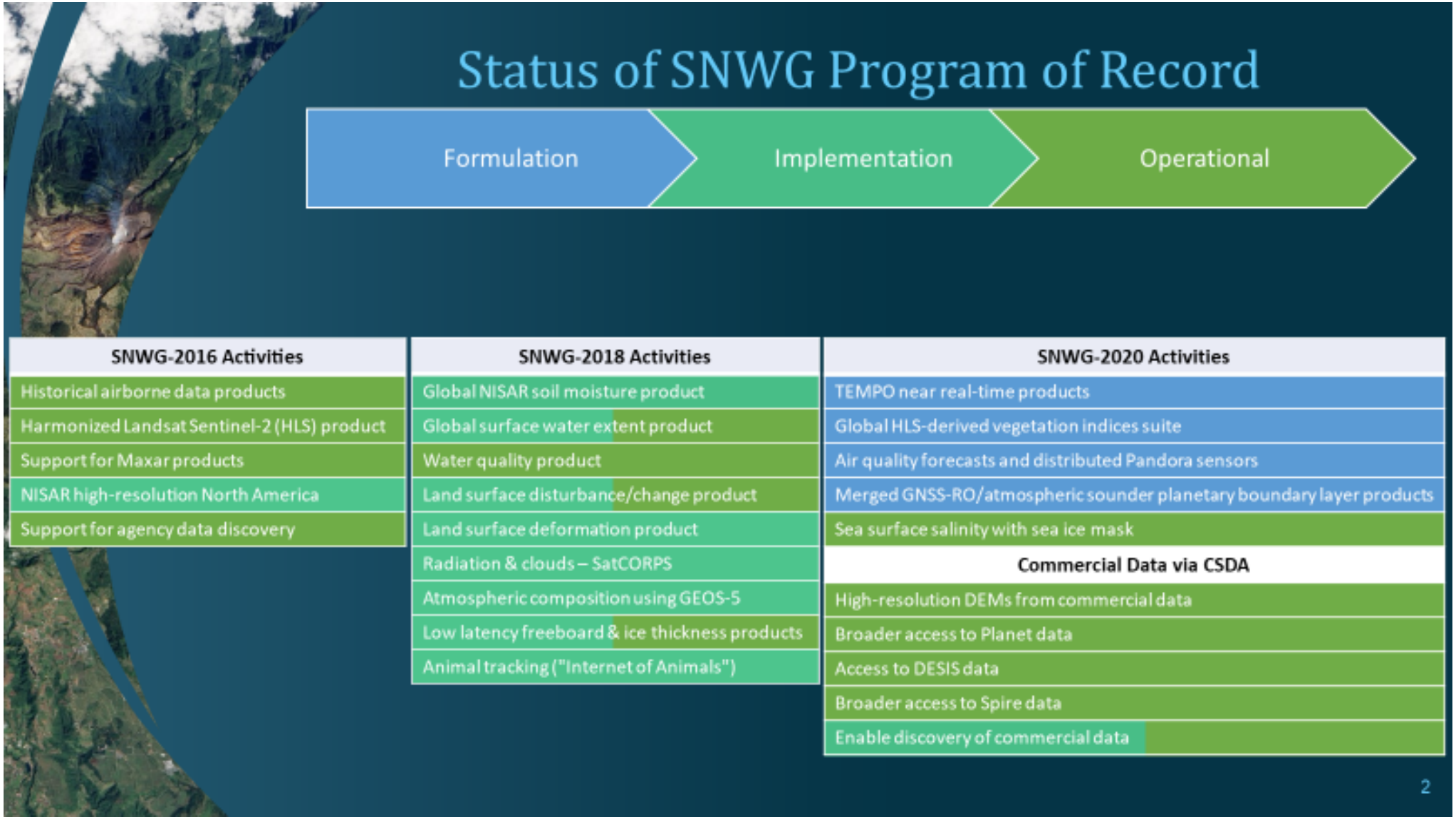
# *Satellite Needs: Fourth Round Priorities*



# *Satellite Needs: Results of Rounds 1-3*



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# *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

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***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)

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***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

Earth Observations for the Americas

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


# 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*

AmeriGEO
Earth Observations for the Americas

bitly

**amerigeo.org**

GROUP ON EARTH OBSERVATIONS

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

GROUP ON EARTH OBSERVATIONS

GEO WEEK 2023
MINISTERIAL SUMMIT
6-10 November
Cape Town, South Africa
#TheEarthTalks

***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

# Town Hall MEETING

- 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

**Meredith Wagner:** USGEO, NOAA

**Helena Chapman:** NASA, OneHealth

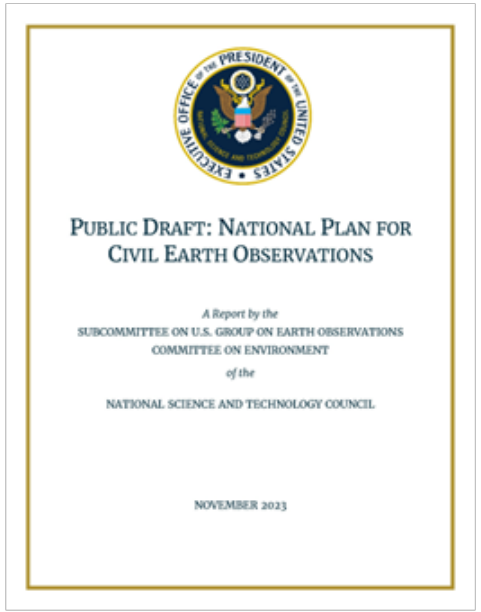
**Slido for Questions & Comments**

**Wall.sli.do**
**code: 1907746**
**or**
**https://tinyurl.com/2p9tw5e3**

Slides will be available on usgeo.gov or by contacting wade.price@noaa.gov

# U.S. National Plan for Civil Earth Observations

## - *Draft for Public Comment* -




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/vvj8sfzy

Slides will be available on usgeo.gov or by contacting wade.price@noaa.gov


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

Slides will be available on usgeo.gov or by contacting wade.price@noaa.gov