U.S. Group on Earth Observations
Interagency and International Collaboration
for Societal Benefit

AGU 2018 Fall Meeting | Town Hall TH33K
December 12, 2018

Erik Noble, OSTP
Lawrence Friedl, NASA
Greg Snyder, USGS

Neil Jacobs, NOAA
Karen St Germain, NOAA
USGEO Town Hall

USGEO
What we represent

GEO
International Context
What’s new

Town Hall
What’s in it for you
Questions, Comments, and Discussion
Got Comments? Got Questions?

Raise a hand and ask directly 🙋‍♂️

Write down on paper 📝

Text them to: 202.997.4812 📱

Town Hall

What’s in it for you

Your questions, comments, and group discussion
Who We Are
Subcommittee of the White House National Science and Technology Council – Committee on Environment

Be Interconnected Focus Impact
Enable Innovation

Purpose
- Coordinate, plan, assess U.S. Federal Earth Observation activities
- Foster improved data interoperability
- Identify high priority user needs
- Represent the U.S. to the Group on Earth Observations
USGEO: Activities

Triennial Assessment of U.S. Earth Observing Systems

Data Management Plans and Guidelines

Triennial National Plan for Civil Earth Observations

Biennial Satellite Needs Process

Support to GEO and the GEO Work Programme
USGEO: Be Interconnected

Investing in Earth Observations is an Investment in our Economy

Geospatial Services Industry is a $73B business; 500,000 are employed.
Boston Consulting Group, 2012

Weather forecasts generate $31.5 billion in economic benefits to U.S. households ($35 billion in 2016).
NOAA by the Numbers, 2018

Ocean Enterprise is a $7B business with over 400 companies.
US IOOS Ocean Enterprise Study, 2016
USGEO: Focus Impact

1 April 2016:
Japan, USA Make ASTER Earth Data Available at No Cost
~2.95 million individual scenes to date

16-plus-year database for Japan/METI’s ASTER instrument on NASA’s Terra satellite.

https://lpdaac.usgs.gov/

25 October 2017:
China will freely share data from the TanSat carbon monitoring satellite

“We have developed a carbon satellite data sharing policy, and level 1A, 1B, 2 and 3 data will be open to users worldwide freely.”
Yang Jun, Director General of the National Satellite Meteorological Center

http://www.chinageoss.org/tansat/index.html
via GEOportal.org, select catalog 'China GEOSS'
Satellite derived and numerically modeled soil moisture products provide timely and accurate information for monitoring and predicting global crop health and yields. We showed that merging satellite and modeled based products provides estimates of end-of-season crop yield comparable to more costly and labor intensive survey-based methods.

Mladenova, Bolten, et al., IEEE JSTARS, 2017

**USGEO: Enable Innovation**

**SMAP Product Transition**

- USDA Foreign Agriculture Service (FAS) integrated NASA’s SMAP-based soil moisture data products into monthly World Agricultural Supply and Demand Estimates
- U.S. farmers/markets have better knowledge of global supply and demand
- First satellite-based global soil moisture dataset available on Google Earth Engine

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USGEO: Enable Innovation – Examples

Commercial Sector using Government data (Landsat)

- Cloud services
  - Google
  - Amazon
- Geospatial Layers
  - esri
- Business Solutions
  - E&J Gallo Winery: vineyard management
  - SilviaTerra: forest inventory
  - Descartes Labs: data refinery to business solutions

Government Using Commercial Data

- Weather Research and Forecasting Innovation Act of 2017 directs several NOAA Commercial Space Activities
- NOAA Initiated Commercial Weather Data Pilot 1 & 2
- CWDP 2 awarded Sept 2018:
  - GeoOptics
  - spire
  - PLANETIQ
International

Intergovernmental organization working to improve the availability, access, and use of Earth obs. to benefit society.

- Ministerial in 2019
- Halfway through its second decade
- Adopting a new category to include commercial companies
- New GEO Work Programme in development for 2020-2022

*US supports more than 75% of the current GEO Work Programme*
Dr. Neil Jacobs
Assistant Secretary of Commerce for Environmental Observation and Prediction

USGEO NOAA Co-Chair
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Erik Noble, OSTP, USGEO, and National Plan

Neil Jacobs, NOAA

Lawrence Friedl, USGEO, GEO Work Programme, and NASA

Karen St Germain, USGEO and NOAA

Greg Snyder, USGEO, Assessment, and USGS
USGEO coordinates, plans, and assesses Federal Earth observation activities in cooperation with *domestic stakeholders*.

What are three key ways/venues USGEO could pursue to fulfill this mandate?
Earth observations data: Where is most progress needed?

A. Discoverability
B. Accessibility
C. Usability
What is suggested balance of:

A. Maintenance of current observing systems
B. Improvements/upgrades of current observing systems
C. New measurements and observing systems

What factors should guide the balance?
Comments on these three key principles:

A. Balanced provision of core public sector services and private innovation to meet Earth observation requirements.

B. Embrace innovation that enables an interconnected set of Earth observations and the generation and dissemination of information products.

C. Build learning and adaption into management of the portfolio to improve the impact of Earth observation resources and maximize the value of Earth observations as a strategic asset.
Which two are highest priority? Which one is lowest?

A. Coordinate and Integrate Observations
B. Improve Data Access, Management, and Interoperability
C. Increase Efficiency and Cost Savings
D. Improve Observation Density/Sampling
E. Maintain and Support Infrastructure
F. Explore Commercial Solutions
G. Strengthen International Collaboration
H. Engage in Stakeholder-Driven Data
What Type of models can the US government engage in to increase the uptake of Earth observations?

A. Funding Opportunities
B. Incubators
C. CRADA
D. SBIR
E. Other?
In what areas do you anticipate under-investment by the private sector over the next 10 years?

In what areas do you recommend the Federal government invest in over the next 5 years?
How can the Federal government better leverage the private sector Earth Observations?
How has GEO helped US companies get access to global data and how has that helped you gain entrance in the global market?
If you are a non-Federal entity using public data – how can we engage with you to publicize this?

A. Newsletters
B. Logos on your Websites
C. Interact with you at your meetings
D. ??
Is your organization concerned about a potential shortage in workers trained on Earth observations and geospatial info?

If so, what level of concern is this topic (high, medium, low) and what do you suggest?
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Thank You