USDA Has Made Progress but Still Needs Additional Representation on USGEO Working Groups

Status

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Context

National Science & Technology Council

President of the United States, NSTC Chair

- **COMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES** (CENR)
- **COMMITTEE ON TECHNOLOGY** (CoT)
- **COMMITTEE ON SCIENCE** (CoS)
- **COMMITTEE ON HOMELAND AND NATIONAL SECURITY** (CHNS)

COMMITTEE ON ENVIRONMENT & NATURAL RESOURCES

Sharon Hays, EOP
Conrad Lautenbacher, DOC
George Gray, EPA

- AIR QUALITY RESEARCH (SC)
- DISASTER REDUCTION (SC)
- GLOBAL CHANGE RESEARCH (SC)
- ECOSYSTEMS (SC)
- OCEAN SCIENCE AND TECHNOLOGY (SC)
- TOXICS AND RISKS (SC)
- US GROUP ON EARTH OBSERVATIONS (SC)
- WATER AVAILABILITY & QUALITY (SC)

USDA CERN Representatives

- **Subcommittee on Global Change Research**
  - Hohenstein William, OCE
- **Subcommittee on Air Quality Research**
  - Robert J. Wright, ARS
  - Raymond E. Knighton, CSREES
  - Ron Heavner, NRCS
- **Subcommittee on Ecological Systems**
  - Ann Bartuska, FS Co-Chair
- **Subcommittee on Toxics and Risk Assessment**
  - Jane Robens, ARS
- **Subcommittee on Natural Disaster Reduction**
  - Susan Conard, FS
- **Subcommittee on Water Availability and Quality**
  - Mark Weltz, ARS
  - Margriet Caswell, ERS
  - Sheryl Kunickis, NRCS
  - Mike O'Neill, CSREES
  - Jim Dobrowolski, CSREES
  - Deborah C. Hayes, FS
- **U.S. Group on Earth Observations**
  - Charlie Walthall, ARS
  - Glenn Bethel, USDA
  - Sheryl Kunickis, NRCS
- **Subcommittee on Oceans**
  - Louie Tupas, CSREES
  - Meryl Broussard, CSREES
- **Interagency Working Group on Dioxins**
  - Jane Robens, ARS

Note: USDA Representation taken from CERN Web Sites and maybe outdated.

ARS 5; CSREES 5; ERS 1; FS 2; NRCS 3; OCE 1

Designated Representatives

BLM Bob Bewley

CDC *Michael McGeehin, George Luber*

DHS *Bruce Davis*

DOD *Grant Aufderhaar*

DOE *Wanda Ferrell,* Bob Vallario

DOT *Tim Schmidt*

EPA *Gary Foley*, Pai-Yei Whung

FEMA *John Perry,* Erin Gallagher

Forest Service *Greg Reams, Zhiliang Zhu*

MMS *Jim Kendall, Walter Johnson*

NASA Teresa Fryberger; *Martha Maiden*

NAVY *Robert Winokur,* Wayne Estabrooks

NIEHS Ann Davis

NOAA *Helen Wood,* Greg Withee

NSF James Collins, Elizabeth Blood

OMB Grace Hu

OSTP Dan Walker

Smithsonian *Len Hirsch, Scott Miller*

State *Shira Yoffe*

USACE *Barbara Sotirin,* Dimitra Syriopoulou

USAID *Carrie Stokes*

USDA Charles Walthall, Glenn Bethel

USGS *Jim Devine*

Co-Chairs

USGEO

National Science and Technology Council

Committee on Environment and Natural Resources

= USDA Represented

= USDA Not Represented

U.S. Group on Earth Observations

Exec Committee = Co-chairs + Group Chairs

FUNCTIONAL GROUPS

- Strategic Assessment Group
- Architecture and Data Management Group
- International
- Policy and Planning Group
- Communication, Outreach, Partner Group

2008 USGEO Activities

Policy and Planning Group

- Develop National Earth Observation policy
- Update Strategic Plan
- Budget planning
- Respond to Decadal Survey

Architecture and Data Management Group

- Formalize architecture
- Coordinate with existing data policies

Strategic Assessment Group

- Requirements
- Priorities
- Identify observation communities

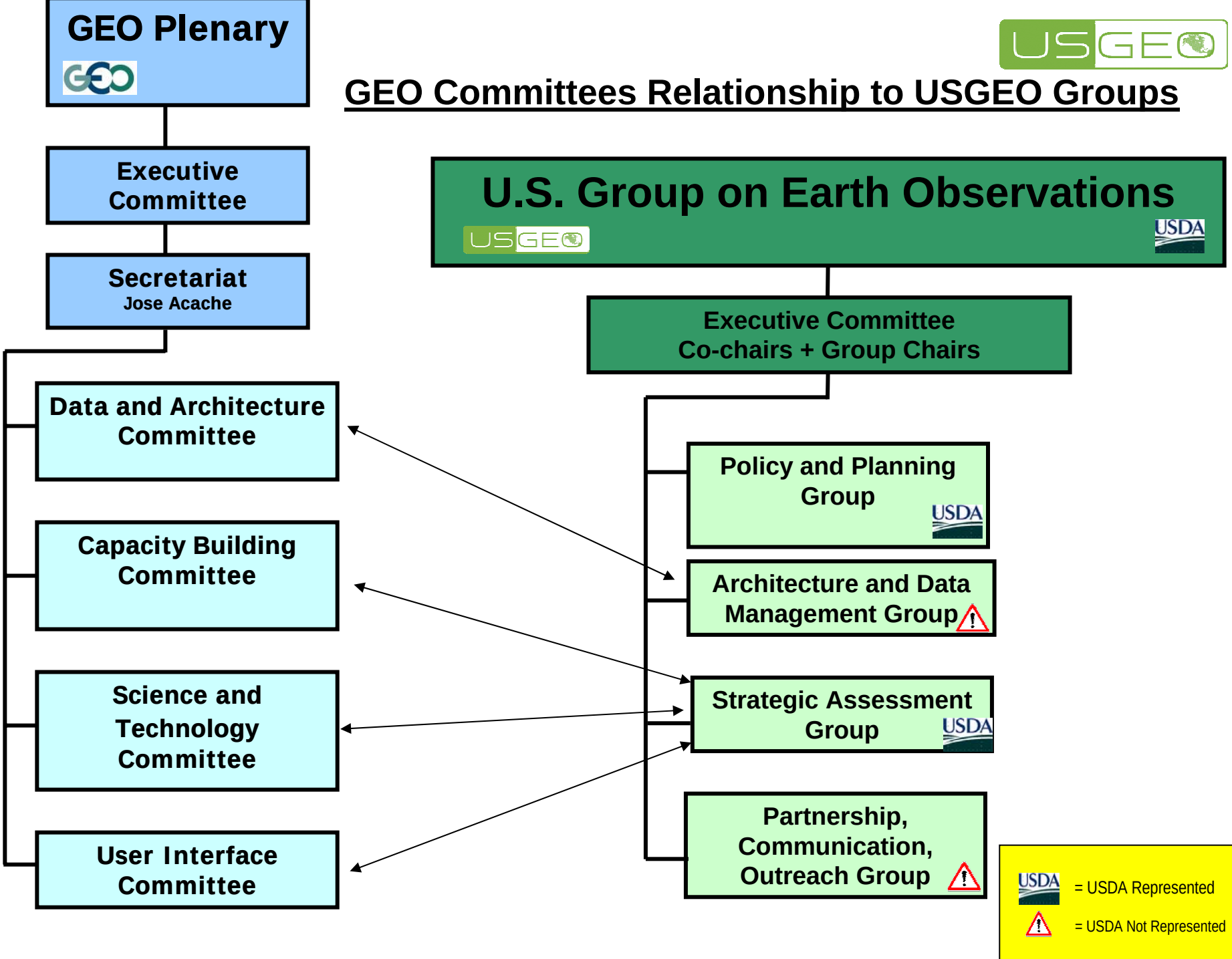
Partnership, Communication, Outreach Group

- Establish partnership structure
- Academic observations workshop
- Raise visibility of USGEO

USDA = USDA Represented

⚠ = USDA Not Represented

GEO Committees Relationship to USGEO Groups



Group Status Information

Policy and Planning Group

1. **Policy drafted as a Presidential Decision Directive or National Security Presidential Directive** (October 2007)
2. **Executive Order (November 2007)**
3. **Publish the policy document as an NSTC/CENR/USGEO Publication. (January 2008)**
    1. **Issue a short Executive Order directing agencies to implement the policy**
4. **"U.S. Earth Observations Integration Strategy: A report of the U.S. Group on Earth Observations"** (June 2008)

Strategic Assessment Group

- Tasks and Time horizons
  - Near term:
    - Develop high-level recommendations
    - Identify major Earth observation gaps & priorities
    - Document impact of not filling each major gap or explain benefits gained by society if gap filled
  - Longer term: sustainable process
    - Develop Strategic Portfolio
    - Analytical framework for evaluating gaps and solutions, recommending priorities
    - Develop Performance Measures

Strategic Assessment Group
Societal Benefit Area Team Lead Status

Disaster	USGS (Bill Leith)
Weather	OFCM, NOAA, DOD
Oceans	NOAA (Zdenka Willis)
Climate	NASA, NOAA
Agriculture	USDA (Glenn Bethel)
Human Health	EPA
Ecology	Smithsonian (Len Hirsch)
Water	EPA (John Lyon)
Energy	DOE

Recommendations (DRAFT)

Gravity	Move forward with the GRACE-2 NRC Decadal Survey mission as soon as possible.
Solar Wind and Magnetic Storms	Actively pursue a replacement for the Advanced Composition Explorer (ACE) capability. Modernize the ground-based geomagnetic observatories.
Clouds / Aerosols	Proceed with the NRC Decadal Survey Aerosol-Cloud-Ecosystems (ACE) Mission. Maintain and expand the AERONET ground network.
Vegetation	Move toward an operational Landsat-like satellite system with spatial resolution of at most 20m, a maximum of a 5-day repeat cycle, and additional shortwave infrared spectral bands. Additional higher spatial-resolution imagery will still be required to optimize tactical understanding of field-level conditions. These data could be acquired from commercial sources, or by the federal government, if the commercial sources are not available.
Green House Gases	Launch the Orbiting Carbon Observatory (OCO) in Jan 2009. Proceed with the NRC Decadal Survey Aerosol-Cloud-Ecosystems (ACE) Mission. Ensure the Forest Service annualized forest condition inventories are completed.
Precipitation	Launch the joint US and Japan Global Precipitation Measuring (GPM) mission as soon as possible to ensure continuity of the Tropical Rainfall Measurement Mission (TRMM).
Soil Moisture	Proceed with the NASA Soil Moisture Active-Passive (SMAP) mission in 2012

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GeoHazard and Deformation Monitoring:	Surface Deformation: Move forward with the L-Band InSAR component of the NRC Decadal Survey DESDynI mission. Sustain the geodetic monitoring capabilities of Earthscope. Earthquakes and Tsunami: Implement the Advanced National Seismic System (ANSS), and sustain the capabilities of the Global Seismographic Network (GSN). Expand the number of offshore seismic nodes in Neptune and OOI. Volcanic Activity: Implement the National Volcano Early Warning System (NVEWS). Geodetic reference frame: Sustain the capabilities of the GNSS network.
Water Quantity and Quality	Support Water for America's plan for increasing the number of stations. Consider supplying more opportunities to do the intensive study of large river basins. Expand the monitoring infrastructure and increase the frequency of sampling. Need capability for rapid detection of water quality measures such as chemical contaminants and pathogens, and rapid dissemination of the results.
Sea Level	Extend the Jason series of satellite altimeters through implementation of a Jason-3. Work in tandem with our European and Japanese observing partners to avoid duplication of efforts. Maintain the 3,000 Argo float array. Upgrade 500 Argo floats to deep ocean capability, including CTD casts. Lidar (coming on 11/3)…….

Recommendations (DRAFT)

Fires	Need a follow-on satellite sensor from MODIS for fire monitoring and detection. The VIIRS instrument may not provide this capability. There is also a need for tactical thermal remote sensing to support real-time fire incident management such as manned and unmanned aerial vehicles. These vehicles need to be evaluated for their utility in supporting fire management and fire research.
Air Quality (gases and aerosols)	Proceed with the NRC Decadal Survey mission Geostationary Coastal and Air Pollution Events (GEOCAPE). Continue the important work of the AERONET ground-based network.
Biodiversity	Support and expand the Smithsonian Institution Global Earth Observatories (SIGEO) and National Ecological Observatory Network (NEON), Long Term Ecological Research (LTER), and Experimental Forests and Ranges (EFR) networks. Ensure the continuity of trending data collection programs like the Forest Service's Forest Inventory and Analysis (FIA) Program (which collects in-situ data on more than 125,000 permanent plots nationwide for forest species, structure attributes, wildlife habitats, pollution levels, and lichens which are sensitive to climate) and the Natural Resources Conservation Service's National Resources Inventory (NRI) (which collects in-situ and remote sensing data for natural resources on about 300,000 permanent plots nationwide).

NATIONAL LAND IMAGING PROGRAM

- The Goals of NLIP maintain the continuous record of moderate-resolution land imaging data started in 1972, enable the widest beneficial use of operational land imaging, ensure that U.S. public users can apply land imagery data and information to meet their needs, develop U.S. operational land imaging systems to meet U.S. needs, and augment U.S. data holdings with acquisitions from U.S. and foreign government and commercial sources.

- **Enhancing Earth Mapping:** Obama will continue support for the Landsat Data Continuity Mission,which allows study of the earth's land surfaces and provides valuable data for agricultural, educational, scientific, and government use.