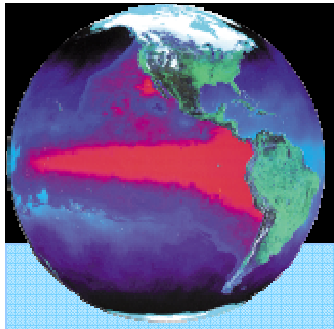
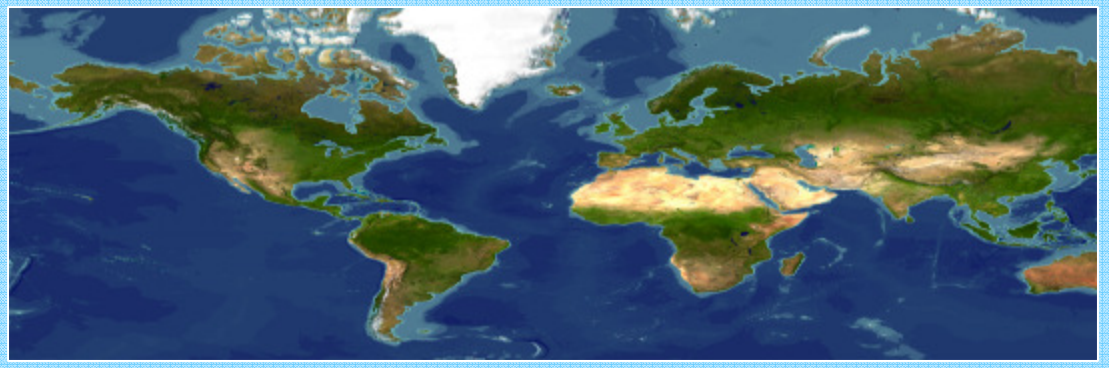


UNITED STATES GROUP ON EARTH OBSERVATIONS

Gregory W. Withee

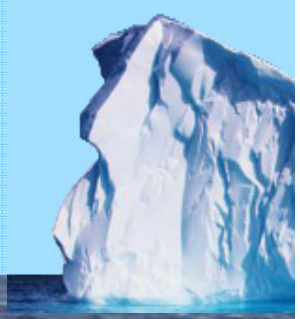
United States Geological Survey
(USGS)



United States Group on Earth Observation (USGEO) update

NRC Board on Research Data and Information

January 29, 2009



Earth Observation Imperative

Some 30% of our economy is tied to the environment

Scientific understanding and ongoing knowledge of the Earth system is fundamental for well informed economic decision making

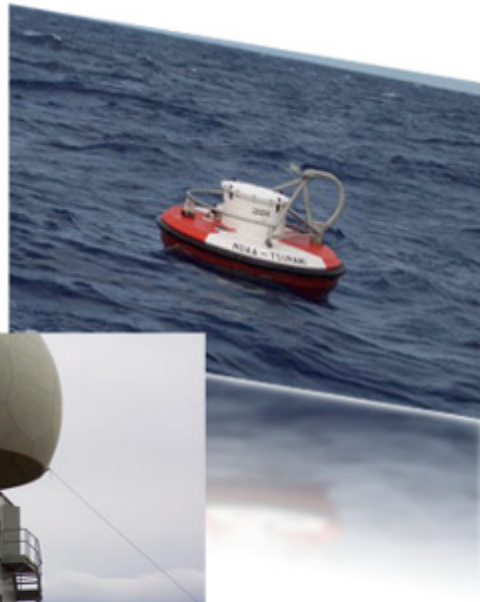
Sustained and timely Earth observations are critical in understanding the Earth and support early warning and more rapid decision making

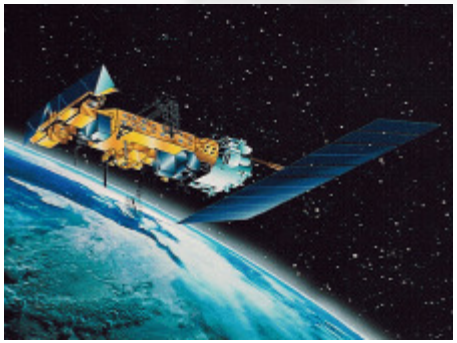
A global approach to Earth observation is required

All countries can benefit from the Global Earth Observation System of Systems

GEOSS

Example GEOSS Observations





GEO and USGEO Overview

Group on Earth Observations (GEO)

- Membership consists of 76 countries and the European Commission, over 50 Participating Organizations and Observers
- Earth Observation Ministerial Summit held every 3 years, GEO Plenary every year and GEO Executive Committee three times per year

U.S. Group on Earth Observations (USGEO)

- Currently15 participating U.S. government agencies; new agencies joining this year
- Standing subcommittee of the National Science and Technology Council Committee on Environment and Natural Resources

Global Earth Observation System of Systems (GEOSS)

- Improves coordination of strategies and observation systems
- Links all platforms: in situ, aircraft, and satellite networks
- Identifies gaps in our global capacity
- Facilitates exchange of data and information
- Improves decision-makers' abilities to address pressing policy issues

International Cooperation Continues

International GEO Meetings

1st Washington, DC, July 2003
34 Members
20 International Organizations

2nd Tokyo, April 2004
47 Members
26 International Organizations

3rd Brussels, February 2005
60 Members
34 International Organizations

4th Cape Town, November 2007
74 Members
52 International Organizations

5th Bucharest, November 2008
76 Members
56 International Organizations

Upcoming

6th Washington, DC, November 2009
76 Members
56 International Organizations

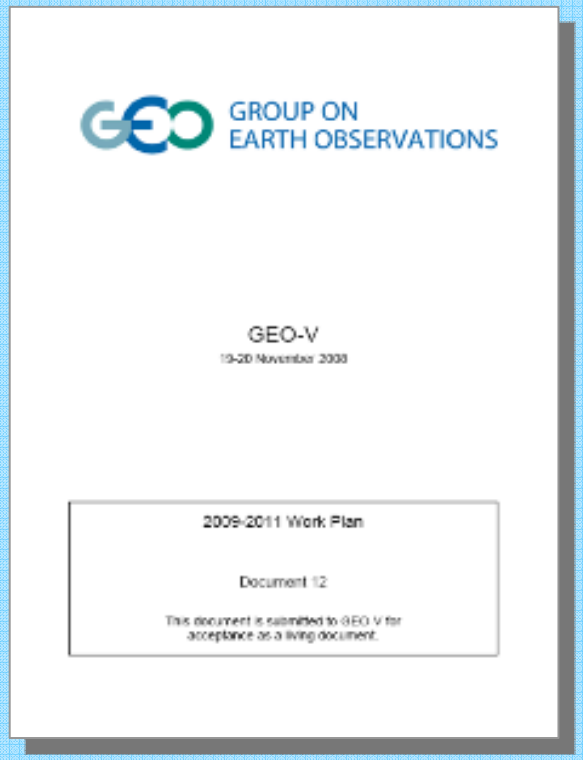
GEOSS Future Directions

- Implement operational tools, e.g., GEOPORTAL, GEONETCast
- Develop GEO Data Policy Principles
- Demonstrate national, regional, global Earth observation programs in support of health, agriculture, water, capacity building (eg SERVIR)
- Begin Global Earth Observing Systems Inventory
- Assess global observation gaps and agree to gap filling strategy
- Promote use of Earth observations in modeling, data assimilation efforts
- Engage academic and industrial partners

GEO Portal and Clearinghouse Underway

- For access to all Earth Observation Data
- To enhance Existing Portals, Systems and Networks
- To Increase Quality and Accessibility of Information
- To provide Decision Support Tools

GEO Strategic Targets 2015 and Work Plan 2009-2011


GROUP ON EARTH OBSERVATIONS

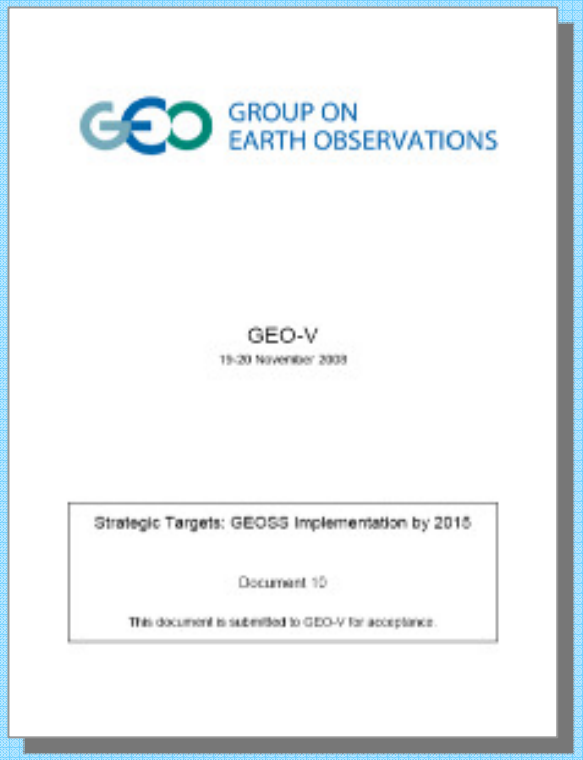
GEO-V

19-20 November 2008

2009-2011 Work Plan

Document 12

This document is submitted to GEO V for acceptance as a living document.


GROUP ON EARTH OBSERVATIONS

GEO-V

19-20 November 2008

Strategic Targets: GEOSS Implementation by 2015

Document 10

This document is submitted to GEO-V for acceptance.

USGEO
UNITED STATES GROUP ON EARTH OBSERVATIONS

USGEO Strategic Plan

http://usgeo.gov

Vision: "Enable a healthy public, economy, and planet through an integrated, comprehensive, and sustained Earth observation system."

Purpose: "to provide a management, planning, and resource allocation strategy for a U.S. Integrated Earth Observation System"

USGEO International Priorities

- Full and open data access
- Disasters
- Drought
- Land applications
- Air quality
- Capacity building services
  - SERVIR
  - GEONETCAST
- Regional efforts
  - GEOSS in the Americas
- Emerging priorities
  - Ecosystems, health

USGEO Priorities

Develop a US Federal Enterprise Data Management Framework

Develop a U.S. strategy for assessing U.S. Earth Observations

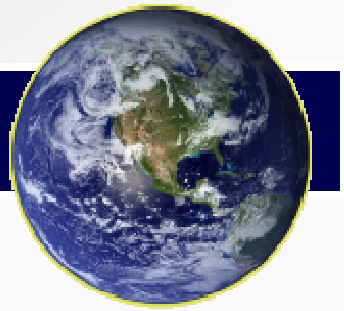
- Build on Decadal Survey but broaden to *in situ*
- Include research to operations transition

Develop a U.S. Earth Observation Policy

Establish relationships with international partners, academia, industry

Work with transition teams to provide continuity for interagency Earth observation efforts

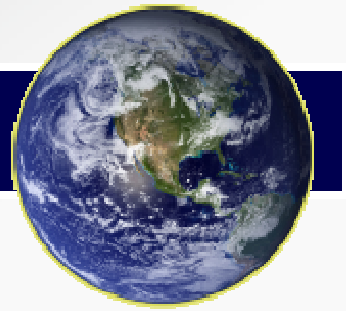
Work with NAS on best way to carry out Earth observations governance-Congressional language



Initial framework

- Provide an integrated picture of national Earth observation priorities
  - Serve to focus near-term decision-making at the highest levels of our government
- Consider measurements from all types of platforms: space-based, land and sea-based, airborne, subsurface, observations collected by humans, etc.
- Address continuity of current measurements as well as the need for new measurements
- Extend across all Agencies and scientific disciplines
- Highlight investments that will maximize total societal benefit

Summary



- GEO is maturing into a viable international organization
  - Target and Work Plan documents
  - GEO Portal and Clearinghouse
- USGEO continues to make interagency progress
  - Strategic assessment efforts in Earth observations
  - Data management plans


November 2009
Washington, DC 7,854 km
GEO VI
Plenary

Questions?

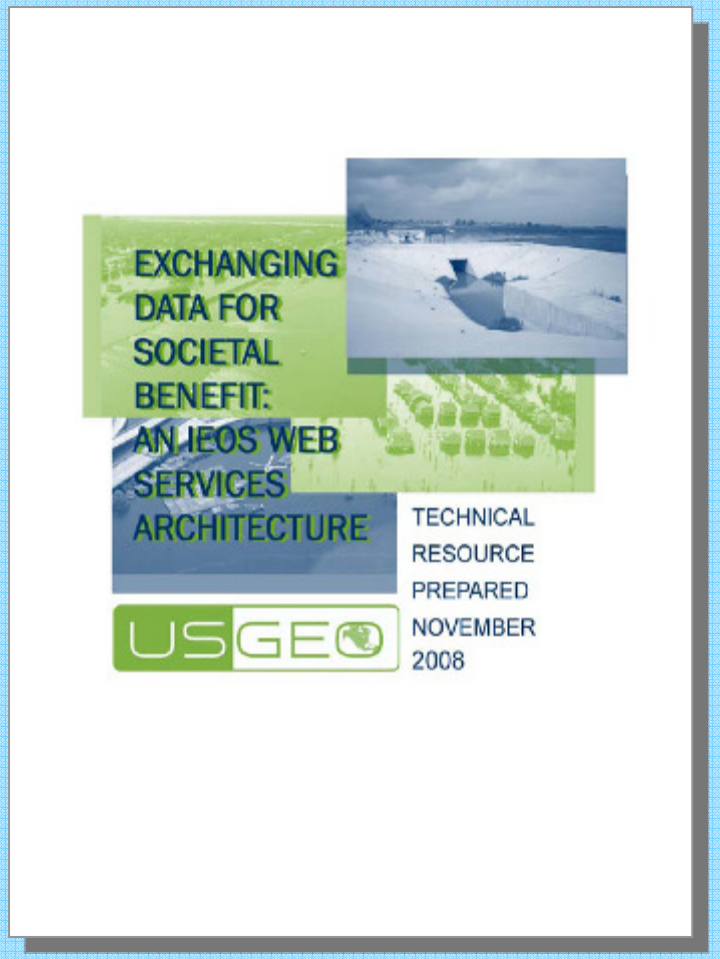
http://earthobservations.org

http://usgeo.gov

Service-Oriented Architecture

Interfacing Data and Decision-Making

- Service-oriented, standards-based technical architecture
- Goal: enable improved, integrated Earth observations data for scientists and decision-makers
- Benefit: enhanced return on our nation's research and development investments



GEOSS
Global Earth Observation System of Systems