

USGS- and LSI-led CEOS Actions in Support of the GEO Work Plan

Bryant Cramer
Associate Director for Geography
U.S. Geological Survey

Enabling Deployment of a GEOSS Architecture

- Category 1 Action: **AR-09-01a_2** - Complete Version 1 of the LSI Constellation Portal for Mid-Resolution Optical LSI Satellite System Information and Enhanced Data Access by March 31.
- Status: On schedule. USGS led overall effort within LSI Constellation and supported with information about Landsat data and access to Landsat data.
- Importance/Impact: High-priority request from user community of CEOS agencies that operate mid-resolution LSI satellite systems. Will facilitate access to information and data by users worldwide.
- Issues: None

Virtual Constellations

- Category 1 Action: **AR-09-02a_26** - Complete the definition of standards (guidelines) for future mid resolution LSI satellite systems to produce information products that benefit several Societal Benefit Areas.
- Status: Progressing. CEOS SEO is conducting this activity with USGS serving in an advisory role. Draft report/final standard expected in September 2009.
- Importance/Impact: Key to our ability to provide optimal mid-resolution optical LSI data in the future; was primary objective of original Constellation concept.
- Issues: None

Virtual Constellations

- Category 2 Action: **AR-09-02a_28** - Enhance timely acquisition of global datasets, including routine acquisition over defined calibration, environmentally sensitive, and other agreed upon sites.
- Status: No recent progress. USGS seeking leadership of other LSI Constellation Agency to move this project forward.
- Importance/Impact: Important as a mechanism to enhance user access to mid-resolution LSI data, particularly in the event of system failures.
- Issues: Currently inactive, lacking LSI agency leadership and support.

Virtual Constellations

- Category 2 Action: **AR-09-02a_29** - Implement common data processing parameters, data formats, and map projections.
- Status: Ongoing. INPE has taken the lead on this project, and has proposed to develop community capabilities to convert data to a common data format (GeoTIFF) and to generate orthorectified image products.
- Importance/Impact: Addresses multiple issues that are important to the land remote sensing user community.
- Issues: Additional LSI member agency support sought.

Management of Energy Sources

- Category 2 Action: **EN-07-01_3** - Enhancing UNEP Solar and Wind Energy Resource Assessment (SWERA) Decision Support System (DSS) with Spaceborne Earth Observations
- Status: On schedule. A Verification and Validation report of DSS activities was submitted to UNEP in December 2008. In addition to continued core emphases to archive and distribute data on solar and wind energy resources, USGS is conducting a Central American small hydropower resource assessment and will deliver a benchmark report in spring 2010.
- Importance/Impact: Provide open access to renewable energy assessments suitable for feasibility and pre-feasibility studies.
- Issues: None

Forest Mapping and Change Monitoring

- Category 2 Action: **US-09-03b_4** - Compile mid-resolution LSI data sets over Southern South America, Southeast Asia, and part of Africa.
- Status: Ongoing. Progress being made through the LSI Constellation Working Group on Regional Data Set Compilation, with support of LSI member agencies.
- Importance/Impact: Valuable as an important data source to many GEO activities in addition to US-09-03b. Also important as a prototype for CEOS agency contributions to the Global Land Survey 2010.
- Issues: None

GEOSS Quality Assurance Strategy (DA-09-01a)

- Category 1 Action: **DA-09-01a_8** - Develop Cal/Val Portal and Post-Launch Test Sites
- Status: On schedule. Developed a consolidated worldwide Cal/Val test site database and an appropriate subset of CEOS endorsed reference standards for Infrared and Visible Optical Sensors
- Importance: Expands the Cal/Val portal content and functionality in support of science needs
- Issues: Obtaining resource support for all CEOS instruments

Conclusion

USGS supports the full range of CEOS activities and initiatives

- CEOS Actions in support of GEO Work Plan
- Work with other LSI member agencies in effort to carry out the “LSI-specific” tasks called for by the CEOS Work Plan
- CEOS SBA Subgroup (Including Agriculture SBA Coordinator)
- CEOS WG on Calibration and Validation
- CEOS WG on Information Systems and Services
- CEOS WG on Education, Training, and Capacity Building
- GCOS Implementation Plan
- “Threads” Analysis