

GIS Working Group Report from the 2009 All Scientist Meeting

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The following items were covered during the GIS Working Group Workshop Time at the 2009 IM Meeting:

1. GIS Standards for LTER Sites

- a. Proposed GIS Recommendations, question on how to move them forward, NISAC? IM Exec?
- b. The proposed recommendations were reviewed and revised. The working group will develop a formal proposal and present to IM Exec and NISAC. There was a lot of discussion during this session and under the governance session on how to proceed.
- c. Recommendations are as followed: September 2009 Edition
 1. All sites provide location data for the site headquarters into SiteDB
 2. All sites provide site boundary polygon to LNO and a boundary of Interest for Site (extending outside the site for DEM's, imagery, etc) (to be determined by the site)
 3. Basic Spatial Information Recommendations for each site:
 - a. Require sites to place "basic spatial information" on-line
 - b. Sites determine accuracy/resolution of data and document in metadata
 - c. document provenance of data
 - d. Study site description information that is required for journal articles
 - e. Include relevant metadata for all spatial data, including all required EML elements such as projection, coordinate system, and datum
 - f. Digital Elevation Model (DEM)
 - g. Imagery (Landsat TM scene)
 - h. Research plot locations (based on GPS) of core research plots
 - i. Roads
 - j. Hydrography
 - k. Structures
 - l. Collect geo-referencing information for every research plot/site/observation location. Include as GIS file format or coordinate pairs (x, y locations).
 4. Spatial data metadata should be searchable with other site databases.
 5. Develop a centralized portal for users to search, display, and access all site spatial data.

2. GIS/Remote Sensing Training needs for LTER Sites
 - a. GIS Data discovery training: how to find data and evaluate it for appropriate use.
 - b. Higher end GIS training: (server and internet mapping applications, training that would work toward GIS Certification for site GIS personnel, modeling, and using the new Flex and Silverlight API's)
 - c. Matching GPS data with remote sensing data (including LiDAR).
 - d. Google Maps training with IM's and using LTERmaps to help sites imbed the technology in their webpages. (working on proposing a workshop on this winter 2010).
 - e. Conduct a survey of web mapping tools and skills at LTER sites.
3. Other GIS issues/projects:
 - a. LTERmaps Phase 1 was demonstrated to the group. LTERmaps is a common interface to data about LTER sites through data in SiteDB along with site locations, site boundaries, gaging stations, and some EcoTrends data. The site uses a Google Map API. The Server subgroup has been working on implementing this technology since January, and are conducting a workshop during the ASM. The current demo site is <http://gce-lter.marsci.uga.edu/public/gis/LTERmaps.html>
 - b. Are their data transfer requirements/standards that we should document as best practices?
 - c. What happened to the spatial data workbench? What is the status of the project (<http://www.lternet.edu/technology/sdw/>)
 - d. The IM portal was discussed and the members of the GIS Working Group were asked to help populate and use the portal. There are several GIS related sections/projects.
 - e. Barbara Nolen agreed to track the Landuse/Landcover efforts that are evolving within the LTER Network.
4. ASM Workshops and GIS Lunch: The several GIS related workshops were discussed and participation encouraged. Several members of the GIS working group met for lunch on Wednesday.

Assignments:

1. Theresa Valentine to begin process of writing white paper proposal to formalize GIS Standards for LTER Sites.
2. Barbara Nolen to coordinate/track with LTER Landuse-Landcover efforts.
3. Need to follow up with IM Exec to forward GIS Training needs
4. LTERmaps team will apply for post-ASM funding,
5. Conduct a survey of LTER Internet mapping sites/skills (LTERmaps team)
6. Theresa Valentine to coordinate with emerging Spatial Analysis Committee (committee is being formed out of workshop
<http://asm.lternet.edu/2009/workgroups/lter-remote-sensing-data-information-and-coordination>)