

A Spatial Data Committee to Support ISSE Research.

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Objectives of the Proposed Effort: The specific objective of this proposal is for the formation, and initial meeting of a proposed LTER Spatial Data and Analysis Committee. The meeting will produce a specific set of prioritized, Network-centric, spatial data needs, acquisition plan and archive strategy within the LTER Network Information System for data to that will advance LTER ISSE research.

Background: The LTER Executive Board recently formed and charged an LTER ad-hoc Remote Sensing Advisory Committee to review LTER remote sensing data use and needs across the LTER Network and in particular the coordination by the LTER Network Office. This group performed a preliminary assessment and came up with a number of recommendations. It was clear that the LTER Network currently has very little Network-wide spatial data to support ISSE research objectives. Spatial data to support ISSE research within the LTER Network are not well documented, have not been recently updated or simply are not easily accessed particularly from outside archive sources. It was also clear that input from scientists across the LTER Network was needed to get a consensus for remote sensing data needed for ISSE research.

A working group at the 2009 LTER All Scientists Meeting (ASM) discussed the recommendations of the Advisory Committee as well points the Committee did not include in their report to the LTER Executive Board¹ and ways to proceed on these recommendations. The ASM working group² discussed types of data and some data needs for the network, but it was evident that a concentrated effort beyond the 2 hour ASM meeting would be needed to achieve this goal. One of the main points of discussion during the meeting was a need for an LTER committee to focus on remote sensing and spatial data issues, particularly at the Network level to address ISSE research.

LTER Spatial data issues were considered within discussions of past LTER technology committees, but were not a primary focus for the group, nor was there a focus on data needs for Network-wide research. Now that the Technology Committee has been disbanded, spatial data needs, particularly for Network-level research, is no longer covered in the current LTER committee structure. A proposed LTER Spatial Data Committee could produce a prioritized list of data needs as well as give the LNO advice on how it could support efforts to acquire necessary data. These recommendations could be documented and implemented through agreement by the LTER Executive Board. This committee would also link with the LTER Information Management GIS working group that currently focuses on the management of site spatial data within the LTER NIS. The working group also discussed the diversity of remote sensing data and tools that are needed for different aspects of LTER research and the needs for complimentary datasets to support cross-site research at specific sites.. For instance, marine remote sensing needs are quite different from terrestrial applications which have historically been a focus for LTER. Snow and ice data are

important for cryosphere studies but again are applicable to a different group of remote sensing scientists. Atmospheric data including cloud types, temperature profiles and similar data would be useful for LTER climatologists but are not usually included in LTER remote sensing activities. The LTER Spatial Data and Analysis Committee would need to include needs for these less generic datasets in the final list of prioritized ISSE data needs.

Funds are requested here to permit LTER scientists with a specific interest in ISSE research related to spatial data to come together and develop a specific prioritized plan to address ISSE data requirements. The initial meeting will address needed membership and leadership to be consistent with LTER bylaws and form a structure which can be accommodated primarily by follow-on VTC and teleconference meetings. Additional meetings of the committee could also be held to take advantage of members attending the triennial ASM meetings or meetings of remote sensing and GIS related professional societies such as ASPRS and even AGU. After the initial meeting of the proposed committee, it is envisioned that subsequent data needs will continue to be reviewed and modified as needed for specific ISSE research.

Ten members from the ASM meeting agreed to be part of the initial committee meeting including M. Gastil-Buhl, Suzanne Sippel, Kyle Cavanaugh, Jamie Hollingsworth, Theresa Valentine, John Schalles, Christine Hladik, Mike Gooseff, John Vande Castle and Andrew Fountain. Additional LTER remote sensing scientists with interests in LTER ISSE research will be invited to attend as well. Members of the LTER Remote Sensing Advisory Committee will be asked to review and suggest specific LTER scientists to serve as initial members of the LTER Spatial Data and Analysis Committee.

Proposed Budget and Justification: We request a total of \$11,000 to permit attendance of the first meeting of the LTER Spatial Data and Analysis Committee by at least 15 LTER remote sensing scientists at Portland State or Oregon State University for a two day meeting in March or April of 2010. The Oregon location will reduce meeting costs for local attendees from MCM and AND. Individual travel costs will be capped at a maximum of \$1,000 per attendee with approximately \$500 for meeting room, breaks and other local costs based on recent LTER meetings at PSU.

References:

1. LTER Ad-hoc Remote Sensing Advisory Committee Summary and Recommendations to the LTER Executive Committee Report:
http://asm.lternet.edu/sites/asm.lternet.edu/files/workinggroups/docs/LTER%20Remote%20Sensing%20Data%20Information%20and%20Coordination/RScommitteeReport_12-5-08.pdf
2. Final Report for the 2009 LTER All Scientists Meeting by the ASM Spatial Data Working Group: http://asm.lternet.edu/sites/asm.lternet.edu/files/working_groups/31/report/ASM%20Spatial%20Data%20Meeting%20Report_v3.pdf.pdf