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| Working Group | Organizer | Products |
| Soil organic matter dynamics: a cross-ecosystem approach | Kate Lajtha |  |
| Working Group Panel : Integration at the network level | John Vande Castle |  |
| Arts/Humanities at LTER Sites | Frederick Swanson |  |
| LTER Remote Sensing Data Information and Coordination | John Vande Castle |  |
| Long Term Monitoring and Experiments in Freshwater Aquatic Ecosystems | Walter Dodds |  |
| Coordinating Phenology Monitoring and Research Across the LTER Network | Mark Losleben |  |
| Hydrologic effects of ecosystem response to climate change and land use change | Julia Jones |  |
| ARC LTER renewal planning | Gaius Shaver | Successful renewal proposal |
| Communicating your research visually to the wired world | Theresa Valentine |  |
| Sharing SLTER Experiences: LTER Science in Education | Mary Leigh |  |
| Key Elements of Site-Based Long-Term Information Management: A Curriculum for Educating Ecological Information Managers | Kristin Vanderbilt |  |
| The other half of the spiral: determining the fate of biologically assimilated N in stream and river systems | Jonathan O'Brien |  |
| Scenarios of Future Landscape Change | Jonathan Thompson |  |
| Hydrochemical response of high elevation watersheds to climate change | John Campbell |  |
| Maps and Locals (MALS) | Robert Pontius | Direct publications include:  *Aldwaik, Safaa Zakaria*, Jeffrey A Onsted, and Robert Gilmore Pontius Jr. 2015. Behavior-based aggregation of land categories for temporal change analysis. International Journal of Applied Earth Observation and Geoinformation 35: 229-238.  *Aldwaik, Safaa Zakaria* and Robert Gilmore Pontius Jr. 2013. Map errors that could account for deviations from a uniform intensity of land change. International Journal of Geographical Information Science 27(9): 1717-1739.  *Aldwaik, Safaa Zakaria* and Robert Gilmore Pontius Jr. 2012. Intensity analysis to unify measurements of size and stationarity of land changes by interval, category, and transition. Landscape and Urban Planning 106: 103-114.  Kofinas, Gary P., Chapin III, F. Stuart, BurnSilver, Shauna, Schmidt, Jennifer I., Fresco, Nancy L., Kielland, Knut, Martin, Stephanie, Springsteen, Anna, and Rupp, T. Scott (2010). Resilience of Athabascan subsistence systems to interior Alaska’s changing climate. Canadian Journal of Forest Research 40:1347-1359  Kofinas, Gary, Douglas Clark, Grete K. Hovelsrud, Lillian Alessa, Helene Amundsen, Matthew Berman, Fikret Berkes, F. Stuart Chapin III, Bruce Forbes, James Ford, Craig Gerlach, and Julia Olsen. 2013. Chapter 4: Adaptive and Transformative Capacity, in Arctic Resilience interim Report to the Arctic Council. pages 71-91.  Pockrandt, Bryanna; John Harrington and Shawn Hutchinson. 2013. "Maps and Locals: Using Landsat Image Analysis to Document Eastern Red Cedar Expansion in the Northern Flint Hills," J. Lee and D. L. Cerney, 2013 36th Applied Geography. Annapolis, MD:  *Runfola, Daniel* and Robert Gilmore Pontius Jr. 2013. Measuring the Temporal Instability of Land Change using the Flow matrix. International Journal of Geographical Information Science 27(9): 1696-1716.  The italics above denote a doctoral student. Three of the publications above derived from the doctoral dissertation of Safaa Aldwaik, who was funded by MALS. She made software that is now available for free at:  https://sites.google.com/site/intensityanalysis/  Also, we created three follow-on funded workshops in Alaska 2010, Oregon 2011, and Colorado 2012.  The MALS team won the following grants.  2009-2010. $25,996 = Pontius’ portion. National Science Foundation, LTER Social-Ecological Systems Supplement. “Maps and Locals (MALS): A Cross-Site LTER Comparative Study of Land-Cover and Land-Use Change with Spatial Analysis and Local Ecological Knowledge” Award # DEB-0620579.  2009-2010. $11,100 = team total. $2,000 = Pontius’ portion. National Science Foundation, Long Term Ecological Research (LTER) Social-Ecological Systems Supplement. “Synthesis papers and research proposal from the Maps and Locals (MALS) project”.  We also wrote a grant proposal during 2011-2012 that was not funded by NSF, as described below:  $1,499,725 = team total. National Science Foundation. CNH: Maps and Locals: Integrating Local Ecological Knowledge with Land Change Science in a Comparative Study of Cross-Scale Social-Ecological System Dynamics and Human Adaptation. 1212247. |
| Applications of LiDAR to Ecological Research | Theresa Valentine |  |
| Sensor network technologies: Recent innovations and tools for management and analysis of sensor data | Donald Henshaw |  |
| Teaching Ecological Complexity Through Field Science Inquiry: Resources for Teacher Workshop Providers and Students | Stephanie Bestelmeyer | http://ecoplexity.org  Description - Ecoplexity is a project to train high school science teachers and their students to conduct authentic field research and use qualitative modeling to broader their understanding of complexity, diversity, and ecology. |
| The Disappearing Cryosphere: Processes; causes and implications | Hugh Ducklow |  |
| Antarctic Field Season Planning and Project Synthesis | Hugh Ducklow |  |
| Microbial diversity and processes comparisons among LTER sites | D Lodge |  |
| Synthesis through Data Discovery and Use: Past, Present, and Future | John Porter |  |
| Understanding state change via long-term datasets | Brandon Bestelmeyer |  |
| Understanding patterns in primary production and species richness via long-term datasets | Debra Peters |  |
| Disturbance ecology at LTER sites: efforts at network-wide synthesis of long-term data | Debra Peters |  |
| EcoTrends Biogeochemistry Project | Peter Groffman | Peters, D.P.C, C.M. Laney, A.E. Lugo, S.L.Collins, C.T. Driscoll, P.M. Groffman, J.M. Grove, A.K. Knapp, T.K. Kratz, M.D. Ohman, R.B.Waide and J. Yao. 2011. Long-term trends in ecological systems: a basis for understanding responses to global change. USDA Agricultural Research Service Publication No. XX. Washington, D.C. |
| Quantifying carbon and nutrient transformations in aquatic ecosystems at regional to continental scales in response to environmental change | Wilfred Wollheim |  |
| Socio-Ecological Consequences of Continental-Scale Climate Change | John Blair |  |
| Time, Space & Causality of Trans-Atlantic Mountain Landscapes: how to compare interdisciplinary sustainable landscapes and research programs in Southern Appalachia and North-facing Western Pyrenees (France) | Taehee Hwang |  |
| Microbial diversity and ecosystem dynamics across sites - Comparisons, contrasts, and bioinformatics needs | James Hollibaugh |  |
| Development of a hydrochemical database | John Melack |  |
| Fungi in Ecosystems | John Hobbie |  |
| The Nutrient Network: A Global Research Cooperative | Melinda Smith |  |
| CoastLines NSF ITEST Project: A model for integrating GIS-based inquiry learning into LTER educational outreach | Kaitlin McLean |  |
| AIBS - Science Policy: How to Inform, Influence, and Communicate with Policymakers | Jacob McDonald |  |
| A Cross-site Comparative Analysis of Land Fragmentation | Milan Shresta |  |
| Microbial Inventory Research Across Diverse Aquatic LTERs: The MIRADA Cross-site LTER Project | Linda Amaral-Zettler |  |
| ILTER in Northern Patagonia: Developing a strategy for coordinating plans for Argentina and Chile | Barbara Bond |  |
| Virtual Field Trips for LTER Sites | Laurence Lin |  |
| Virtual Learning Commons for LTER IM: Vision and Web 2.0 Support | Kristin Vanderbilt |  |
| Large forest dynamics plots across the LTER and NEON network. | Jill Thompson |  |
| LTER Education Representatives Meeting | Carol Landis |  |
| LTER Graduate Student Symposium | Amber Hardison |  |
| Recent Advances and Opportunities for Urban Long Term Ecological Research: Theory and Methods | Morgan Grove | A successful NSF MacroBiology proposal. Peter Groffman was the lead for the proposal, Collaborative research: Ecological homogenization of urban America. 8/1/2011-8/1/2014. $2,405,752. |
| A unified framework to quantify biogeochemical complexity of large-scale ecological systems | Tiffany Troxler |  |
| Blog Posts and Tweets: Potential Uses of Web-Based and Social Networking Media for Communicating LTER Science and Conducting Citizen Science | Marcia Nation |  |
| Influence of Sea Level Rise on Coastal Wetland Ecosystems | Evelyn Gaiser | - Distributed Graduate Seminar led by Steve Pennings on Sea Level Rise and Coastal Geomorphology  - A funded proposal to the Coastal SEES program at NSF |
| ILTER Synthesis Workshop: Interactions among ecosystem services, ecosystem dynamics, and human outcomes and behavior | Patrick Bougeron |  |
| Reconstructing ecosystem structure and function: merging paleoecology and ecosystem ecology | Nick Colvard |  |
| ASM Student Poster Judges | John Vande Castle |  |
| Implementing the ILTER Science Agenda: Defining International and Regional Science Initiatives | Patrick Bourgeron |  |
| Next phases of development for Ecological Metadata Language (EML) | Margaret O'Brien |  |
| How Is Urbanization Making America Socially and Ecologically Homogeneous? | Emily Moran |  |
| Approaches for monitoring seasonal and long term changes in dissolved organic material composition in ecosystems | Christina Veber |  |
| Schoolyard Study of Biodiversity Incorporating Site Specific Biodiversity Issues and LTER Sampling Protocols | Brook Wilke |  |
| Approaches to Information Management for Schoolyard LTER data | Steven McGee |  |
| Using social network sites and visualizations to lower the barriers to cross-site and socio-ecological research in urban systems | Bethany Cutts |  |
| Invertebrate impacts on ecosystem services under climate change | Chelse Prather | Prather, C.M., S.L. Pelini, A. Laws, E. Rivest, M. Woltz, C.P. Bloch, I. Del Toro, C. Ho, J. Kominoski, T.A. Newbold, S. Parsons, and A. Joern. 2013. Invertebrates, ecosystem services and climate change. Biological Reviews 88(2):327-348. |
| Agriculture, forestry and emissions trading: is there a role for the LTER network? | Neville Millar |  |
| Identifying the benefits and barriers to graduate student cross-site socio-ecological research in urban systems | Elizabeth Cook | Record, S., K. Schwarz, E.M. Cook, G. Losada. 2010. The Collaboration Conundrum: Making interdisciplinary research work.  LTER Network Newsletter, Spring 2010, 23(1): 15.  Record, S., P. F. B. Ferguson, E. Benveniste, R. A. Graves, V. W. Pfeiffer, M. Romolini, C. E. Yorke, and B. Beardmore. 2016. Graduate students navigating social-ecological research: insights from the Long-Term Ecological Research Network. Ecology and Society 21(1):7. <http://dx.doi.org/10.5751/ES-08111-210107>  Romolini, M., S. Record, R. Garvoille, Y. Marusenko, and R. Stuart Geiger. 2013. The next generation of scientists: examining the experiences of graduate students in network-level social-ecological science. Ecology and Society 18(3): 42. http://dx.doi.org/10.5751/ES-05606-180342 |
| Publishing the Grasslands Data Integration Database for access to extensive and integrated cross-site ANPP data | Nicole Kaplan |  |
| EcoTrends: past, present, and future - an opportunity to promote synthetic analyses | Christine Laney |  |
| Integrating spatial and temporal data across the LTER network | Christine Laney |  |
| LTER Information Management Meeting | Donald Henshaw |  |
| Culturally relevant ecology learning progressions and environmental literacy | John Moore |  |
| Building an LTER Taxonomic Database to Support Synthetic Research | Christine Laney |  |
| The Schoolyard Children's Book Series | Beth Simmons2 |  |
| Stable Isotopes: new technologies novel elements and approaches | Steve Macko |  |
| Pathways to Environmental Literacy: The Intersection of Science, Equity, Place, and Citizenship | Kirby Webster |  |
| Dominant plant species loss: a synthesis of community and ecosystem consequences | Melinda Smith |  |
| Sources of Social-Ecological Resilience: The LTER Network as a Testbed to Explore General Patterns of Adjustment to Rapid Changes | F.S. Chapin |  |
| Broadening Undergraduate Participation in Integrative LTER Research | Daniel Green |  |
| Using EcoTrends to synthesize animal data from the LTER Network | Michael Willig |  |
| Cross-Site Working Group on Coupled Human-Natural Systems | Craig Harris |  |
| Assessing the IM Training Video Series: Viewer Feedback and Panel Discussion | Kristin Vanderbilt |  |
| Metrology for aquatic urban systems: comparison of the French and US approach | Morgan Grove |  |
| LTER Executive Board (closed meeting - 1pm - 5pm) | Robert Waide |  |
| Integrating Science, Society, and Education for Sustainability | Nancy Grimm |  |
| A Cross-site Comparative Analysis of Land Fragmentation | Milan Shresta |  |
| SPAN – A Network Providing Sensor-to-Database End-to-End Services | Tamara Mittman |  |