

Request for Information (RFI) – USDA Long-Term Agro-ecosystem Research (LTAR) Network – 12/01/12

The Agricultural Research Service (ARS) requests information from research groups that are interested in becoming formally affiliated with the USDA Long-Term Agro-ecosystem Research ([LTAR](#)) Network. This request is limited to those entities that already manage long-term research watersheds, experimental ranges, or other similar sites. **Responses are due no later than April 1st, 2013. Please forward your responses to Colette Wood at Colette.wood@ars.usda.gov.** The USDA will formally announce the names of the sites to be added to the network by October 1st, 2013. The information provided in response to this RFI will allow the ARS to evaluate candidate sites for inclusion as part of the LTAR Network.

Criteria for Evaluating a Site's Potential for LTAR Candidacy

Information provided should address each of the following criteria:

- 1) **Productivity**—The track record of the current research team and the level of existing process-based understanding (this information will be used to assess the overall strength of the research team and its leadership);
- 2) **Infrastructure Capacity**—The presence of an instrumented watershed or other long-term research facility (e.g. experimental range) of sufficient size to capture landscape-scale processes and heterogeneity; to integrate across small plot, watershed, and landscape scales; the availability of land to support crop and/or livestock production; and the availability of critical infrastructure (e.g., field and analytical laboratory facilities; storage capacity; IT support; housing for visiting researchers);
- 3) **Data Richness**—The number of years, breadth, depth, and overall quality of the existing data record;
- 4) **Data Availability (Accessibility)**—The state of organization and accessibility of existing data sets (e.g. data in STEWARDS or some other publicly-accessible database);
- 5) **Geographic Coverage at Various Scales**—How does the site fit within the overall network, and/or complement other potential network sites with regards to the 10 major US [agro-ecosystems](#), the 21 [HUC2](#) watersheds within the lower 48 US states, the 20 [NEON](#) Domains, etc.? LTAR sites should complement both existing networks and other LTAR sites by filling geographic gaps. Where there is geographic overlap, each site should provide unique data (e.g. long-term datasets) or data collection opportunities not possible at other sites (this information will be used to assess network overlap and/or redundancies now as well as existing gaps to be filled later); LTAR sites should be representative of their region, however defined—i.e., LTAR sites would be focal points for research in that region;
- 6) **Partnerships**—The strength of existing external partnerships with producers, other stakeholders, local universities, federal agencies, etc., including the potential for education and outreach (responses should include descriptions of the various activities--research; education; outreach—as well as their strengths and weaknesses);
- 7) **Institutional Commitment**—Is there a multi-decadal institutional commitment to support the continued operation of the site (a letter of support from the appropriate ARS Area Office or institutional leadership is strongly recommended)? How well-integrated are the existing projects and/or research groups currently at the site? Are scientists and support staff committed to this effort?

Additional Factors That Could Enhance the Case for a Specific Site

- Existing water/energy balance and/or carbon flux/sequestration research (e.g., Ameriflux; GRACEnet; NEON), representing a capacity to integrate across soil, water, and air processes.
- A formal association with other long-term research networks (e.g., Ameriflux; LTER; NEON).

Responsibilities of LTAR Network Sites

- Sites must be willing to collect a core set of common measurements that will be compatible across sites, meet established quality standards, and be maintained in a mutually agreed-upon, publicly-accessible format (i.e., site operators must agree to the integration aspects of the LTAR Network, including quality-control procedures, data collection, and presentation requirements).
- Sites must agree to participate in an annual LTAR Network meeting/workshop to share research progress, discuss methodological and operational issues, and plan future network activities and initiatives.
- Sites must be willing to undergo a formal review process every 5 years to assess research progress and performance and continued satisfaction of network criteria as established above.
- Sites must be willing to encourage and welcome research partners from both ARS locations and outside ARS, including other governmental agencies, universities, and the private sector. Scientists located at LTAR sites and potential partners should propose LTAR Network-based research that is fully consistent with the mission of the LTAR Network. Such partnerships are to demonstrate full collaboration, including conceptualizing, designing, conducting, and publishing research conducted as part of the LTAR effort. Researchers at these sites must be willing to work with potential partners to secure funds that are adequate to cover the costs of proposed collaborative long-term research.

Additional Background (From *Robertson et al. 2008. BioScience 58(7):640-645*)

“The critical mass needed to establish an inaugural LTAR program requires:

1. A capacity for field-scale experimentation at the site level;
2. Stakeholder involvement that exploits existing data sets and regional infrastructure.

The key element for networking is common measurements at multiple sites that provide:

- The foundation for scaling up to regional and national levels;
- The basis for cross-site syntheses, allowing theories to be developed across gradients of climate change, management intensity, etc.

See also pages 50-53 of *The Agricultural Research Service Water Availability & Watershed Management National Program Action Plan 2011-2015*: [link](#).

Format

The body of the RFI response should not exceed 15 pages of single-spaced text and/or graphics (1” margins; 11 point Times New Roman font or equivalent in terms of characters per inch), excluding citations.