

### Long-Term Agroecosystem Research (LTAR)

Part of a network effort to develop innovative approaches to sustain agricultural productivity while reducing environmental impacts

- [Raramuri Criollo](#) cattle and *sensor networks* as new tools for livestock production in arid and variable environments
- Research to improve *grassland restoration* in the Southwest
- [Big data](#) approaches to solve a wide range of regional agricultural problems, including disease outbreaks



### Long-Term Ecological Research (LTER)

Part of network efforts to understand and forecast long-term environmental change at large spatial scales

- Over [100 years of data](#) and publications on climate, vegetation, and biodiversity change
- One of 28 [LTER](#) sites supporting researchers and students across the globe
- One of 81 [National Ecological Observatory Network](#) sites

### Ecological Site Description program (ESD)

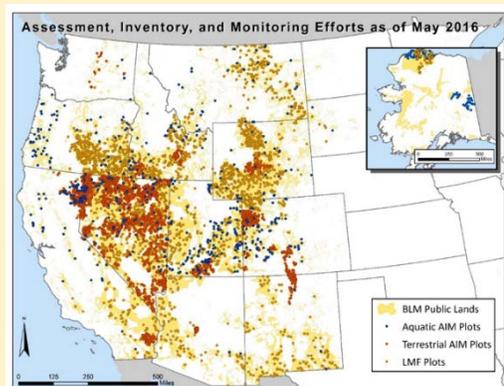
Collaboration with USDA Natural Resources Conservation Service to provide science-based information for conserving and managing different kinds of land

- New database to improve quality, accessibility, and utility of [ESD information](#) nationwide

### Land assessment, inventory, and monitoring systems

Methods and databases for the public, agencies, and international programs

- [Rangeland methods](#) adopted by Natural Resources Conservation Service and Bureau of Land Management (BLM)
- Development of [National Wind Erosion Network](#) to assess effects of land use on air quality
- Mobile delivery of site-specific management options via [Land Potential Knowledge System \(LandPKS\)](#)



### Southwest Climate Hub

One of 10 national hubs that develop and deliver science-based, region-specific information to enable climate-informed decision making

- [Synthesis, tools, and analyses](#) to support agricultural decisions
- Direct engagement with resource managers and tribal communities in AZ, CA, NM, NV, UT, HI, and US Pacific Islands

### Science Education

Investment in the next generation of scientists and science-literate citizens

- Collaboration with [Asombro Institute for Science Education](#) on >17,000 K-12 student contacts per year
- Research and employment opportunities for NMSU students