The National Ecological Observatory Network: Overview and Strategies for Managing Thousands of Simultaneous Measurements Across the Continent

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The National Ecological Observatory Network (NEON) is responsible for making observations of terrestrial, aquatic, and organismal ecology in 20 different eco-climatic domains across the continent. NEON will provide localized data on key physical, climate, and chemical forcing, as well as their associated biotic responses, in an effort to inform climate change, land-use change, invasive species, and other impact studies. The sheer volume of data is expected to exceed hundreds of Terabytes per year and will present challenges for data management on an unprecedented scale. This poster will provide an overview of NEON as a whole, while specifically focusing on how to develop and implement a standardized ecological observatory that must accommodate such a large volume of data without sacrificing quality. Highlights will include preliminary first results hosted on the NEON data portal and look toward first article science results.

Figure 1. The National Ecological Observatory Network