

## **COREO Positions and Recommendations to the NEON National Design Team and to NSF November 22, 2005**

Representatives of the Consortium of Regional Ecological Observatories (COREO) met at the W.K. Kellogg Biological Station November 21-22, 2005, and passed the following position statements and recommendations as unanimously-approved motions. Full meeting minutes are posted at [www.neoncoreo.org](http://www.neoncoreo.org).

### **1. Domain Boundary Position and Recommendations**

COREO supports the overall approach of objectively identifying domain boundaries as a mechanism for ensuring national coverage.

The proposed 20 domains correspond in large part to previous, self-organized working regional groups and reflect the heterogeneity in major national climatic patterns. COREO groups are reorganizing to reflect the domain boundaries and will be considering name changes to reflect those new boundaries. Some working groups were impacted more than others during the alignment with the new domain boundaries and may require additional resources to maintain and/or regain previously developed momentum.

COREO supports the domain boundaries with the understanding that other variables could be used to adjust those boundaries and that minor refinement of some boundaries is justified. A consistent and objective approach for addressing these issues is under development. We recognize that boundaries are not firm and coordination between domains should be promoted.

It would be helpful to the COREO community to have more information on (1) how sensitive the domain boundaries were to specific input variables; and (2) how the raster output was transformed to vector boundaries. COREO would also like to have the 20-domain raster results posted on the NEON web site.

COREO remains committed to assisting with and promoting other regional- to national-scale efforts in environmental science.

### **2. Site Selection Criteria Position and Recommendations**

COREO accepts the proposed site types within districts (urban, managed and wild). It would be helpful to expand and clarify the acceptable ranges of each of these, which should be broadly defined in terms of domain-specific patterns and underlying processes.

COREO believes that a district size of approximately 200-km diameter can be an effective implementation strategy for some domains. However, district size and placement should be adequate to retain the urban-wildland endpoints for the lifespan of NEON. District sizes may also need to be scaled consistent with the current land-use patterns within a domain. In some domains, a 200-km size will not allow enough buffer among sites to insure that the wildland site persists. We also note that for some domains, placing a size limit might necessitate using a steep elevational gradient, compromising “the control of climatic variability.” In some domains, historical land-use patterns have precluded the independence of land use and climate. For example, settlements occur along waterways and valleys while wildlands tend to occur in steep, high elevation areas.

Additionally, while we realize that there are logistic and monetary constraints, we are concerned that a 1-km<sup>2</sup> area is not adequately reflect the scale at which regional processes are affecting continental scale patterns. Sites should be scaled to the predominant land-use patterns within the domain and adequate in size to encompass terrestrial-aquatic-atmosphere fluxes.

### **C. Site Selection Process Position and Recommendations**

COREO supports a selection process whereby NSF solicits prospecti from consortia of institutions, organizations, and agencies within domains. NSF should encourage consortia of the broadest possible array with respect to institutional diversity.

COREO suggests that NSF encourage a single prospectus from each domain and allow individuals and institutions to be collaborators in multiple proposed districts and prospecti.

COREO strongly supports the standard NSF peer-review process for prospectus review and district selection. This process should emphasize selection based on the potential for a district to make a substantial scientific contribution to the NEON science and education mission.

Review criteria should also encourage the inclusion of research reserves for future NEON expansion, experiments, monitoring, and education.

Additionally, NSF should encourage consideration of synergies that leverage existing resources and minimize redundant research and education investments.