

**Karen Milek's thoughts for the  
SAGES-NABO Meeting  
March 26th**

**What are the three most important issues we need to understand about human-environment interactions?**

- 1) **The relationships between human ecodynamics and the social, political, and ideological changes occurring in a particular region.** Even though we all acknowledge the importance of social conditions and historical contingency on human behaviours and economic strategies (e.g. the influence of ideologies, values, mechanisms for social learning, particular social networks, and the powers of leaders or conservative institutions), and even though the Resilience Alliance places an emphasis on the dynamics of **Social-Ecological Systems**, the greatest challenge to environmental archaeologists remains the integration of environmental data with an understanding of social processes and the feedbacks of interlinked social and ecological systems across different spatial and temporal scales (Folke 2006).
- 2) **More complete time coverage in our studies of human-environment relationships.** The detailed datasets for the Viking and Medieval Periods in the North Atlantic Region are not matched by post-Medieval or Early Modern datasets (of which there are almost none), making it impossible in many regions to understand human-environment interactions through a full millennium – including the coldest, most heavily populated, and potentially most stressful periods of human history in the region. We need to be more thorough in our data gathering, and include more sites dating from AD 1400-1950 if we are really to argue that our research covers long time-scales and is relevant to modern environmental challenges.
- 3) **Better chronological resolution and better linkage between the dates of our environmental data (especially climate data) and our archaeological data.** While regional soils and vegetation data are sometimes very successfully integrated into an understanding of site-specific ecodynamics, sometimes the data remain too generalised (both spatially and chronologically) to be relevant to the decisions and strategies being observed on sites, which could potentially vary from year to year or decade to decade. Climate data in particular would be most useful if was more often localised in time and space by being gathered from contexts on or near the site (e.g. O isotopes of mammalian tooth enamel; chironomids in local bogs, lakes, ponds). Have we really come to grips with the ecological effects of the North Atlantic oscillation and the Arctic oscillation, such as short-term changes to growing season, fish stocks, etc., and therefore human ecodynamics seen on a site scale (Dawson et al 2007)?

**What are the biggest obstacles to developing inter-regional comparisons and syntheses?  
How can we overcome these obstacles?**

- There is a very uneven distribution of sites and regions that have been investigated at similar levels of detail. For example, the most intensive research activity in Iceland continues to focus on north Iceland (Skagafjörður, Eyjafjörður, Mývatnsveit) to the exclusion of other regions. We can't develop inter-regional comparisons if we don't have good detailed studies of several different regions, with similar questions and data from all of them.
- The sorts of questions asked and data generated in each region varies a lot, and is dependent on the individual specialists who happen to have funding/contacts/interests in that region. Although we cannot be everywhere at once during a particular field season (though Tom McGovern certainly does his best!), there could be much more discussion and consultation between research groups, to ensure that comparable data is gathered.

**References**

Dawson, A.G., Hickey, K., Mayewski, P.A., and Nesje, A. (2007) Greenland (GISP2) ice core and historical indicators of complex North Atlantic climate changes during the fourteenth century. *The Holocene* 17(4): 425-432.

Folke, C. (2006) Resilience: the emergence of a perspective for social-ecological systems of analysis. *Global Environmental Change* 16: 253-267.