Dynamic Interactions among People, Livestock, and Savanna Ecosystems under Climate Change: *The East Africa Climate-Land Interaction Project in Savanna Ecosystems*

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Please join us for refreshments at 3:00pm, Pfendler Gallery

ABSTRACT Land use transformation has accelerated in the savannah ecosystem of East Africa during recent decades, driven by increasing population, changing economy, changing governmental policy on land tenure, overseas investment, developing infrastructure, and the introduction and development of irrigated agriculture. These factors are likely to be influenced by climatic factors in pressuring people to transition their livelihoods among various options that include pastoralism, subsistence farming, cash farming, or employment at corporate plantations. All of the resulting land use/land cover transformations have the potential to alter regional climate. Much of this effect may be local, with surface-atmosphere fluxes of water and energy being modified, resulting in small-scale alterations in air circulation, temperature, and precipitation. A large, multi-institutional research team is attempting to understand the causes of these changes in the savanna, particularly the role of climate change. The East Africa Climate-Land Interaction Project in Savanna Ecosystems (EACLIPSE) is utilizing a comprehensive conceptual and methodological approach to modeling and statistical analysis of climate, land management, and ecosystem dynamics at two scales; the local scale where human decisions are made and ecosystem dynamics are most evident, and the regional scale where the cumulative effect of human activity and ecosystem change may significantly impact climate. This presentation will give an overview of the research questions, hypotheses and methodology of EACLIPSE as well as some initial research findings.