

---

---

# Environmental Risk, Human-Animal Health Systems, and the Socioecology of Maternal and Child Health in African Pastoral Communities

---

ALYSON YOUNG

My research in 2013 has been devoted to a diverse set of projects centered on environmental risk, human-animal health systems, and maternal and child health African pastoral populations. Essential to this research has been a focus on how responses to environmental uncertainty shape caregiver-infant interactions and child health among Datoga agropastoralists in northern Tanzania and the mechanisms that link pastoral livelihood strategies to patterns of human and animal health in eastern and western Africa.

Ongoing research on perceptions of environmental risk, human-livestock disease interactions and water quality among Datoga in Tanzania (initially funded by a UF Humanities Enhancement Grant) recently culminated in a paper entitled, “Global Convergence in Ethnotheories of Water and Disease” that appeared in *Global Public Health*. The paper uses data from nine different sites across the world, including Tanzania, to examine cross-cultural perceptions of waterborne infection and their relation to public health messaging.

I also presented a paper at the American Anthropology Association annual

meeting entitled, “Maternal Perceptions of Breastmilk Quality, Breastfeeding Decisions, and Child Growth Among Agropastoral Datoga.” This paper uses longitudinal data collected among mother-infant dyads in Tanzania to explore the effect that maternal perceptions of breastmilk quality have on patterns of mother-infant interaction, breastfeeding decisions, and child growth. I’m currently in the process of revising the paper for submission to the *American Journal of Human Biology*.

The LCC-CRSP series report, “The Nexus of Gender and Nutrition: A Literature Review” came out in early 2013 as an outcome of collaborations with Sarah McKune, Sandra Russo, and a LCC-CRSP workshop on livestock sustainability and climate change held in Senegal in 2012. The report discusses the interaction between climate change, gender and nutritional outcomes among African pastoral communities. The report was produced with significant help from Therese D’Auria Ryley, a graduate student in anthropology and current FLAS fellow in Wolof.

Finally, I’m involved in a proposed interdisciplinary project in northern Senegal that examines the interaction between seasonal environmental fluctuation, parasitic infection, and human and animal health patterns in five rural communities along the Senegal River. The proposed project brings together a team of researchers from the College of Liberal Arts and Sciences (Alyson Young), College of Agriculture (Adegabola Adegosan), and the College of Veterinary Medicine (Jorge Hernandez, Sarah Reuss, and Heather Walden) as well as members of the Senegalese Ministry of Agriculture and Ministry of Health. Senegal, like many places in Africa, has suffered significantly and disproportionately from the local effects of global climate change. In fact, the term “desertification” took hold in the academic literature as a result of the drought in

Senegal between 1968-1972. Sahelian Africa is expected to experience a 4°C average rise in temperature and 20% decline in rainfall over the next 100 years. The impacts of these changes are most likely to affect the health and nutrition of women and children in poor households, particularly in areas of northern Senegal where women take primary care of livestock and often ensure up to 80% of agricultural production.

The goal of our proposed project is to develop and consolidate a long-term partnership between UF, the Ministry of Health, and the Ministry of Agriculture to investigate key issues that affect the sustainability of livestock systems and health of animal and human populations in changing environments. The project specifically proposes to: 1) estimate seasonal changes in prevalence of gastrointestinal parasite burdens and nutrition among small ruminants, women, and children in three communities of northern Senegal; 2) compare the efficacy of different forage types for reducing parasite infections and improving nutritional status of small stock; and 3) identify whether there are specific sociodemographic or economic factors, such as changes in livelihoods or household production activities that impact the prevalence of gastrointestinal parasites and nutritional health of community members. Funding status for the project under the Feed the Future Innovation Lab initiative is pending, however Dr. Hernandez and colleagues received a seed grant from the College of Veterinary Medicine for collection of pilot data to move the project forwards.

*Alyson Young is assistant professor of anthropology and affiliate faculty in the Center for African Studies.*

