



What climate change means to Africa

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by ANDREA GIBSON

Geographers tackle a growing threat to the continent's dryland communities

For most Americans, dealing with climate change might mean installing compact fluorescent light bulbs, avoiding plastic shopping bags and perhaps trading in the SUV for a Prius. For the people of East Africa, however, global warming has drastic and more immediate consequences, changing livelihoods, economies and even gender dynamics in families, according to Ohio University researchers.

Edna Wangui and Tom Smucker, two newer faculty members in the Department of Geography, know the region well. Since their time as graduate students at Michigan State University, they have studied the impact of drought on the pastoral and agro-pastoral peoples of Kenya and Tanzania. Though climate change has become a recent buzzword in the States, the citizens of the savanna – as well as research colleagues who've studied the area for decades – attest that their environment has been changing in unexpected ways since the 1970s.

Many cattle herders, impacted by drought, have switched to farming the limited wetter zones of the East African savanna. Though these communities changed their livelihoods as a temporary remedy, the increased frequency of those droughts and other limitations on pastoralists have forced them to make a more permanent livelihood shift, the researchers say. And that's resulted in growing vulnerability and food insecurity among sections of the population. If predictions about climate change in East Africa play out, the situation may become only worse.

Who will save the people of East Africa from this grim scenario? Wangui and Smucker argue that it's the communities themselves – and not a well-meaning western aid organization – that should drive the agenda for climate change adaptation.

"Africa, like most of the developing world, is littered with failed development projects," says Smucker. That includes exotic breeds of cattle that are vulnerable to tropical livestock diseases, or irrigation projects that assume the unlimited availability of women's domestic labor.

Other countries develop technological solutions to Africa's problems that local people can't adopt, leading to either stalemate, or, at worst, additional problems. Such "top-down" interventions just don't work, the researchers say.

Wangui and Smucker's research, funded by two National Science Foundation grants, takes a new approach by surveying the African communities about their awareness of climate change, how they have coped with environmental variability and drought in the past, as well as strategies they would suggest implementing to combat the problem.

Turning power over to the Africans to make these decisions isn't as simple as it might seem, Wangui notes. For 30 years, westerners and western-trained professionals have devalued their knowledge systems and indigenous practices and instead told them what to do. Now researchers will have to build trust in the community to make the grassroots climate change initiative work.

And that might mean opening peoples' eyes to some uncomfortable truths. In a previous study, Wangui interviewed the men and women in Loitoktok, Kenya, about how work is distributed in the community. Both men and women claimed that the men tackle the farming and the cattle herding, but researchers actually observed the women taking on the lion's share of the livestock work. The men were shocked at this finding and initially were in denial, she recalls.



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Edna Wangui, left, conducts an interview with a family in Africa.

photo by: Courtesy of Edna Wangui

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But bringing such research findings back to the communities is an important part of the process, Wangui argues. Some researchers collect data for use by government officials in Nairobi or Washington, D.C., and the communities under study never hear from them again, Smucker notes. That's made many communities wary of working with outside academics. And scholars can't control whether government officials will use their findings to implement beneficial new policies.

"It would be great to influence policy, but that takes many years," Wangui says. "So in the meantime, we go directly to the communities."

The geographers already have ongoing research in Tharaka and Kajiado, Kenya, and have undertaken preliminary field research to develop a new project in the savanna zones surrounding Kilimanjaro and the North Pare mountains in Tanzania. In future phases of the project, they hope to involve Kenyan, Tanzanian, and U.S. students. Catherine Cutcher, a doctoral student in cultural studies in education, joined Smucker, Wangui and a group of U.S. and Tanzanian geographers in Tanzania last July to take part in an NSF-supported workshop to identify priorities for future research. Cutcher was awarded a Fulbright last spring to conduct complementary research. She's examining how grassroots organizations in rural Kenya have taught life skills to women without access to formal education. ([Click here to read Cutcher's account of her research experience.](#))

Geographers are uniquely positioned to study climate change in Africa, Smucker says, because they are trained to consider the interaction of social and environmental factors. But the researchers point out that interdisciplinary scholarship is needed to address the bigger picture. In their work in East Africa, Wangui and Smucker collaborate with interdisciplinary teams that include researchers from the University of Dar es Salaam, Sokoine University of Agriculture, the International Livestock Research Institute, Michigan State University, West Virginia University and Oberlin College.

To encourage further dialogue on the topic here, Smucker and Ghirmai Negash of the Department of English and African Studies have organized a university symposium, "Enabling Local Knowledge in Africa: A Pathway to Social Resilience?" January 24 and 25 in Baker Center. The event will include lectures and panel discussions by Ohio University and outside scholars, including keynote speaker Cindi Katz of the City University of New York.

"We see the symposium as a great opportunity to showcase Africa-focused research from across the university," Smucker says. "The geographers who will be coming to Ohio University are well known in the field as experts on local and indigenous knowledge."

[For more information, click here](#) or contact Smucker at smucker@ohio.edu.