Ranchers, Forest Service, University of Arizona co-develop approaches to improve planning for drought on public lands

By Julie Brugger, Institute of the Environment, University of Arizona, julieb3@email.arizona.edu, and Mitchel McClaran, School of Natural Resources and the Environment, University of Arizona, mcclaran@u.arizona.edu

Drought threatens livestock and natural resources on rangelands. It reduces rain-fed forage and drinking water for livestock, diminishes the quantity and quality of critical water resources for sensitive wildlife species, and increases wildfire risk. While all agree that improved planning will minimize the impacts from the next drought, agreeing on the best practices to reach that goal is harder. Disagreement can be quite intense on the 90 million acres of rangelands that are federally owned and managed by the U.S. Forest Service (FS) and grazed by livestock belonging to private ranchers with grazing permits.

One case in point occurred in 2002 in the Tonto National Forest in central Arizona, when the Forest Service required the removal of all livestock during what was the worst drought in the historic record. Dialog between the parties was heated, and some animosity remains. But today, both ranchers and land managers want to improve planning for drought in order to avoid a similar scenario in the future. In an interview prior to a March 2015 workshop, a rancher expressed his vision for what should happen when the next severe drought occurs:

“What you would hope for, and hopefully what this drought workshop is working toward, is to bring the proper people together, and each ranch should be treated individually. … If I can sit down with the land management agency, in this case the Forest Service, and say, ‘Come on out. Let me show you where I intend to go and what I can do, and there’s water here,’ and so forth, then that’s the way I believe it should be done. If we’re all talking on the same page, if we’re all looking at the same data on a national level, from NOAA and so forth, the climatologists, et cetera, and we get them involved, and we have the land management agency, and the ranchers are much more cognizant of what this drought is, you come together and sit down and talk, maybe we can figure out some ways. Maybe we can educate even ranchers about what you should do to prepare for the drought.”

To support that desire for better planning, a team from the University of Arizona (UA) is working with ranchers and the Tonto National Forest to co-develop approaches that are 1) feasible for ranchers and 2) consistent with the federal policies that define management options for the National Forest. The project is funded by the National Oceanic and Atmospheric Administration’s (NOAA) Sectoral Applications Research Program (SARP) Coping with Drought program.

In this case, co-development is the engagement of ranchers and Forest Service personnel to define the issues and identify possible solutions, rather than the UA or anyone else coming with pre-determined solutions and then convincing the other parties to adopt them.

The UA team conducted surveys and interviews designed to support a series of workshops over the two years of the project. The surveys and interviews identified the different ways that ranchers and the Forest Service perceive threats from drought. Both parties shared interests in learning more about how to better plan for drought. Those responses helped define the activities in the first workshop held in March 2015 with 17 ranchers and 11 managers from the Tonto National Forest.

The first workshop was
designed to provide information and stimulate discussion among participants, and that input will help define the drought scenarios that will be analyzed in the second workshop, scheduled for August 2015. A final workshop will occur in April 2016.

The ultimate product will be a Guide to Drought Planning and Response for Livestock Management on Forest Service Lands in the Southwestern U.S., similar to the to the publication, Managing Drought Risk on the Ranch: A Planning Guide for Great Plains Ranchers, produced by the National Drought Mitigation Center (http://drought.unl.edu/ranchplan/Overview.aspx). The Guide will provide a framework to facilitate ranchers and the Forest Service working together to explore options to improve planning for drought.

Mitch McClaran, professor of range management at UA, opened the first workshop by explaining the co-development process and the challenges and opportunities for ranchers and FS managers working together. One of the challenges is that ranchers and the FS have different concerns and perceive each other as creating risk for managing livestock in the Tonto National Forest. For ranchers, the top three risks were the FS, drought, and federal regulations. For the FS, the top risks were drinking water reliability, livestock practices, and drought. Some of the opportunities are: 1) both groups want to learn more about drought information sources, drought management practices, and the FS administrative process; 2) both groups feel that management flexibility can help and drought plans can help, and; 3) both groups want to participate in these workshops to improve livestock management during drought.

Mike Hayes, director of the National Drought Mitigation Center, and Mike Crimmins, UA Climate Extension specialist, gave a presentation on drought information tools. Hayes gave an introduction to drought risk management and the U.S. Drought Monitor, and Crimmins presented the idea of a web-based “drought monitoring dashboard” for the Tonto National Forest that would provide easy access to a variety of drought monitoring tools that ranchers and the FS agree are most useful. In the workshop evaluations, one of the FS participants said she “learned a lot about data sources for monitoring changes in temp, precip, climate change, and drought conditions.”

Judith Dyess, assistant director of Rangeland Management for the FS Southwestern Region, described opportunities for incorporating flexibility into the FS administrative framework for managing livestock grazing on national forests. Finally, Doug Tolleson, Range Management Extension specialist at UA, gave an introduction to scenario analysis and led a discussion of livestock management practices that can increase flexibility during drought.

Overall, the first workshop met its goals. It introduced participants to each other and to the objectives of the project, provided them basic information on background policy conditions and existing drought decision support tools, and began the process of identifying common goals. Analyses of transcriptions, workshop notes, and an evaluation survey indicate that significant progress was made in eliciting new ideas to support the co-development of practices to improve drought planning for the Tonto National Forest.