

# Study: Rural ranchers face less access to water during drought than urban counterparts

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Local students conducted surveys in Spanish with ranchers in Mexico's Baja California Sur state. Credit: Melissa Haeffner

For farmers and ranchers in Mexico's southern Baja California peninsula during a six-year drought, the farther away they lived from urban areas, the more likely they were to have to make changes to cope with the dwindling supply of water, according to a Portland State University study.

Melissa Haeffner, an assistant professor of [environmental science](#) and management at PSU's College of Liberal Arts and Sciences, said the findings highlight a rural-urban divide and show that [ranchers'](#) access to water was neither equal nor valued during the drought from 2006 to 2012.

"Where people live and how close they are to the city and how well the city can deliver those services to households was unequal across the population and it had devastating effects for households who were not able to access those resources," said Haeffner, the study's lead researcher.

The study recommends government agencies focus efforts on enacting policies and programs to better protect rural households during a drought, such as supporting sustainable agriculture projects in the region, increasing transportation options to access city centers and providing access to insurance and credit schemes.

The study, published online in February in the journal *Regional Environmental Change*, surveyed 163 households from two municipalities: a rural area adjacent to the state capital of La Paz and the village of San Javier, high in the Sierra la Giganta mountains.

Haeffner looked at whether the ranchers migrated or stayed in place but had to change their farming practices or find different work because of the drought. She found that most people reported changing their practices—reducing their herds, trading cows for goats or corralling

them, as some examples—or finding other work that could sustain them.

But the biggest finding was that those who lived closer to the city center or the main highway had better access to water deliveries than those in more remote areas—because of distance and transportation issues—but still less than their urban counterparts.

Haeffner said [city dwellers](#) were supplied with 250 liters per person per day, while the rural families had to rely on twice-weekly deliveries that only became less reliable as the drought dragged on. To make matters worse, the wells and streams that the ranchers and their ancestors had relied on for centuries were either contaminated or dried up.

Haeffner said the narrow-minded view that ranchers are only [drought](#)-aid recipients needs to be challenged.

"If we think about their role in agriculture production and as people who are maintaining clean water for the city and the aquifer that serves the [city](#), then we can think about how we support them and their livelihood in a completely different way," she said.

**More information:** Melissa Haeffner et al, Investigating environmental migration and other rural drought adaptation strategies in Baja California Sur, Mexico, *Regional Environmental Change* (2018). DOI: [10.1007/s10113-018-1281-2](https://doi.org/10.1007/s10113-018-1281-2)

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