



Rancheros in San Javier

2013

Household Survey Report

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For the past 300 years, people have been living the ranching life in Baja California Sur. Life is rapidly changing for a variety of reasons. Roads facilitate travel to further distances and job opportunities seem to become more and more distant. Even life within the ranching home is changing as solar brings electricity to the home, and the municipality delivers water from the city. How are rancheros changing? Are they as resilient to the harsh desert climates as they once were? Are they doing better?

Purpose

The purpose of the study is to assess the adaptive capacity and vulnerability of rancheros, specifically in regards to drought and water scarcity. This study was undertaken to understand what the changing circumstances mean for the *rancheros sudcalifornianos*, in order to gain a deep understanding of the socio-economic characteristics of the population living in San Javier and their relationship to the environment.

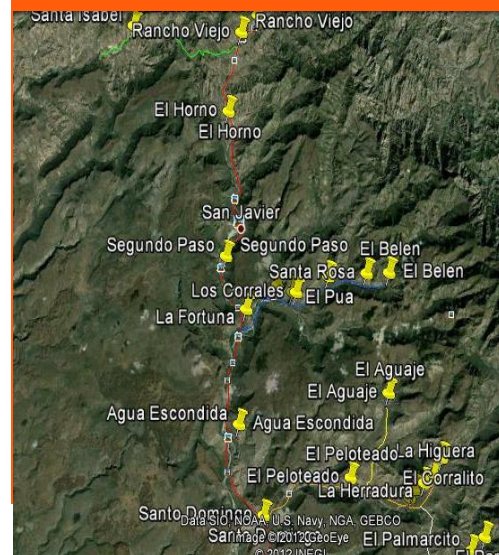
The Team

This study would not have been possible without the support of the non-profit Living

Roots, especially McKenzie Campbell, and Martha Drew. Rosina and Chuey helped us in the town. Three research assistants helped with the surveys: Yuri Davis, Paola Bonilla, and Laura Morales. The conducted the surveys by sitting down with rancheros in their homes, for up to an hour at a time. Surveys were conducted in July 2013, one year after a 6 year-long drought.

Survey

The survey included 40 questions about single family residential water supply and the actions families take to respond to drought. In particular, we wanted to know if drought and water scarcity contribute to ranch abandonment. To understand how well prepared rancheros are for the future, we also asked about their savings, plans to cope with future drought, their ability to "read" environmental signals to identify droughts, and their propensity to migrate. We further asked about how they earn their livelihoods, the characteristics of their ranches, what social support systems they have in place, and what educational investments they make.



Surveyed communities. Source: Google Maps

Sample

So that we may report our results with 95% confidence, we sampled 43 households in the designated area. Due to the difficulty of travel on the dirt roads of the sierras, we completed a dispersed purposeful sample. We obtained a 91% response rate, representing 211 individuals.

About San Javier Rancheros

Rancheros in San Javier watershed seem happy living in the mountains – one third (33%) said that they would not leave under any circumstance. When asked what would make them leave in the future, they said health reasons (49%), work (33%), or natural disasters (21%). If members of the households left in the past, their primary reasons were to find work or to get married.

Most households (74%) who had members who left went to other rural areas, usually in the San Javier area. 65% of the 211 people represented in the survey went to urban areas, and 30% went back and forth, usually to find work. There were two households we surveyed where no one in the family ever moved away.

- ◆ The mean age of the heads of households in our sample was 56.
- ◆ The average household size was 4.9.
- ◆ 81% of the heads of households in our sample had some type of formal education, and 21% had more than a primary level of education.



◆ Most (61%) obtain their food from a mix of buying and growing. Meanwhile 5% only grow their own food, and 26% only buy food.

◆ Many rancheros (47%) rely on their own experience to read the weather, but also rely on collective knowledge in the community (42%) and their family (35%). Yet they are also able to access other news from the radio (51%) and TV (56%).

◆ 56% said that ranching accounted for some portion of their income.

◆ Most of the respondents reported that the head of household was a "jornalero," a day laborer. 44% reported that they receive some part of their income from the government-sponsored temporary work programs (PET). 33% said that they receive income from work other than PET or ranching.

81%

Respondents report that they have noticed that the weather has become more unpredictable in the last 10 years.

74%

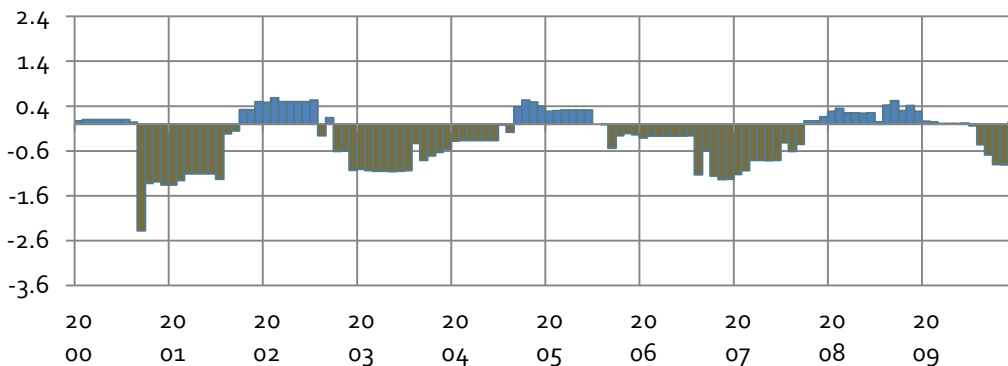
Respondents said that water scarcity and drought are their primary environmental concerns.

40 YEAR OLD RANCHING MAN

"The dry season is long with less water in the riverbed, the wells. Almost no one was living here. They were in Loreto. It rained very few days."

Drought and Floods

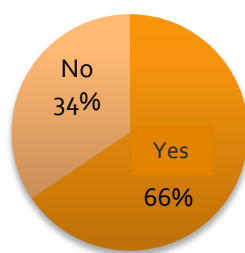
Drought and water scarcity are the primary environmental concerns for rancheros, while other concerns were heat, hurricanes, and floods.



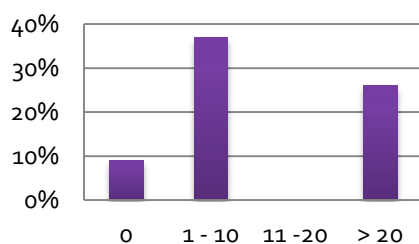
Loreto Precipitation

Source: CONAGUA

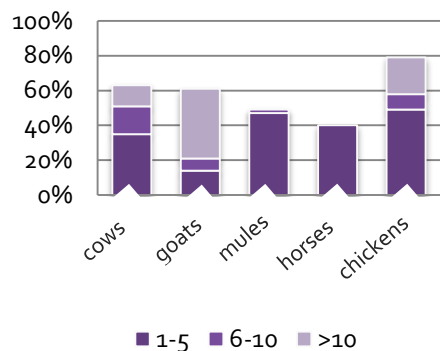
Do you own a title to your land?



How many hectares do you have?



How many animals do you have?



86%

Respondents report that they have health insurance.

23%

Respondents say that there is someone with a chronic illness or disability in their household.

Adaptive Capacity of Rancheros

We learned a lot about the adaptive capacity of rancheros through this study. Adaptive capacity is the ability to withstand crises over the long term. When studying adaptive capacity, we can measure 5 aspects, called capitals: financial, physical, natural, social, and human. When we understand which capitals people have available to them, we can better understand what their needs are.

Financial Capital

Most people realize that when there is a disaster, people with more financial capital – more money – will probably have an easier time coping. The survey asked rancheros how they obtained their income, but to protect their privacy, we did not ask how much they make per year. Rancheros have diverse livelihoods beyond raising animals. When asked what the obstacles were to buying insurance, respondents said that they could not travel to the city to buy it. Others reported that the cost did not justify the benefit. Only 6 households (7%) of the respondents said they have access to loans or credit. This data suggests that there is a great potential here for microloan and microinsurance programs.

Physical Capital

For rancheros, another important source of survival is physical capital. In most cases, families must prove that they own the land in order to receive government services, like drought relief. 63% of respondents reported that they own the title to their land, and 92% said that they have access to land. 46% said that they access 20 hectares or less, while 26% access more than 20.

Animals are important physical capital during times of drought. Many respondents said that drought affects their animals first and hardest. To save their animals, corralling animals is an important coping strategy. The majority of households (75%) own cows. Half (51%) raise chickens. 70% own goats. 47% have horses, and 46% have mules.

Human Capital

Human capital is the wealth of knowledge and skills that we develop. In times of crisis, having access to information and being able to analyze that information is important.

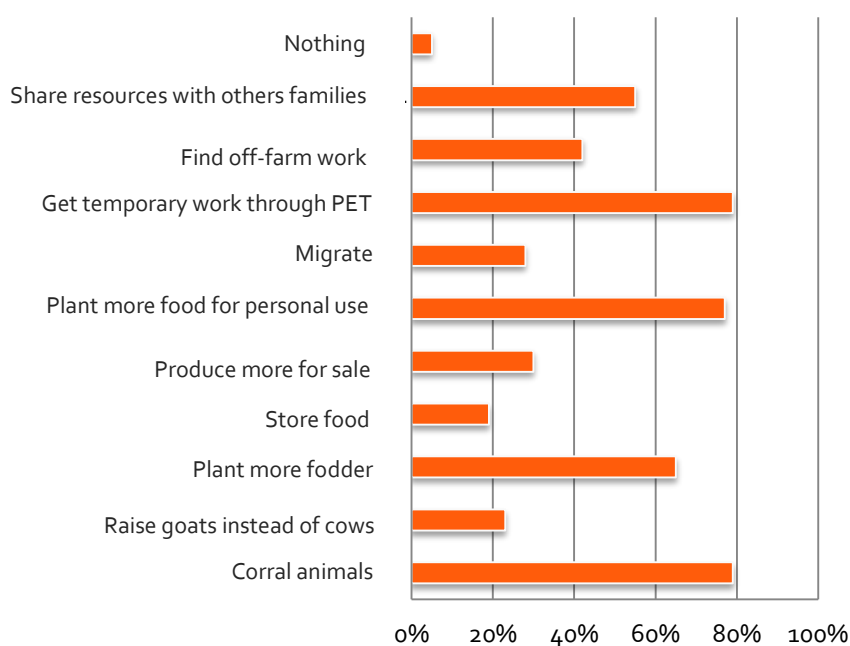
Being able to work is one of the most important strategies for rancheros in times of drought. When asked how they plan to pay for damages in the next drought, 28% said that they will work more. Participating in the temporary work program (PET) was one of the highest ranked strategies to cope with the last drought (79%).

Older heads of household may have more difficulty in finding extra work when times are tough. The average age of the heads in our study was 55. Fortunately, less than a third of households (23%) reported that someone in their household had a chronic illness or disability. 86% of households said that they had health insurance to help if someone in their family fell ill or suffered an injury. Special attention should be paid to households with elderly and disabled family members in planning for emergency situations, for example, if they need to be evacuated.

Social Capital

Social capital is our connection to other people – our family, our friends, and our communities. In times of crisis, we can often turn to our social circles for help. 28% of the respondents in this study said that they moved to cope with the last drought. About half (49%) said that they had contact information of someone in another place, if they found themselves in a situation where they had to migrate.

Adaptation strategies in the last drought



24% of respondents said that they were a member of an organization like a parent association or a water committee. As shown in the center graph, 55% of households reported that they worked with other families to share resources in the last drought. 86% said that they would collaborate to survive future droughts. This suggests a strong foundation of building social capital for rancheros to work together in times of drought.

Water Infrastructure

Natural Capital

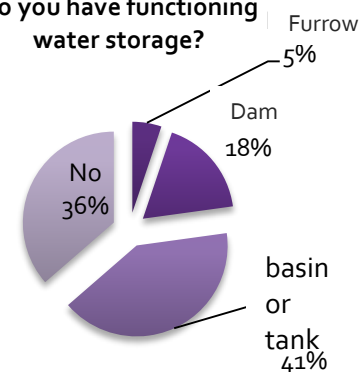
Natural capital is made up of the natural resources that people use to survive. In this study, we were interested in how rancheros are able to manage their water resources, especially during drought. We asked about water storage, access to the pipe network, and water conservation.

Most of the respondents fetch their drinking water from wells (74%) and bodies of water, like arroyos (23%), but a few (5%) also get their water from the municipality. Most households (58%) water their animals with surface water.



63% said that they have a concession with CONAGUA to access water, for example, for a well. The picture to the left shows the open canal system for water delivery. 63% say that they have a functioning form of storage for water for the future.

Do you have functioning water storage?



Where do you get drinking water from?



Opportunities for the Future

Ranching in the rural mountains is a 300 year old legacy, and newcomers to the area can learn a lot from people who have survived droughts in the desert for so long. Likewise, many rancheros are eager to learn new skills. On the whole, they recognize government agencies as sources of information and education.

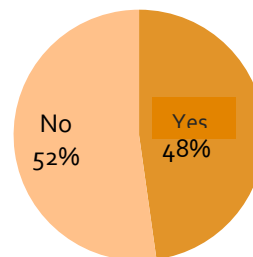
This is good news for government agencies who want to work with ranching communities. 60% of our respondents said that they already participated in a capacity building workshop on topics of water conservation, economic development, and weather. Respondents reported that CONAFOR, PRODESA, and the Secretary of Labor, as well as Living Roots, Niparaja, and NOLS were already active in their communities in providing education opportunities.

Rancheros are enterprising. They said that they are eager to have broader market access that will help them bring in more income. When we asked them what kind of capacity building workshops they were interested in, they suggested: English, tourism, confection, cheese-making and other ranch-related businesses, agriculture, wood-working, hair dressing, drawing and sculpture, conservation, and water management. Agencies could add financial literacy workshops to their educational programs to teach rancheros basic accounting practices for their new enterprises.

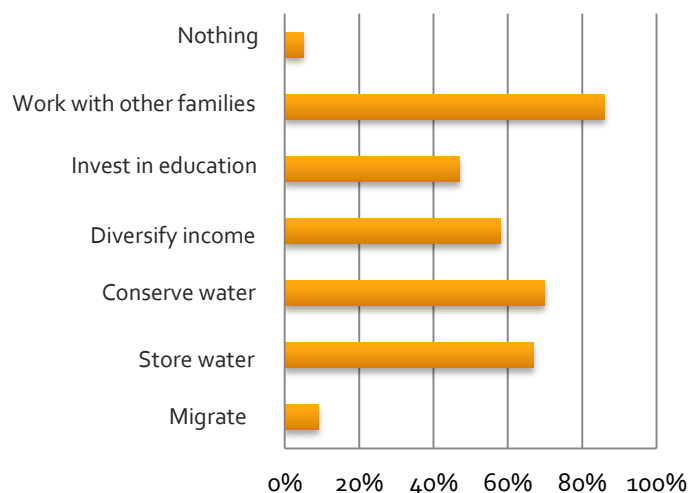
The rancheros reported that they rely on the government for services during a drought. Nine households reported that they learn about droughts through government workshops and meetings. 70% said that they think that the government is primarily responsible to help families in times of drought, and 49% said that they will look to the government for help in the next drought.

Rancheros already turn to government agencies and non-profits as leaders. In addition to disseminating information, agencies can build social capital within the committees by encouraging rancheros to join local committees to be able to make decisions about what happens in the sierras. Agencies would benefit from the local knowledge that rancheros bring from their experience of living in this area for over three centuries.

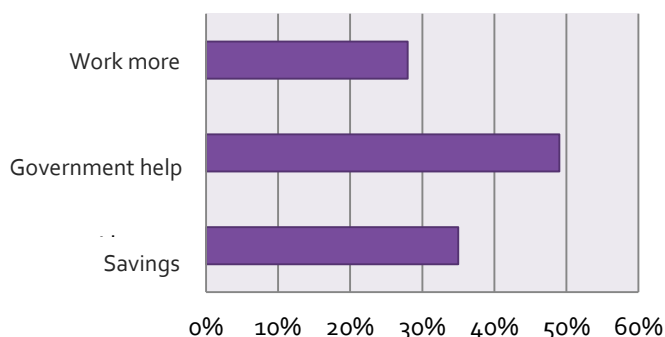
Have you participated in a capacity building workshop?



Planned adaptation strategies for future droughts



How will you pay for the next drought?



Acknowledgements

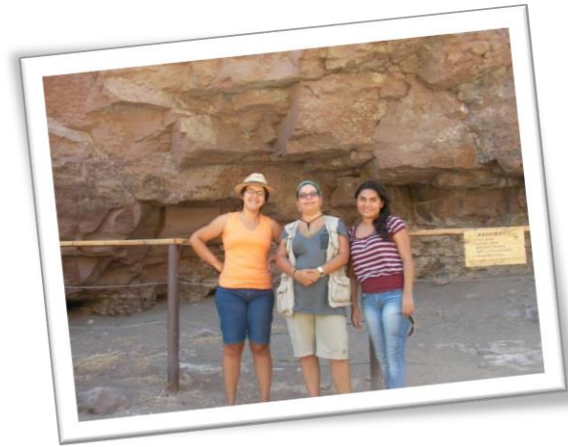
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The translators (right to left) Paola Bonilla Yee, Laura Morales, and Yuridia Davis.

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