

## Severe Cold and Snow Storm Hits Nunoa - September 4, 2013

Nunoa and the rest of the Peruvian altiplano are receiving unprecedented cold with snowfall up to three feet. This has resulted in the deaths of livestock, especially young alpacas, llamas and sheep, which do not have sufficient body mass or reserves. Snows normally last a day or so before melting. However, when the snow covers the pasture for more than a week livestock are unable to graze.

On the human side when the grass thatch roof of a traditional dwelling is covered with snow, melt water seeps through and soaks the interior –blankets, clothing and all. We have observed whole families standing outside their homes in the cold under such conditions. The Peruvian government has called for emergency relief for many of the altiplano provinces, and food, tents and blankets are being flown in to the Department of Puno to be distributed.



A graduate student from the University of Massachusetts, Meagan Mazzarino, who is associated with the Nunoa Project, has been studying the effects of climate change on stream run-off and pasture quality in order to anticipate how alpaca herders will be impacted in the future. Increased unpredictability and intensity of weather events are further challenging the livelihood and health of herders living at the upper edge of human habitation. In the past year the Project has constructed three small adobe (mud brick) houses for the pastoral families on one of the ranches we have been working with. It is hoped that the steep roofs and new thatch of these homes will repel the melt water and serve as adequate shelter for people and their young animals.



