This project focuses on identifying solutions to unsustainable management of the high altitude grassland environment in Northern Peru known as the "puna".

For more information see: https://www.ccrp.org/grants/punas-and-pastures-iii/

**Summary**

Widespread soil degradation

In the Ancash region of northern Peru it is estimated that 93% of the natural pastures are under communal control and that over 75% are deteriorated from overgrazing. These pasture are essential for carbon and water retention.

**Approaches that recognize heterogeneity**

2010: 20 experimental parcels were established in two sites (one with 22% soil humidity the "wet puna" and one with 12% the "dry puna") in a collaboration between researchers and farmer research groups.

AEI Knowledge Mobilization

2012-2013

• 50 farmer-to-farmer exchange events
• Open house between 4 communities and authorities (n=150)

Social and Institutional Mobilization

2014: Formation of pasture committees (80 families)

**Contextualize and refine landscape management options**

2015:
Treatment, fenced plots for 4 years:
• Recuperation of the dominant native grasses that are most favored by animals and reduction in overall diversity.
• The wet pasture has three times the production of biomass than the dry one (3500 kgMS/ha vs 1100), however this was not evidenced until year 4.
  • Soil cover in wet puna was 90%, 78% in the dry puna.
Control plots, available for grazing:
• There were not many differences in plant biomass between wet and dry sites.
• The soil cover in the wet puna was 80%, 48% in dry

Results indicate that the dry puna is more vulnerable to soil degradation and that fencing activities should be prioritized in this region and encouraged in all ecosystems.

**Farmers adapt options to their contexts**

2018: The two practices that were most often repeated were fencing of pastures and fallowing of paddocks. These were the only two options used in communal lands. In kin-group managed lands, sheep manure was also used. In private lands up to 6 options were used showing that a higher investment is given to private lands. Other factors that influenced use include organizational capacity, training and technical assistance, availability of labor (often low in women headed households) and water, income, market, and climate change.