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## Livelihood and Production Strategies of Smallholder Livestock Keepers in the Central Peruvian Andes

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### Abstract

The living conditions of smallholders in the Peruvian Andes have always been marked by harsh climatic conditions. Nowadays farmers see their livelihoods more and more challenged by environmental and economic changes. This results in adaptations of their livelihood strategies that can be classified in on-farm production and income-generating strategies.

The objective of the study was to investigate income-generating and production strategies of livestock keepers in the Central Andes of Peru. In addition, farmers' perception of their own livestock and perceived effects of climate change were investigated.

Therefore, semi-structured interviews were conducted in Spanish language with 46 livestock farmers from the provinces of Pasco and Daniel Carrión.

Most farmers diversify their livestock, as they keep llamas, alpacas, sheep and cattle in different combinations at once. Only a few farmers are specialised and keep alpacas in high numbers. A diversified production strategy can be seen as a means to decrease vulnerability regarding environmental and economic shocks and changes. The main reasons for a change in the herd compositions were due to economic and environmentally caused reasons as a lack of pasture and declining prices for especially sheep wool.

Climate change is strongly seen as a production constraint by all farmers and the ones that can afford it have already tried to cope via the adoption of diverse adaptation strategies. Farmers seem to plan a shift towards a higher number of llamas as they are seen to be more resistant to changing climate. But the market for llama products is small and prices are low, so farmers cannot rely on sufficient incomes by only keeping llamas.

More than half of the farmers work in non-farm activities. This shows that farmers experience a high economic pressure to look for work in other sectors than farm-related ones. For the young generation living in rural areas does not seem to be very attractive.

Therefore, investments in infrastructure, better extension services and capacity-building programs should be taken to support farmers to improve their livelihood. This can help to ensure that farmers are offered a perspective for their future in the High Andes.

**Keywords:** Andes, diversification, livestock, smallholders