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## Agroecological practices in an indigenous territory: Case study of an Aymaran community in Bolivia

LEA PFENNIGER<sup>1</sup>, ELVIRA CARMEN SERRANO CABALLERO<sup>2</sup>, SÉBASTIEN BOILLAT<sup>3</sup>, CHRISTINE JURT VICUÑA MUÑOZ<sup>4</sup>, NANCY BOURGEOIS LÜTHI<sup>5</sup>, ALESSANDRA GIULIANI<sup>6</sup>

<sup>1</sup>*Bern University of Applied Sciences, School of Agricultural, Forest and Food Sciences (BFH-HAFL), Switzerland*

<sup>2</sup>*Universidad Mayor de San Simón ,*

<sup>3</sup>*Bern University of Applied Sciences (BFH), School of Agricultural, Forest and Food Sciences (BFH-HAFL),*

<sup>4</sup>*Bern University of Applied Sciences, School of Agricultural, Forest and Food Sciences , Switzerland*

<sup>5</sup>*Bern University of Applied Sciences, School of Agricultural, Forest and Food Sciences , Switzerland*

<sup>6</sup>*Bern University of Applied Sciences, School of Agricultural, Forest and Food Sciences (HAFL), Switzerland*

### Abstract

Indigenous peoples and their traditional food systems play a crucial role in global biodiversity conservation, but nowadays are highly vulnerable to environmental and societal changes. Agroecology offers a solution to increase the resilience of these food systems. This study describes the synergies between the traditional farming system of Antakahua and the agroecological principles. Antakahua is located between 3650 m and 4480 m a.s.l. in the Bolivian Andes, which is part of a newly formed legal entity called “autonomía indígena originario campesino Challa,” that promotes decentralisation through the reintroduction of their ancestral self-government under the principle of subsidiarity. We collected qualitative data on farming and social practices in the community of Antakahua using participant observation, informal dialogues, agricultural calendars, and semi-structured interviews with community members (N=15) and experts (N=5). We analysed the practices to assess to what extent they align with the 13 agroecological principles defined by the High-Level Panel of Experts on Food and Nutrition in 2019. We classified the practices into four categories according to whether they “promote,” “partially promote,” “potentially promote,” and “do not promote” the principles of agroecology.

We found that community members continue to use many traditional practices developed over time to overcome the ecological limits of the fragile mountainous ecosystem without damaging its ecological balance. This includes a community-controlled system of sector-fallow rotation that requests all members to practice long fallow and crop rotation. It also includes social practices of non-monetary exchange of labour and goods among community members. However, recent processes have put pressure on the system, with intensification through mechanisation and motor vehicles, more productive potato varieties that require external inputs, and the concentration of population in a single settlement, which tend to disrupt the sector-fallow system. Additional factors such as rural-to-urban migration, evangelisation, and climate change further influence the traditional system. We found that

traditional practices tend to fall in the “promote” and “partially promote” categories, while more recent practices tend to fall in the “potentially promote” and “do not promote” categories. This shows that the community has strong affinities with agroecology but tends to drift away from it.

**Keywords:** Agroecology, Aymara, Bolivian Andes, indigenous territory, traditional farming