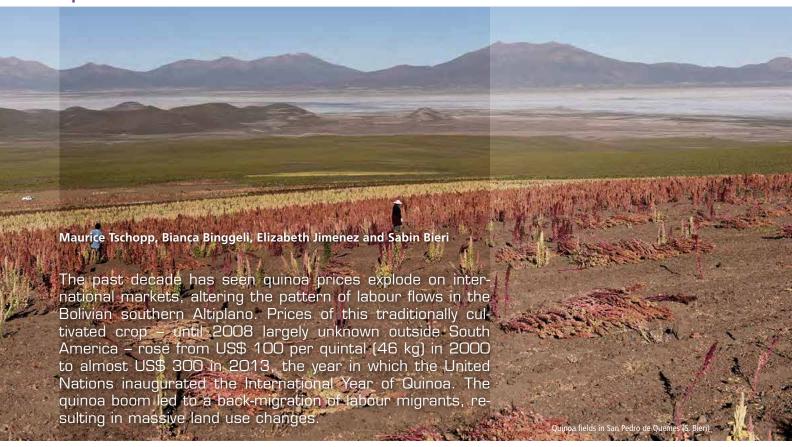
## In- and outmigration in the context of the quinoa boom



Before the quinoa boom, peasant families from the southern Altiplano in Bolivia had developed livelihoods that were adapted to the harsh climatic conditions of the area and involved high geographic mobility. To boost their farming income, they sought temporary employment in local mining ventures or other work opportunities in Bolivian cities or neighbouring Argentina and Chile [1]. Nonetheless, many migrants chose to keep a house in their village of origin and to cultivate some quinoa on the side. While in some cases many household members remained in the community, in other cases the entire household would migrate to the city, returning only to sow and harvest quinoa.

The steep rise in quinoa prices between 2008 and 2014 was a major incentive for quinoa-producing families to return to their native communities in the Altiplano and expand their area of cultivation (Figure 1). This agricultural intensification process resulted in the large-scale conversion of commonly owned pastures into quinoa fields [2, 3]. Some reports warned that the sharp increase in quinoa production coupled with the ensuing decrease in llama herding could lead to land degradation and a long-term decline in soil fertility [4]. A 2015 survey estimated that between 2008 and 2014, the average area of quinoa cultivation per household doubled (from 3.8 to 7.8 ha), while the average number of llamas per household fell by 20 percent [5]. But in many communities, a few families undertook a much larger expansion (up to 50 or 60 ha), and migrants with limited links to the community were accused of carrying out unsustainable agricultural practices [6, 7]. However, this behaviour rarely resulted in sanctions from traditional authorities.

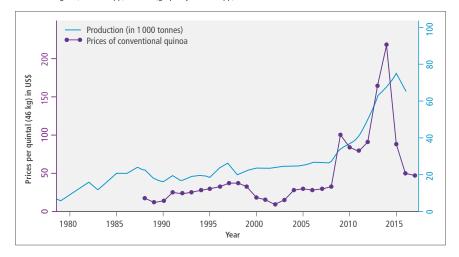




## The local authorities subsequently tried to strengthen community rules that would have the potential to reduce pressure on land, with varying degrees of success [5]. To retain the right to cultivate their land, migrant families had to comply with obligations such as sending their children to community schools and participating in community meetings. Other actors also tried to reduce the potential environmental impacts of the quinoa boom. Cooperatives, in particular, established quinoa production norms, limiting the amount of land that could be cultivated by their members and reducing the use of pesticides [5, 6].

Since 2015, the prices of quinoa have fallen to pre-boom levels, in particular because of increasing production in Bolivia and other countries. Many families have returned to their previous livelihood strategy of pursuing several activities, and communities have noted an increase in recent outmigration. While these departures have helped to reduce pressure on the land, the decline in quinoa prices has also led to a reorientation of production towards more sustainable niche markets. Multiple stakeholders including cooperatives, private companies and the Bolivian State are working to establish a Designation of Origin for quinoa from the southern Altiplano. This label would guarantee the quality of the quinoa produced, but also bind all quinoa producers from the southern Altiplano to common production norms (e.g. organic, fair trade).

Figure 1. Evolution of price and production of quinoa in Bolivia (1980–2017). Source: P. Laguna, M. Tschopp, FaoStat (graph by M. Tschopp)



## Lessons learned

- People in the region pursue geographically mobile livelihood strategies and can adapt quickly to emerging economic opportunities.
- In- and outmigration can create pressure on land. Sustainable land use largely depends on the capacity of local institutions to manage access to, and use of, local resources. Policies must enhance local capacities to act collectively at the level of communities, associations and cooperatives.
- Orientation towards niche markets and specific production labels can offer interesting alternatives and reduce pressure on natural resources.

## Migration and household labour structures

The division of labour in households in the southern Altiplano in Bolivia has remained largely traditional despite the quinoa-induced economic boom, but is influenced by spatial mobility and different migration constellations. Where the men work abroad, the women have been left to do both household and agricultural work. Recent research suggests that the quinoa price hike only increased the women's workload, especially that of single women/ mothers. Married women were relieved slightly by the return of their husbands, but most of household work still fell to the women [8]. As quinoa prices dropped, a new wave of outmigration occurred as many returnees - mostly men - left their communities of origin again. This traditional division of labour within households persists as men often have better employment opportunities because of the labour market structure and their generally higher level of education compared to women in Bolivia.