Sintesis

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CONTENT

Climate change and financing: Challenges facing women quinoa farmers in the Southern Altiplano of Bolivia

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https://capitalsaft.com/de-la-degradacion-del-suelo-a-la-regeneracion-juntos-hacia-un-camino-hacia-la-produccion-sostenible-de-quinoa/

Climate change is presently one of the greatest problems globally, and it disproportionately affects many vulnerable communities, while exacerbating already-existing inequalities. In this context, various studies indicate that women, particularly those in rural zones and who economically depend on agricultural activities, are among those most affected (see, *e.g.*, Denton, 2002; Alam and Rabbani, 2007; Alston, 2013). According to the United Nations Framework Convention on Climate Change (UNFCCC, 2022), and similarly as per Kristjanson *et al.* (2015), and Esquivel and Sweetman (2016), this is attributable to factors such as more limited access to resources – *e.g.*, education, loans and land – and the exclusion of women in decision-making and leadership positions, besides their being in situations of greater vulnerability.

Also, a strategy worth highlighting among those progressing in adaptation to climate change is access to climate financing, given that it fosters sustainable agriculture. However, small farmers face a diversity of barriers in accessing financing, among which are lack of collateral, little or no financial education, and irregular income. All of this is reflected in a low level of financial resources designated to this sector (Huang and Wang, 2014; Buto *et al*., 2021). For these reasons, effective access to this type of financing is a matter pending on the agenda, and which is urgent for mitigating the effects of climate change, particularly for the most vulnerable communities. Besides, from a gender perspective, such an agenda can directly promote greater access to resources, strengthening the agency not only for production, but also for formulating and implementing climate policies and solutions (Kristjanson *et al*., 2015; Esquivel and Sweetman, 2016).

In the framework of the project titled Creating Indigenous Women's Green Jobs Under Low-Carbon COVID-19 Responses and Recovery in the Bolivian Quinoa Sector, and sponsored by the International Development Research Centre (IDRC) of Canada, Fundación INESAD performed, in 2024, a survey of women quinoa producers and held semi-structured interviews, working in both cases in the Southern Altiplano of Bolivia. The objective of this work was to know, first-hand, the effects perceived by these women in the face of climate change and the limitations they see for overcoming these effects. Also sought was an understanding of the challenges and opportunities that these women face for obtaining more financial resources given their situation, and from the perspectives attributed to their gender. The main findings are presented below.

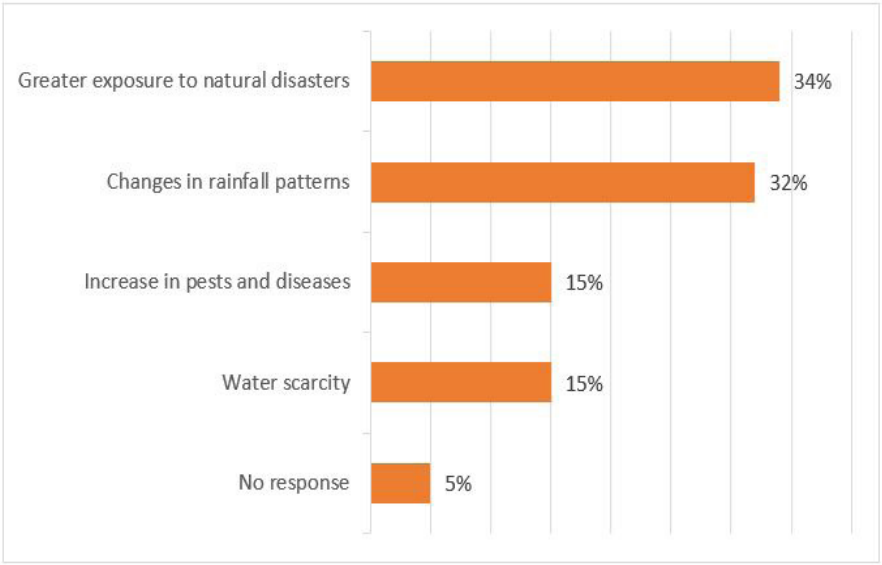
Impacts of climate change

Women quinoa producers have suffered, first-hand, the negative impacts of climate change. They mentioned that their farming activities are mainly exposed to natural disasters (34%) and changes in rain patterns (32%) (see Graph 1). In many cases these factors lead to an increase in their farming activity workload, as the women must help in work for mitigating potential crop losses, particularly when facing extreme climate events.

And yet, in many cases, the women also mentioned that there has been a change in the traditional gender

Climate change increases the workload of women quinoa farmers, but at the same time empowers them.

***Graph 1.* Perception of the climate change impact on agricultural activities**



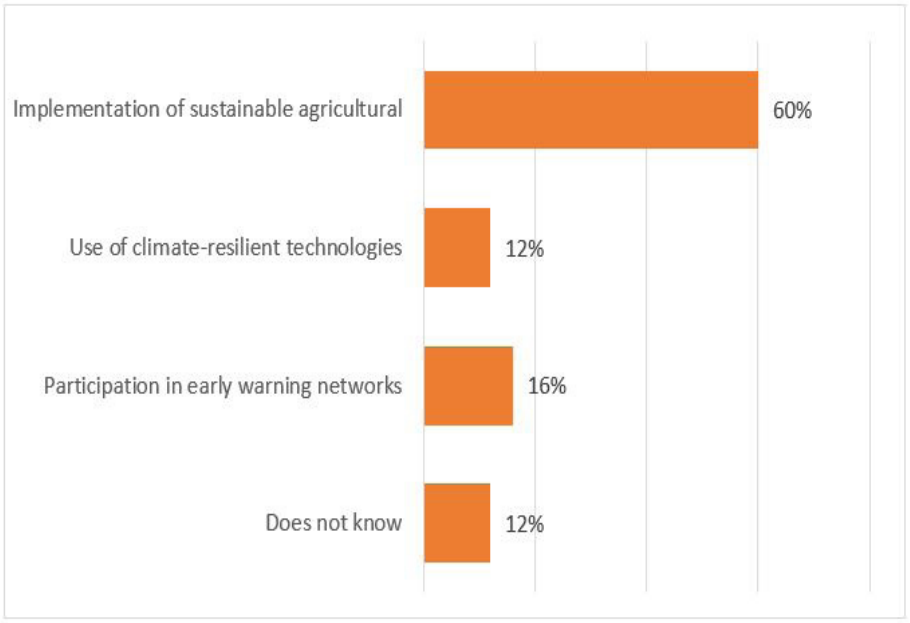
Source: Own elaboration based on primary data collected by INESAD (2024).

roles of agricultural activities, as well as greater participation in decision-making and more leadership

Such findings stand in contrast with what the literature indicates, possibly because quinoa production is generally not an individual activity, but rather a family one. In this case, the concern in terms of gender differentiation represents a greater workload, added to the responsibilities of caring for the home and its members. Even so, it seems to be a potential tool that can foster greater participation in decision-making and increased leadership by women, given that they take on more responsibilities in quinoa cultivation.

Lastly, many producers mention that climate change affects not only their crops but also their households; their perception is that food has diminished in quantity and nutritional quantity, generating greater food insecurity.

***Graph 2.* Climate change adaptation strategies**



Source: Own elaboration based on primary data collected by INESAD (2024).

Adaptation to climate change

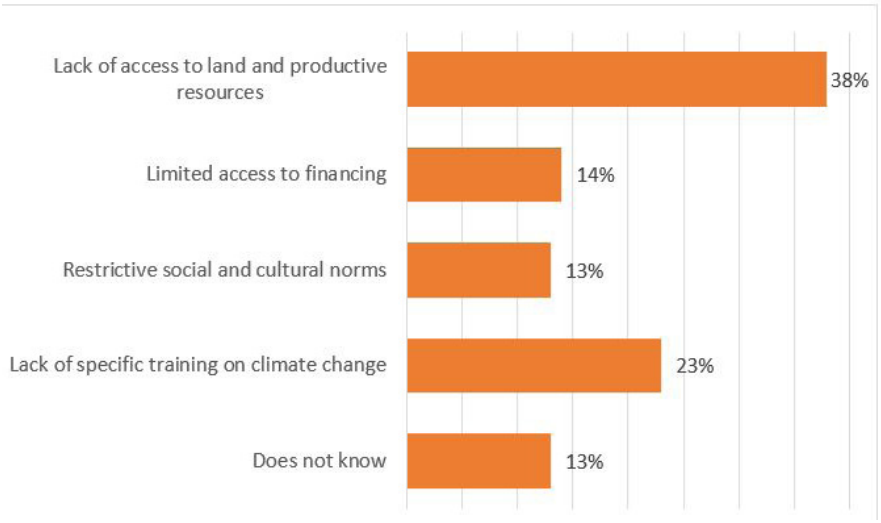
Women quinoa farmers acknowledge that the implementation of sustainable agricultural practices, including crop diversification, are the most effective strategies for adapting to climate change (60%). Such tasks are fundamental, given that they also advance the conservation of ecosystems and biodiversity (see Graph 2). In addition, some women (16%) highlight the need to participate in early warning networks, which allow them, to some extent, to be prepared for and respond to extreme climate events.

Presently, most of the women manage some kind of risk related to climate change, mainly in the practices of comprehensive pest management (35%), traditional seed conservation (30%) – which contributes towards conserving the genetic diversity of crops – and, to a lesser degree, water and irrigation management (23%). Such participation also makes many women quinoa producers see themselves as leaders when going forward with climate change adaptation measures. At the same time, others consider that they have no opportunities, that they are undervalued or that they are not confident of their capacities.

In general, gender roles remain strictly defined within the quinoa producer homes, where women tend to be those mainly in charge of caring for the household and its members, while men handle quinoa production. Even so, the family nature of the cultivation of this crop makes shared responsibility very important (Muriel et al., 2025). In addition, women have less resources designated to them and less access to them, given that they: i) have less years of schooling, technical skills and information compared to men; ii) inherit less land than their brothers because traditionally they move to the communities of their husbands; worth noting is the fact that the agrarian reform of 1952 inhibits a land market; and iii) have less access to credit.

Increased access to resources is key for women in combatting climate change.

Graph 3. Barriers to participation in climate change adaptation initiatives



Source: Own elaboration based on primary data collected by INESAD (2024).

From the viewpoint of women quinoa producers, the major barriers they face for participating more actively in the measures of adaptation to climate change are mainly lack of access to resources. Firstly are the resources of economic assets – such as land and other production factors – (38%); and secondly is specific training (23%) (see Graph 3). In contrast, few women perceive that there are limitations in terms of restrictive social and cultural norms. This suggests that resources are important for exercising agency in this particular case, and not so much so the sociocultural structure of opportunities – *i.e.*, formal and informal rules of play – which differentiate men from women. In any case, as mentioned, this structure plays an important role for access to these resources, particularly to land.

Lastly, gaps in assets seem to also limit the exercising of agency of women when deciding on the economic resources for production. In terms of this, 44% of women stated that they actively participate in such decisions and that their voice is heard, and 56% feel that their opinions are not taken into consideration or that they do not have the opportunity to exercise an influence.

Climate financing

According to the survey performed, only half of the women quinoa producers state having been able to access formal financing, while 20% had limited access and 30% had no access. Besides this, in the face of scenarios concerning climate, their perception is that this lack of access increases their vulnerability and limits even more their chances of adopting sustainable agricultural practices. This result is highly consistent with the literature, where access to climate financing is a fundamental means for

progressing towards adaptation to climate change.

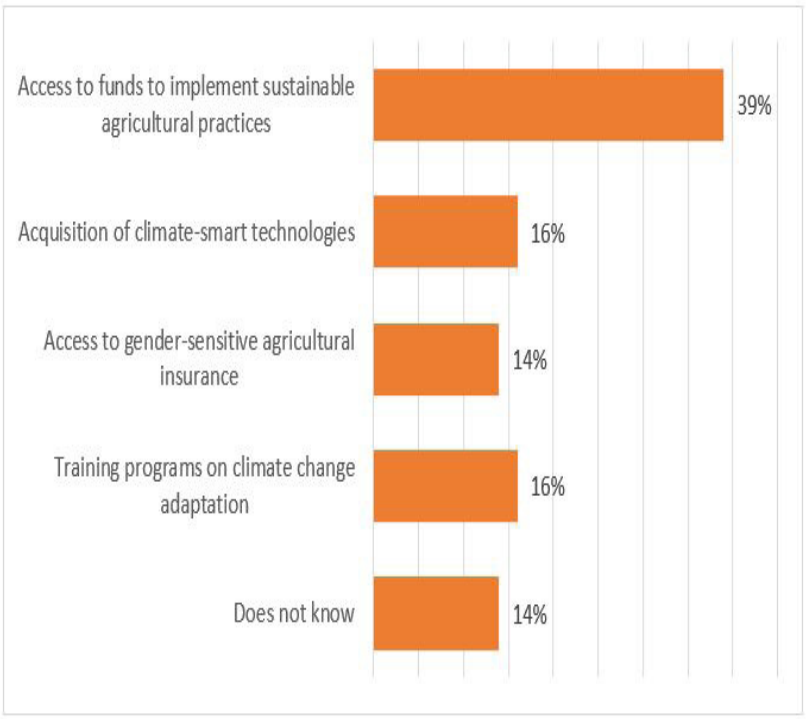
In their search for financing for agricultural activities, women face a variety of challenges. Among these, the most important factors are high interest rates (32%) and lack of collateral (19%). Besides this, some women also perceive that there is gender discrimination. Once again, in this context, many women highlight lack of training and information.

Also, the main financing needs are related to their present responsibilities in quinoa production, given that 32% consider that financing would be important for acquiring quality inputs and seeds, and 27% consider it for improving irrigation infrastructure. Besides, they also value access to modern machinery and training in sustainable practices. Among the women who were able to obtain financing in the past, most of them stated having done so by means of bank loans, and very few of them through collective financing or government subsidy programs.

The survey also delves into the financing possibilities that allow the women producers to more actively participate in climate change adaptation initiatives (see Graph 4). In this case the importance of accessing funds for implementing sustainable agricultural practices stands out (39%), and secondly for acquiring climate-smart technologies (16%), as well as having training programs in climate change adaptation (16%).

Finally, it is worth noting that the women farmers perceive that gender sensitive financing for dealing with climate matters, particularly in emergencies, has been less developed than community or microcredit savings and loan mechanisms that are mostly destined to commercial activities.

Graph 4. Specific financing needs to participate in climate change adaptation initiatives climático



Source: Own elaboration based on primary data collected by INESAD (2024).

Climate financing is scarce and not easily accessible for women quinoa producers, particularly due to high interest rates and lack of collateral.

Final thoughts

The literature indicates that climate change affects women in the agricultural sector in a differentiated way; however, the interrelations differ greatly and the results are often casuistic, associated to the particularities of the land and territory, the sociocultural characteristics of the people studied, and the form of the production processes, among others. Under this perspective there are some important findings regarding the women quinoa producers interviewed, indicating that quinoa cultivation is generally performed at the family and not the individual level in the region under analysis, the Southern Altiplano of Bolivia.

Firstly, the women perceive that the climate concerns imply more participation in the agricultural activities, with consequently a greater workload; however, the counterpart of this seems to be favorable, as it generates changes in the traditional gender roles and a greater exercising of agency.

The low rate of asset ownership limits economic decision-making for production.

https://www.pub.eldiario.net/noticias/2016/2016_01/nt160105/economia.php?n=17&-fuerte-sequia-se-cierne-sobre-cultivos-del-grano-de-oro-en-altiplano-

Secondly, the quinoa producers are aware of the strategies that they must realize for adaptation to climate change, and many women perform some of them, though there are still limitations in decision-making. In this regard, they perceive that the greatest difference by gender for participating more actively in the initiatives for adaptation to climate change is lack of access to several resources. This difference is much more important than the restrictive sociocultural roles. Notwithstanding, these roles have limited obtaining the resources, mainly access to land, indicating that the gender roles can be more or less limiting, depending on the particular dimension being studied.

Thirdly, many women face barriers for accessing financing both for their production and for combating climate change concerns, among which high interest rates and lack of collateral stand out. What is more, they rightly consider that the initiatives aimed at fostering gender sensitive financing are focused on other economic activities. Lastly, they highlight the need for implementing training in several fields which would foster sustainable production and access to financing.

Policy recommendations

The findings mentioned demonstrate the need for generating policies aimed at allowing women quinoa producers to obtain more production resources - *e.g*. training, access to land, technology – and greater access to climate financing.

Regarding more access to climate financing, the recommendation is made to create an agricultural-rural climate fund with a gender approach combining microcredits at low interest rates and subsidies for sustainable practices with technical assistance. Such a fund should include inclusive mechanisms such as community guarantees, female participation quotas and special schemes for women who do not have formal land ownership. This would allow fostering greater equity in access to financial resources.

Additionally, it is necessary to develop alternative collateral systems for women quinoa producers, and for those in the rural zones in general, who cannot access traditional loans due to lack of ownership titles. These mechanisms can be based on cooperative networks such as those of solidarity guarantors, prior sales agreements with buyers or warranty funds supported by local institutions. It is also pertinent to expand training opportunities in climate adaptation, including sustainable management, climate-smart technologies, and access to climate information. Such training should be designed specifically for women, taking into consideration their responsibilities and the sociocultural context.

It is also possible to strengthen and expand collective financing schemes with a gender approach. This could be in the form of community funds and solidarity savings cooperatives, which have shown to be more accessible for low-income women with no credit history. Such models

can be complemented by tax incentives and technical support for improving their sustainability and governance.

It is also important to institutionalize the participation of women in formulating and implementing climate polices by means of their inclusion in formal decision-making spaces at the local and regional level. Even though women have now taken on more production responsibilities, it has been noted that many women continue to feel that their voices are not taken into consideration, making these mechanisms essential for progressing towards more inclusive climate governance.

So as to ensure that these measures do not remain limited to isolated interventions, it is essential to incorporate a scalability perspective allowing to replicate and expand successful experiences. At the institutional level, this implies linking the proposals with national plans and policies such as the National Adaptation Plan and rural development programs. It is also necessary to foster strategic alliances with multilateral actors who can support the initiatives technically and financially. At the technological level it is necessary to foster the application of both climate-smart tools and accessible community means of communication (*e.g.*, the radio or digital messaging). This would allow disseminating early warnings, market prices and training content.

It is also possible to aim for community and territorial scalability, replicating financing models such as rotating funds or microinsurance in other regions of the Altiplano. This would require fostering rural women leader networks operating as agents of change who would channel their learning by means of woman farmer to woman farmer methodologies. Such an approach would allow not only taking ownership of the strategies, but would also reinforce the links between environmental sustainability and women's empowerment.

As a whole, these recommendations can strengthen the adaptation capacity of women quinoa producers, reducing their vulnerability and increasing the exercising of their agency within the agricultural and climate governance systems. The implementation of the recommendations requires the active commitment of the State, of multilateral entities and of local actors, as well as recognizing the strategic role that the women play as fundamental agents of the construction of resilient and inclusive rural development in the face of climate change.

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