

Peru's Potato Park preserves and restores diversity of potatoes and other Andean crops

Peru Potato Park, Pisac District, Calca Province

The Potato Park in Peru is managed by a collective of indigenous communities who employ traditional knowledge and management methods to restore agrobiodiversity, particularly of potatoes, adapt agricultural systems to climate change, and strengthen cultural identity and sovereignty in the area.

Established in 2002, the Potato Park, located in the Cusco region in the Pisac district of Peru, aims to protect agrobiodiversity, particularly of potatoes. The Potato Park spans over 9,000 hectares in a mountainous area in the Andes. The Potato Park works with six local indigenous Quechua communities and aims to expand this partnership to a further 23 communities. Management of the area is governed by participating communities who hold a collective land title and have enacted an inter-community benefit-sharing agreement based on customary laws. Principally, the Potato Park aims to protect the diversity of native potato varieties as well as other Andean crops. Depending on which type of classification system is used, the area boasts 650 potato varieties, or 1,200 according to traditional classifications. Efforts to safeguard and enhance food systems and native agrobiodiversity is rooted in indigenous biocultural heritage, traditional knowledge, and community-led and rights-based methods of management. Concretely, measures implemented included the diversification of crop planting with some farmers planting as many as 200 potato varieties. Additionally, working with the International Potato Centre, 410 locally adapted potato varieties, samples of which had been collected from the area in the 1960s and 1970s, were reintroduced further supporting the diversification and protection of agricultural resources. Furthermore, other biocultural innovations were documented in the Potato Park including the increased use of natural fertilisers and pesticides and shifting the range of cultivation to adapt to changing microclimates. The communal management structure of the Potato Park allows for collaborative learning through experimentation that can help communities effectively adapt local ecosystems to a changing climate.

Case effectiveness on

Climate change

Mitigation: Positive

The traditional grazing practices and highland pasture management methods maintained and expanded are reported to store carbon.

Adaptation: Positive

Increases in genetic diversity and the number of resilient potato varieties in the Potato Park have reportedly reduced the risk of crop failure from frost, drought



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Targets poor/disadvantaged

Intervention type

Food production
Protection

Ecosystem type

Montane/Alpine
Terrestrial production

Climate change impacts addressed

Loss of food production
Other climate impact

Instigators

Community/self driven
Local NGO or CBO (eg. indigenous)

Societal challenges

Biodiversity conservation
Climate change adaptation
Climate change mitigation
Conflict and Security
Economic and Social development
Food security
Health

Literature info

Grey literature
Case methodology not reported

External case resources

Read resource 1
Read resource 2

and disease. The use of climate-resilient potato varieties found to be resistant to particular climatic stressors as well as the improved mobility of potato cultivation (allowing for adaptation to changes in local microclimates) are reported to have contributed to greater resilience of local agricultural systems.

Ecosystem health

Ecological effect: Positive

Potato diversity is reported to have almost doubled since 2003, reaching 1,345 native potato varieties (650 different varieties according to non-native classifications) in 2012. Improved agrobiodiversity is reported to maintain ecosystem service functioning including improved soil fertility and pollination. Genetic diversity is reported to have increased, leading to more resilient agroecosystems. Terracing has reportedly improved soil quality and reduced soil erosion. The Potato Park's reforestation work has supported the restoration of key forest ecosystems.

Socioeconomics

Potato yields have reportedly increased slightly since 2002 despite documented severe climate change impacts. The share of households that reported being self-sufficient in basic foods in 2012 was found to be high and had remained stable since 2003. Average household income is reported to have almost doubled between 2003 and 2012, and income exceeded expenditure for the first time in 2012. Ecotourism has facilitated the diversification of local incomes and revenues from ecotourism are currently reported to make up the largest source of income for the local economy. Health benefits from increased consumption of more nutritious foods have been reported. Expert respondents working with the project reported that competition for resources has been replaced by collaborative management.