



A woman drives a herd of llamas in the Peruvian Andes. The Andean highlands of Peru are heavily affected by climate change. An SDC-supported project aims to safeguard the livelihoods of poor rural communities by helping them become more resilient to the effects of climate change. The SDC is working to find solutions with project partners at local, regional and national levels.

MOUNTAIN FARMERS WEATHER THE EFFECTS OF CLIMATE CHANGE

In the Andes, the effects of global warming are already clearly visible. The SDC's Adaptation to Climate Change Programme (PACC) responds to this situation by seeking to help communities of the Peruvian Altiplano become more climate resilient.

Peru is one of the countries that is hardest hit by global warming. And the phenomenon shows no signs of abating – in 2030, the average temperature will have risen by at least 1.5°C. In 40 years' time, the people of the Andean highlands will have only 60% of the water resources that they have at their disposal today.

This development jeopardises the livelihoods and survival of communities in the La Puna region, in the south-east of the country. While fluctuating temperatures and low rainfall have always been a feature of this ecosystem, climate change accentuates their impact, which in turn threatens the livelihoods of the local population who are heavily dependent on agriculture and livestock farming. If these communities fail to adapt, many will be forced to leave their ancestral lands or endure a life of extreme poverty.

Reliable weather forecasts

PACC helps to reduce the vulnerability of these communities to the effects of climate change. The programme, which was launched in 2009 by the Peruvian government and the SDC, is jointly implemented by the Peruvian environment ministry and several regional authorities. Associations from both Switzerland and Peru as well as private stakeholders are also involved. Efforts on the ground are concentrated in two regions: the Huacrachuco catchment areas in Cusco, and the Mollebamba catchment area in Apurímac. Over 1700 families in 21 rural communities are direct beneficiaries of the project.

The effectiveness of climate change adaptation relies heavily on the accuracy of knowledge and predictions on likely climate change developments. Peruvian experts from the National Meteorological and Hydrology Service (SENAHMI) therefore have run courses on the collection and reading of meteorological data. This is how Silverio Choquenaira, a farmer in his fifties from Cusco, learnt to put into words the increasingly unpredictable effects of climate change which he observes. Three times a day, he goes to the Huacrachuco weather station, where he records the temperature and wind strength. If his readings indicate that violent downpours, hail or frost are imminent, he immediately transmits this information to the local radio stations. Silverio's weather forecasts are particularly appreciated by other farmers in the region because they enable them to take the necessary action to protect their harvests from the damaging effects of unexpected changes in temperature.

Involving the local community

The PACC management team organises regular friendly competitions that pit rural communities against one another. These are a clever way of raising awareness of climate change adaptation techniques. The local authorities reward inhabitants who use natural fertilisers on their vegetable patches or who have carried out work to improve communal reservoirs and water pipes. In certain regions of the Andes, small reservoirs, known as qochas in the Quecha language, are built to store rain water. Given diminishing

rainfall levels, these small artificial lakes help communities deal better with periods of drought. The PACC management team have encouraged 18 local communities to develop existing qochas by creating channels that will supply water to irrigate agricultural land and keep cattle hydrated.

“The impact of climate change knows no national borders. It affects everyone, all over the world, and is particularly hard on those whose livelihoods depend directly on the natural environment.”

These few examples illustrate the diversity of efforts on the ground and the instrumental role that local participation can play in the attainment of PACC’s objectives. Local communities are more than able to decide which technique will bring the most benefit to them and to the preservation of the environment in which they live.

Cooperation with an international team of scientists

The PACC project has helped to make the Peruvian authorities aware of the critical challenges that global climate change poses for their country. The Peruvian government now incorporates environmental criteria in other national projects, such as Haku Wiñay which aims to safeguard food security in 17 regions of Peru. The international scientific community is also an important contributor to PACC. This consortium is led by the Institute of Geography of Zurich University and comprises assorted partner institutions from Switzerland and Peru. Training climate specialists at Peruvian universities provides the country with a supply of experts who are not only equipped to implement projects like PACC and Haku Wiñay but are also well-acquainted with the terrain and the customs of local Andean communities.

A real step forward

Another important feature of PACC, besides the involvement of the national authorities and the dissemination of knowledge, is the participation of women at all levels. The SDC has made concerted efforts to make women aware of the challenges posed by climate change, to enable them to play an active role in efforts on the ground and to ensure their inclusion in all decision-making processes. PACC has been cited in several recent discussions on the role of women in climate change adaptation, such as the discussion which took place during the Paris Climate Change Conference (COP 21) in December 2015.

“Swiss expertise helps communities affected by climate change as well as public and private institutions develop measures that build resilience in areas such as water, food security and disaster risk reduction.”

PACC also receives considerable attention in international climate talks, to which Switzerland brings significant added value thanks to its project experience. One reason for the high level of interest in PACC is that it offers concrete recommendations on climate change adaptation, which is in contrast to international discussions that tend to focus on efforts to combat global warming and reduce CO₂ emissions. Through its projects and initiatives, Switzerland makes a significant contribution to key climate issues, which will have a decisive impact on the future of other countries.



Schoolchildren learning how to grow vegetables sustainably in the Andean highlands of Peru.

GLOBALISATION THAT PROMOTES DEVELOPMENT

- Protecting the environment and natural resources
- Renewable sources of energy and greater efficiency
- Efficient use of resources

International rules that promote development also allow small and poor countries to assert their rights. The international community's collective rules must be formulated in such a way that all countries understand their environmental rights and can be integrated into the global market in a lasting way.

Switzerland plays an active role in the UN environmental organisations, the World Bank, regional development banks and the UN Food and Agriculture Organisation (FAO).

But developing countries too must make a contribution and assume their obligations. These include a sustainable and efficient use of the environment and its resources, and the provision of non-fossil energy sources.