



# Piloting Benefit-Sharing Mechanisms and Influencing National Policy in Peru



## Outcome Stories

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**Water Use in the Cañete River Basin**  
People who live in a healthy watershed benefit from its steady supply of water in many different ways, using it for households, agriculture, and industry. In many cases, however, the benefits derived from water are inequitably distributed among water users. Mechanisms that redistribute the benefits are known as *benefit-sharing mechanisms* and are most likely to be successful in places where water supply from ecosystems upstream is combined with a high demand for water downstream.

This is the case in the Cañete River basin in Peru, where farmers, rural households, hydropower companies, industry, and the population of Cañete town rely on the ecosystem upstream to supply them with water.

## OUTCOMES

- ✓ The Ministry of Environment established a new scheme for rewarding ecosystem services in the Cañete River basin and designated the basin as an official pilot for a national benefit-sharing program, which, if successful, could be scaled up and implemented in an additional fifty-three river basins.
- ✓ The ministry also developed an ecosystem services law, aimed to foster more benefit-sharing mechanisms, scheduled to be ratified during 2014.

The Cañete River basin stretches across 6,000 square kilometers in central Peru. The Cañete River rises in the Andean mountains at 4,000 meters of altitude and runs down to the Pacific Ocean. In upstream areas, annual precipitation rates are as high as 1,000mm, whereas the landscape downstream is much more arid. Water users include farmers and rural households in the upper part of the basin, shrimp farmers and hydropower companies at the mid-level, and more farmers, industry, and the urban population of Cañete town downstream. In this watershed, the ecosystem upstream supplies most of the water that is used downstream.



However, the ecosystem in the Cañete basin is changing. During the past forty years the number of glaciers in the watershed fell from seventeen to eleven and their ice cover shrank by 40 percent. Pollution from mining and wastewater from rural households is adversely affecting water quality, and farmers in the basin are already reporting that they cannot export their products due to polluted water. In the upper parts of the basin, extensive livestock grazing is depriving soils. Ecosystem degradation is seriously jeopardizing the future availability of water in the basin.

#### Evaluating the Effects of Benefit-Sharing Mechanisms

The International Center for Tropical Agriculture (CIAT) and other partners worked under the CGIAR Challenge Program on Water and Food (CPWF) to develop methods to anticipate, monitor, and measure the effects of introducing a benefit-sharing mechanism in the Cañete River basin.

A benefit-sharing mechanism can help create a virtuous circle between the welfare of people and the ecosystems they live in. They are intended to redistribute the benefits of a healthy watershed equitably between all water users. Typically, a benefit-sharing mechanism is a series of agreements on how to use land and water in ways that protect the environment, are sustainable, and account for climate change. The agreements also outline how downstream water beneficiaries can provide financial and other benefits—including schools and health care—to the upstream communities that care for the environmental health of the basin.

To be successful, a benefit-sharing mechanism must be designed with the local social and hydrological context in mind and should continuously be revised to respond to the ever-changing needs of communities and the environment.

#### About CPWF Outcome Stories

The CPWF Outcome Stories document changes in knowledge, attitudes and practices that have emerged through CPWF-funded research. Outcomes occur when research outputs foster engagement processes that result in changes in practice or changes in behavior. These stories capture outcomes at a specific point in time; outcomes may have evolved since the completion of these projects.

In the Cañete River basin, local water users have an explicit interest in developing a benefit-sharing mechanism in order to maintain a healthy ecosystem and long-term water supply. Through multi-stakeholder meetings, CIAT and its partners found that water users downstream recognize the benefits they receive from the ecosystem upstream and are willing to reward the upstream communities for maintaining the ecosystem. This makes the Cañete River basin an ideal site for introducing a benefit-sharing mechanism.

#### Rewarding Water-Related Ecosystem Services in the Cañete Basin

Since 2010, CPWF and CIAT had advised the Peruvian Ministry of Environment on how to design a benefit-sharing mechanism in the Canete River basin. When in 2013, the International Fund for Agricultural Development (IFAD) partnered with the ministry to support such a benefit-sharing mechanism, CIAT leapt at the chance to put its research into use.

The ministry introduced a rewards for ecosystem services scheme designed to allow communities downstream to continue to benefit from water-related ecosystem services, while ensuring that part of the benefits are transferred back to the people who maintain the ecosystem upstream. This reciprocity, in the form of an economic retribution, is expected to promote sustainable

use of the ecosystem and its biodiversity.

CIAT helped the Ministry of Environment and IFAD establish the new rewards for eco-system services scheme in three ways: CIAT's experience and research on benefit-sharing mechanisms influenced the design of the trust fund; CIAT helped determine the priority areas where the trust fund might invest in ecosystem conservation; and CIAT helped determine the value of different ecosystem services (considering also the opportunity costs for ecosystem service providers), thereby establishing the foundation for a financial retribution scheme.

Transferring resources from relatively wealthy communities downstream to poorer communities upstream will not only spur ecosystem maintenance and conservation, but also help rebalance socioeconomic inequity and reduce water-related conflicts.

Yet, putting in place a rewards for ecosystem services scheme is institutionally and legally challenging; no institutions currently exist at the watershed level, leaving no one to coordinate the implementation of the scheme. Similarly, water management and environmental protection planning takes places in two different sectors with only minimal coordination. Finally, national legislation in Peru does not yet accommodate the establishment of benefit-sharing mechanisms, although

that is about to change with the drafting of a new ecosystem services law.

The Ministry of Environment has designated the Cañete basin as an official pilot site for a national benefit-sharing program. If successful, the rewards for ecosystem services scheme in the Cañete basin could be replicated in another fifty-three basins in Peru, furthering more equitable sharing of water across the country.

#### Impacting National Policy in Peru

When the Ministry of Environment began drafting a new, proposed ecosystem services law, it approached CIAT and other organizations to seek advice on how to ensure that the law would foster benefit-sharing mechanisms.

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CIAT has advised on scientific, technical, and linguistic aspects of the new law.

CIAT has helped to ensure that the draft law is carefully phrased and can be easily understood by all stakeholders. For example, CIAT and its partners have suggested that the draft law refers to “retribution”—a term that encompasses both compensation and rewards—rather than “payment for ecosystem services” to avoid a potential misunderstanding of the law as an attempt to commodify a natural resource. In addition, the law provides national definitions for terms such as “ecosystem services”, “retribution for ecosystem services”, and “ecosystem services beneficiary”—another

important step toward integrating benefit-sharing mechanisms into national policy.

In December 2013, the Peruvian congress commission that is mandated to evaluate laws related to indigenous communities and environmental affairs voted in favor of the law. Before the vote, CIAT was invited to contribute to discussion of the law in congress and explained the rationale and importance of the law. The Peruvian congress is scheduled to vote on the ratification of the law during 2014. If approved, the law is expected to create a much stronger enabling environment for the establishment of benefit-sharing mechanisms in the country.

## References

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## About CPWF

The CGIAR Challenge Program on Water and Food was launched in 2002, with the aim to increase the resilience of social and ecological systems through better water management for food production (crops, fisheries and livestock). We do this through an innovative research and development approach that brings together a broad range of scientists, development specialists, policy makers and communities, in six river basins, to address the challenges of food security, poverty and water scarcity.

The CPWF is part of the CGIAR Research Program on Water, Land and Ecosystems. WLE combines the resources of 11 CGIAR centers and numerous international, regional and national partners to provide an integrated approach to natural resource management research. The program goal is to reduce poverty and improve food security through the development of agriculture within nature. This program is led by the International Water Management Institute (IWMI).

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