

CASE STUDY

Intensifying and Diversifying Farming through Community Irrigation



Community-managed irrigation in eastern Nepal. Photo credit: Narendra Shrestha/ADB.
Production potential can be achieved through small-scale irrigation systems powered by a community-driven process.

Overview

Irrigation is one of the main keys to increasing the production of staple crops to meet the growing gap between agricultural production and the needs of the expanding population. Unfortunately, the majority of Nepal's small and marginal farmers suffered from poor yields and low productivity due to limited or no access to irrigation and improved agricultural technology.

To address this challenge, the Government of Nepal, with financing from the Asian Development Bank (ADB), established the Community Irrigation Project. This successfully provided irrigation for about 17,000 hectares of farmland.

Project snapshot

Dates	<ul style="list-style-type: none"> • 27 September 2010: Approval Date • 15 July 2018: Close Date
Cost	<ul style="list-style-type: none"> • US\$ 24.40 million: Amount of Loan
Institutions and Stakeholders	<p>Financing</p> <ul style="list-style-type: none"> • Asian Development Bank <p>Executing agency</p> <ul style="list-style-type: none"> • Department of Local Infrastructure Development and Agricultural Roads, Nepal

Development Challenges

Poverty in Nepal is much higher among the landless and marginal farmers than among those with small or medium landholdings. The cause of higher poverty is the poor quality of land operated by marginal farmers and their limited access to agricultural inputs particularly irrigation systems, chemical fertilizer, high-yielding seed varieties, and funding.

Small farmers without irrigation include the economically poor and disadvantaged Dalit and Janajati people who live and cultivate rain-fed land in peripheral water-scarce areas on steep slopes away from fertile and water-rich valleys in the hills and on the fringes of irrigation systems in the plains.

Context

Without access to irrigation, farmers like Padmi Dharala could barely yield rice from their land. Likewise, their harvests were just for household consumption and not as extra income that they can use to pay their bills.

“In the area where Dharala lives, farmers have traditionally spent a lot of time repairing and maintaining an obsolete irrigation system. The modest structure was built from fallen tree trunks and boulders prone from water loss due to seepage from earthen canals,” said Kal Bahadur Kathayat, Chairman of the Rami Jiulo-Mul Kulo Water Users Association.

Solution

In 2010, ADB approved the funding for Nepal's Community Irrigation Project. This was designed to support small-scale irrigation projects in 12 districts and to promote participatory irrigation planning and management, with a focus on helping women, the poor and other disadvantaged groups of the project areas.

The initiative intended to balance irrigation infrastructure support with the strengthening of community water groups and government agencies and the transferring of modern agriculture technology to small farmers.

Actual Outcomes

The project has provided irrigation for about 17000 hectares of farmland through construction and renovation of 456 irrigation subprojects.

After the irrigation systems were built, rice production has intensified. Produce has been doubled. Farmers also were able to diversify their crops - producing vegetables, potatoes, corn, as well as other seasonal vegetables. This resulted in higher household income. One of the farmers in the project area increased his annual income 2.5 times because of the improved irrigation system.

Mukhtor Khamudkhanov, ADB's Country Director for Nepal, said that the project's capacity to quickly provide direct benefits to the farmers who need it most is its advantage. "Many farmers feel the benefit of the project in just a few months, compared to larger infrastructure projects, which can take much longer to help those in need," he added.

For Dharala, the improved irrigation allowed her to shift to commercial farming, cultivate crops for three seasons a year, and earn additional income. She used this to pay the school fees for her children and buy new clothes for herself and her family.

Lessons

Irrigation plays a critical role in Nepal's poverty reduction and food security strategies. Access to irrigation increases food production, on-farm employment, and household income thus reducing the severity of rural poverty.

With reliable irrigation, farmers will be able to maximize the potential of their lands, intensify their production, and diversify their crops all year long.

Moreover, the potential of community irrigation projects can be leveraged through the following:

- Establishing water users association and training them to efficiently manage improved irrigation infrastructures
- Training farmers on how to apply improved agricultural practices

- Giving farmers access to microfinance, and
- Enhancing the government's capacity to plan and coordinate small-scale irrigation projects.



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