



Photo Credit: Tom Van Cakenberghe/IWMI.

# Driving sustainable irrigation through farmer empowerment in Nepal

Numerous international organizations had tried to sustain irrigation projects in Nepal, but had limited success. The International Irrigation Management Institute (IIMI), as the International Water Management Institute (IWMI) was then known, developed an ingenious strategy that ensured the long-term sustainability of an irrigation system in central Nepal. The Government of Nepal stated that all international organizations working in local farmer-managed irrigation systems (FMIS) should follow this strategy, which has also been adopted as the basis for irrigation governance across Asia and Africa.

The Sindhupalchok District is a hilly area in central Nepal where the Indrawati River flows deep in the valley, making its water almost inaccessible for irrigation. Farmers were forced to build canals from the tributaries of the Indrawati River along the contours of the hills to irrigate terraced fields. These canals flooded during the monsoon and dwindled into a trickle in the dry season.



Photo Credit: Tom Van Cakenbergh/IWMI.

*The single water spout that served more than 250 households in the Dhap village over two decades earlier. It took a household half a day to collect one bucket of water.*

## Empowering farmers to get involved

In 1985, IIMI together with the Water and Energy Commission Secretariat (WECS), Nepal, and supported by a grant from the Ford Foundation for action research on FMIS in Nepal, recommended upgrading these irrigation systems. Nineteen irrigation systems were chosen out of more than 200 that were studied over two years. IIMI then discussed the way forward with the farmers of the selected systems. These discussions led IIMI to conclude that successful FMIS in Nepal was based on indigenous systems of governance that evolved as the systems were planned and built. IIMI decided to involve the farmers from the construction of the system, and to empower them to make their own decisions on its operation and maintenance.

The farmers were provided with a modest budget of NPR 100,000 and they contributed their labor for the construction of the irrigation system. They were involved at every stage of the project and were asked to prioritize the improvements they needed, starting with those they could not do themselves. IIMI and WECS also built farmer capacities by encouraging them to learn from other farmers who managed successful irrigation systems and adapt this learning to their own needs. A water users' association (WUA) was set up to control the system and ensure its upkeep and operation.

Placing farmers in the driver's seat resulted in the construction of the Subedar Ko Kulo irrigation system which still flourishes decades later.

## Transformed lives

Over 25 years later, IWMI staff visited the Dhap village and discovered a thriving and prosperous community. Villagers had depended on just one water spout for meeting the needs of over 250 households. Now the irrigation system provided a steady and continuous flow of water that has enhanced their livelihoods. The water is available for all household needs and livestock no longer travel long distances to the river. Agricultural production has increased substantially and villagers now have a balanced diet. Water diverted by the system is also used to operate two water mills and for producing micro-hydroelectricity.

"The irrigation system transformed our lives. If not for it, we wouldn't have enough food. Even our paddy fields have expanded and we grow many more crops. Having electricity means that we no longer face the hazard of kerosene lamps," declared Gamalath Sapage, cultivator, livestock owner and home gardener. She grows cabbage, onion, cauliflower, garlic and potato all year-round and harvests a paddy crop twice yearly. She sells the excess produce and the milk of the prize goats she owns. With this money she was able to build a life for herself and educate her daughter who now works in Kathmandu.

Joki Waiva, cultivator, herdsman and part-time tutor, and his wife Sanchamaya, keep buffalo and chickens. They use biogas for fuel and grow millet, wheat and mustard. Their son and daughter attend a college in Kathmandu. "The irrigation system sustains us like a mother. The electricity it provides has brought light into our lives and has helped educate adults too," said Joki.

Putting farmers in the driving seat encouraged them to actively participate in enhancing their quality of life. Subsequent IIMI studies confirm that farmer participation increased the value of the grant provided by the Ford Foundation by 140%.

According to Prachanda Pradhan, Institutional Specialist of IIMI at that time, who had been involved in the project since inception, the IIMI study has now influenced irrigation projects in Nepal, financed by the World Bank and the Asian Development Bank (ADB).

## Donors and partners

Ford Foundation; Water and Energy Commission Secretariat (WECS), Nepal.

## For more information

Contact Luna Bharati, Senior Researcher – Hydrology and Water Resources & Head of Office, IWMI, Kathmandu, Nepal ([l.bharati@cgiar.org](mailto:l.bharati@cgiar.org)).