LUFUMBU VILLAGE WATER PROJECT, Tanzania:
Offsetting Shortage in Water Infrastructure

How can water be supplied to areas that are not covered by the public water network? In sub-Saharan Africa, this question is of crucial importance. As of 2004, only 16 per cent of the population had household water connections (mostly in urban areas), and only 56 per cent had access to safe drinking water (only 42 per cent of the rural population). As a result, local initiatives are needed to fill the water gap. The case of the Lufumbu village, in South West Tanzania, illustrates how a small community can decide to build its own water supply scheme and effectively construct and manage such a scheme.

Lufumbu is a small village, in the Ludewa district, with a population of 6,180 people. Almost all the people in the village are poor, living on less than US$ 1 per day. Villagers earn a living through agriculture, growing food crops, namely maize, beans and other legumes, as well as cash crops, mainly coffee and banana. Incomes from agriculture are low due to absence of a reliable market for their crops. The problem of crop marketing is compounded by the remote location of the village and poor access roads.

Photo: UNDP/CWI – Lufumbu water supply project

Mobilising community effort for water supply

In 1992, the government conducted a survey to determine villages in dire need of water so that water projects could be constructed by using government funds. For reasons of budgetary constraints, Lufumbu was not selected. This disappointed the villagers. They sat down and, in a participatory way, voted to raise their own resources to establish a village water supply scheme.

The Water Tank

The scheme, which relies on a simple gravity principle, was designed jointly by the villagers and water technicians. Its costs, which did not excess US$50,000, were shared between the villagers (48 per cent), the Roman Catholic Church (10 per cent) and the United Nations Development Programme (42 per cent). With 10 kilometres of mains, a reservoir tank of 60,000 litres and 56 drawing points, the scheme was designed to serve the whole community. It was effectively implemented by the community itself, through a clear division of tasks. Adult men were in charge of the collection of sand, aggregates and stones, the construction of intake and reservoir tank as well as the excavation of the gravity main and distribution mains. Adult women were responsible for ferrying and loading of building materials and water, while older persons and children provided support, for example by cooking food for the workers. Consequently, the implementation of the Lufumbu project was quick. It took the villagers only 4½ months to finish the project.

Upon completion, the Lufumbu water scheme produced a wide range of results, going far beyond the anticipated objective. Access to water was dramatically improved, leading to a significant reduction in the incidence of water borne disease in the community. Agricultural productivity has increased, while additional initiatives to establish nurseries for coffee have contributed to the expansion of coffee farming. Housing has also benefited from this better access to water, as water is required to make brick houses. Hence, over 327 modern brick houses can now be seen towering around the Lufumbu village.

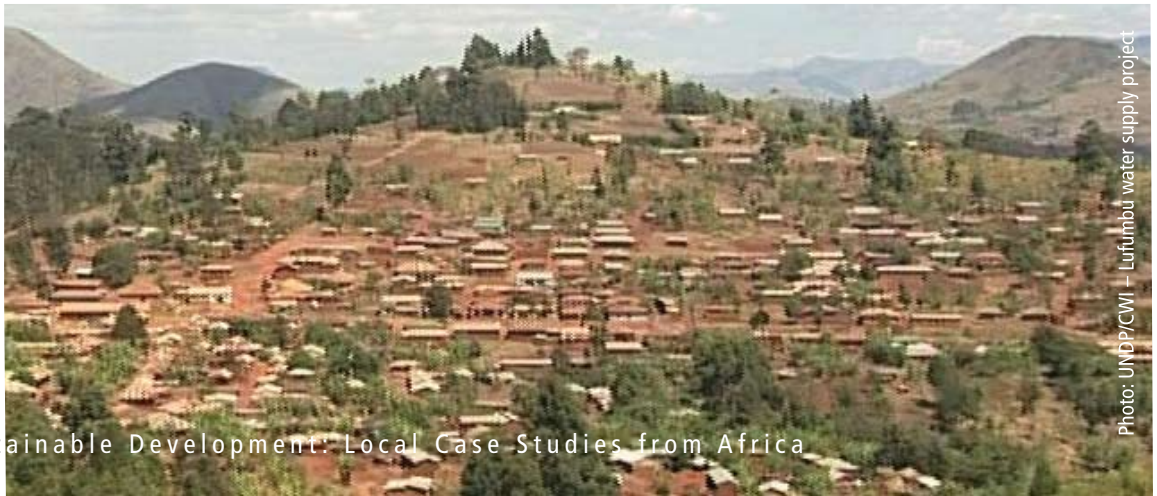
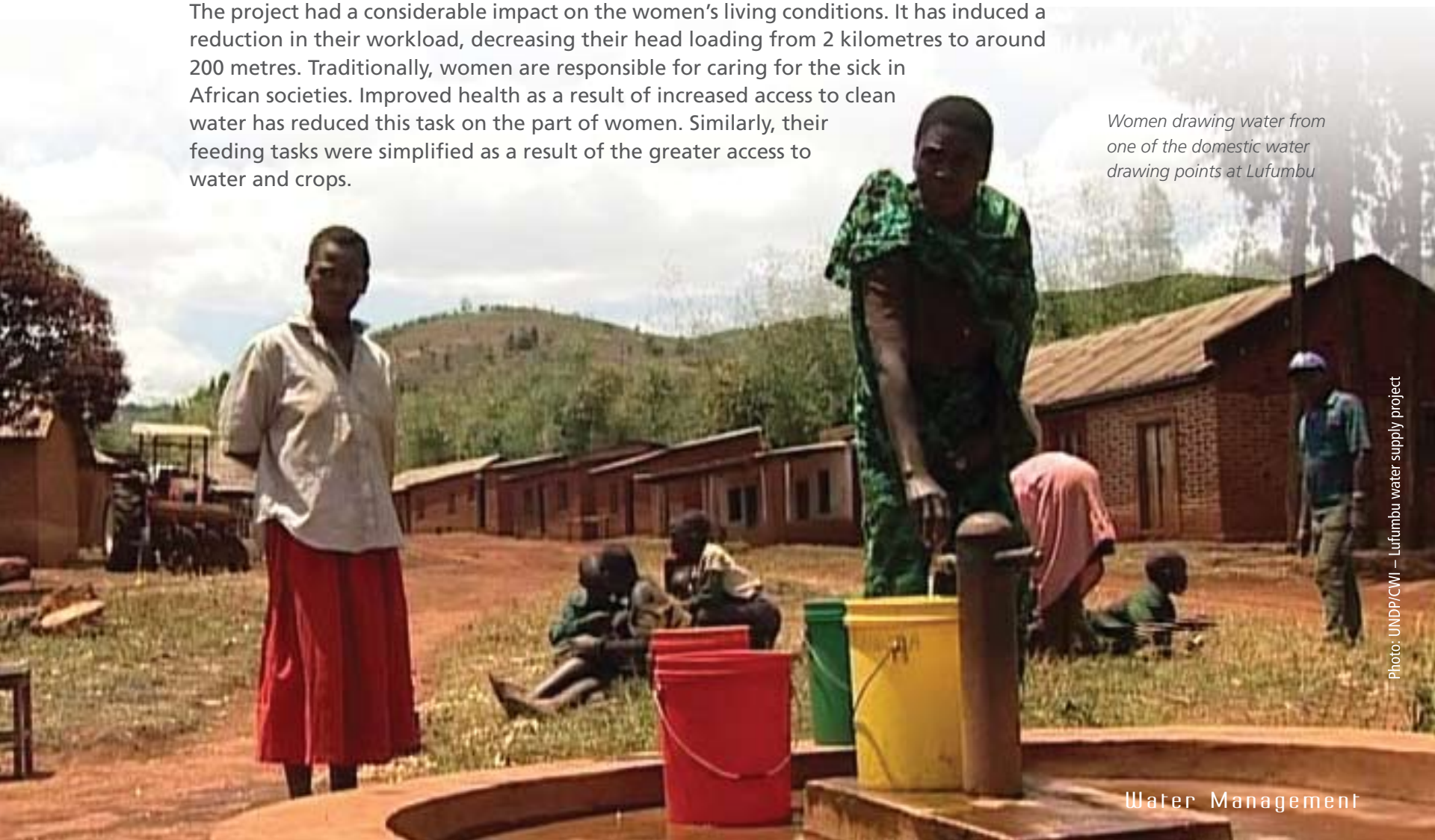


Photo: UNDP/CWI – Lufumbu water supply project

An overview of the Lufumbu Village

The easy access to water has also encouraged villagers to afforest and reforest their land. Valleys and hills that used to be bare are now covered by vegetation, attracting various species of birds, insects and small wild animals that had long disappeared. A long-term conservation strategy for the water source has been put in place. Villagers have planted and maintained trees with water retention properties in the catchment areas.

The project had a considerable impact on the women's living conditions. It has induced a reduction in their workload, decreasing their head loading from 2 kilometres to around 200 metres. Traditionally, women are responsible for caring for the sick in African societies. Improved health as a result of increased access to clean water has reduced this task on the part of women. Similarly, their feeding tasks were simplified as a result of the greater access to water and crops.



Women drawing water from one of the domestic water drawing points at Lufumbu

Photo: UNDP/CWI – Lufumbu water supply project

LUFUMBU VILLAGE WATER PROJECT, Tanzania:
Offsetting Shortage in Water Infrastructure

The village dispensary at Lufumbu is connected to the Lufumbu water supply system. Before the project, it was a huge challenge running a dispensary without a reliable water supply


Photo: UNDP/CWI – Lufumbu water supply project

Showcasing innovative water governance

The Lufumbu village case is truly innovative for at least three reasons. First, it shows how even infrastructure projects, which are assumed to be more technical and complex than other projects, can be owned by a community of poor villagers. The villagers, guided by their leaders, conducted an analysis of their situation and ranked water as their priority need without involvement of external support. Similarly, they participated fully in the design and the implementation of the scheme, although technicians were hired. They used their own resources to kick start the project. External resources came later to complement resources that had been provided by the villagers themselves.

Next, the water governance in this project has proved particularly efficient and transparent. The implementation of the scheme was divided into seven segments, each of them being managed by a committee. Through these committees, all community members were involved in project implementation. Likewise, the management of the scheme is ensured by a water committee that is elected democratically. It is constituted of villagers that have undergone training.

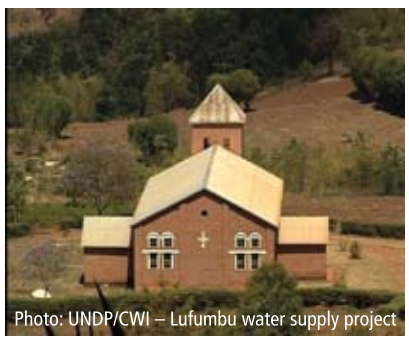


Photo: UNDP/CWI – Lufumbu water supply project

Construction of Village Roman Catholic Church building, using burnt brick, was made possible due to easy accessibility of water from the Lufumbu water scheme

Furthermore, the project has generated positive feedback for the whole region, through technological innovations. Lufumbu villagers invented and designed low cost reservoir tanks that use locally obtainable materials, namely stones and corrugated iron sheets. This invention has now been adopted by the District Government as the standard design for all community-based water schemes in the district.