

Improving water management is an essential component of sustainable development policies. It is critical for African development as it conditions various dimensions of economic growth and social welfare. Irrigation is a key determinant of agricultural productivity. Hydro-electricity can represent a large share of energy in countries where rivers are abundant. Access to drinking water is decisive for public health.

The management of water resources still poses challenges in many African countries. Fourteen of them, mostly located in the Sahel region and the Horn of Africa, experience water stress (less than 1,700 m³ per capita/year) or water scarcity (less than 1,000 m³ per capita/year)¹⁵. Natural conditions account for a large part of this difficult situation as most of Africa's continental landmass is classified as arid or semi-arid and 60 per cent of the population lives in zones with mean annual runoff of 300 millimetres or less¹⁶. However, water stress is also the consequence of underdeveloped infrastructure. The lack of dams and deep wells seriously reduces the capacity of local populations to collect and store water. Also, weak water and wastewater management plays an important role in the degradation of water bodies. The lack of water treatment facilities in urban areas reduces the access of the local population to potable water. The use of unsustainable agricultural practices contributes to soil depletion, land degradation, and wasteful use of scarce water resources.

If large-scale projects are needed to address strategic water issues, particularly to improve water infrastructure, local initiatives can also play a major role in improving water management. In terms of access to water, small infrastructure projects can provide coverage in areas not covered by larger municipal water networks. Hence, the Lunfumbu village case, presented in the first subsection, shows how a community of poor villagers can organise itself to define its priorities and manage the construction of a local water supply scheme. With this initiative, villagers challenged the long-held tradition among rural people of waiting for external resources or Government support funds to develop water infrastructure. They also showed that the improvement in local water management has widespread side-benefits for a community, from reductions in poverty and gender imbalance to biodiversity protection. Similarly, improvements in the micromanagement of large infrastructure, such as dams, can generate considerable benefits for human living conditions and for biodiversity. Thus, the second case study treated in this section, the Kafue Flat restoration case, highlights the importance of day-to-day management of water infrastructure. Following the construction of the Kafue Gorge hydro-electric dam downstream of the Flats, the Itezhi-tezhi Dam was built upstream in 1978 to store wet season peak flows, disrupting one of the richest wildlife habitats. Through dialogue and scientific research, local communities, non-governmental organisations and dam managers succeeded in restoring a water flow pattern similar to the one existing before the construction of the dam. Around 300,000 people are expected to benefit from the restoration of the Flat's ecological health.