



## **Lessons learned from the integration of local stakeholders in water management approaches in central-northern Namibia**

A. Jokisch and W. Urban

Darmstadt University of Technology, Institute IWAR, Water Supply and Groundwater Protection, Darmstadt, Germany  
(a.jokisch@iwar.tu-darmstadt.de, +49 61513758)

Water is the main limiting factor for economic and agricultural development in central-northern Namibia, where approximately 50% of the Namibian population lives on less than 10% of the country's surface area. The climate in the region can be characterized as semi-arid, with distinctive rainy and dry seasons and an average precipitation of 470 mm/a. Central-northern Namibia can furthermore be characterized by a system of so-called Oshanas, very shallow ephemeral river streams which drain the whole region from north to south towards the Etosha-Saltpan. Water quality within these ephemeral river streams rapidly decreases towards the end of the dry season due to high rates of evaporation (2,700 mm/a) which makes the water unsuitable for human consumption and in certain times of the year also for irrigation purposes. Other local water resources are scarce or of low quality. Therefore, the local water supply is mainly secured via a pipeline scheme which is fed by the Namibian-Angolan border river Kunene.

Within the research project CuveWaters – Integrated Water Resources Management in central-northern Namibia different small scale water supply and sanitation technologies are implemented and tested as part of the projects multi-resource mix. The aim is to decentralize the regional water supply and make it more sustainable especially in the face of climate change. To gain understanding and to create ownership within the local population for the technologies implemented, stakeholder participation and capacity development are integral parts of the project.

As part of the implementation process of rainwater harvesting and water harvesting from ephemeral river streams, pilot plants for the storage of water were constructed with the help of local stakeholders who will also be the beneficiaries of the pilot plants. The pilot plants consist of covered storage tanks and infrastructure for small scale horticultural use of the water stored. These small scale horticultural activities enable the users of the pilot plants to improve their standard of living by producing vegetables for self-consumption or for selling them on local markets. Irrigation for small-scale horticulture was virtually unknown in the region prior to the project which makes intense training for the local users necessary.

This paper summarizes the participative process of finding a pilot village and a suitable location along the ephemeral river stream as well as the process of selecting people from the local community for construction and for the operation of the pilot plant. According to the demand-responsive approach of the CuveWaters project, local stakeholders were involved in all these processes. Tools for participation used are workshops and interviews with local stakeholders and the integration of the users in all decision-making processes as well as in construction, maintenance, operation and monitoring.