

Sustainable water use in Cameroon

INTEWAR – Innovative Technologies for the containment of Water Associated Diseases



Many regions in Cameroon are heavily affected by extreme weather events such as floods and droughts, which promote the spread of water-associated diseases. Inadequate or unreliable water and sanitation infrastructure increases health risks, particularly in urban and peri-urban low-income areas. During crises, regular water supply often breaks down, leading to rapid outbreaks of cholera and other diarrheal diseases. Until now, Cameroon has lacked systematic emergency strategies to ensure safe water supply during such events. The INTEWAR project aims to develop practical and transferable concepts for disaster preparedness that integrate technical, institutional, and societal aspects. The motivation is to strengthen the resilience of local populations through preventive measures and to significantly reduce water-related health risks. Accompanying workshops, WASH training, and awareness campaigns supported capacity building and the long-term embedding of the developed solutions.

To develop location-specific risk management strategies, comprehensive data on land use, topography, infrastructure, population, and health status were collected and analyzed in the pilot regions. Based on this information, flood hazard and risk maps were produced to enable targeted planning of protection and supply measures. For drinking water supply during emergencies, mobile, decentralized treatment units were designed, installed, and tested under real-world conditions according to WHO guidelines. In addition, a pilot

decentralized wastewater treatment plant was planned, constructed, and operated to address hygienic risks holistically. Participatory processes ensured local stakeholders were involved in site selection, system operation, and capacity-building activities. The combination of technical, institutional, and social measures created a comprehensive framework for resilient water supply, emergency preparedness, and health risk reduction.



Well in the wetlands.

Key Results

A central outcome of the project is the successful development and implementation of a modular emergency water supply concept, which was tested in three pilot regions in Cameroon. Mobile, decentralized drinking water treatment units compliant with WHO standards were installed and made available to the population during disaster situations. A pilot facility for decentralized wastewater treatment demonstrated an innovative approach to reducing hygienic contamination of wastewater while simultaneously contributing to drought mitigation by reusing treated water for urban irrigation purposes. The tested technical solutions were complemented by operation manuals, training materials, and an operator model to ensure long-term usability. The project strengthened resilience to extreme weather events and sustainably reduced water-related health risks. Additionally, (digital) flood hazard and risk maps were developed as a planning tool for municipal and national authorities. Structured involvement of local stakeholders not only increased acceptance of the measures but also promoted knowledge transfer between research, practice, and administration.



Project overview

PROJECT TITLE

INTEVAR – Innovative Technologies for the containment of Water Associated Diseases

PROJECT PERIOD

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PROJECTPARTNERS

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MEMBER Johannes-Rau-
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