SMALL | Water supply and sanitation in small towns: the urban-rural intersection

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PROJECT DESCRIPTION

This innovative and interdisciplinary research focuses on **water and sanitation management in small towns** of Sub-Saharan Africa. In these towns, at the intersection between urban and rural, existing coverage of basic public services is lagging behind, hindering the achievement of SDG6 if concrete actions are not taken urgently. The research aims to **assess existing models of water and sanitation provision** by studying to what extent current infrastructural and management models reflect the specificities of small towns or rather mimic models implemented in large urban centres. This research will put **users at the forefront by integrating public health protection into the management models**, leading to a positive impact on health of users in the long run. The way technological solutions are being selected, and how financial, operational and commercial risks are allocated and distributed will be studied to transform the provision of water and sanitation services in an informed, inclusive and sustainable process. Moreover, this research will explore the **implications of existing and proposed management models and interventions for the users and how it affects the dynamics and interdependencies between urban and rural realities**. This research will ensure that the realities and possibilities of small towns are taken into account in national policies by producing specific knowledge on water supply and sanitation (WSS) in small urban settlements and providing concrete recommendations to improve current practices. This research will document the specific needs of small towns when it comes to water and sanitation management, both for productive use and human consumption taking into account the particular development processes within small towns as well as the urban/rural dynamics. In this way, this project will contribute, in coordination with local partners, to the development of **fit-for-use models** for water management and provision of water and sanitation services, which will potentially result in more sustainable outcomes for service providers and users.

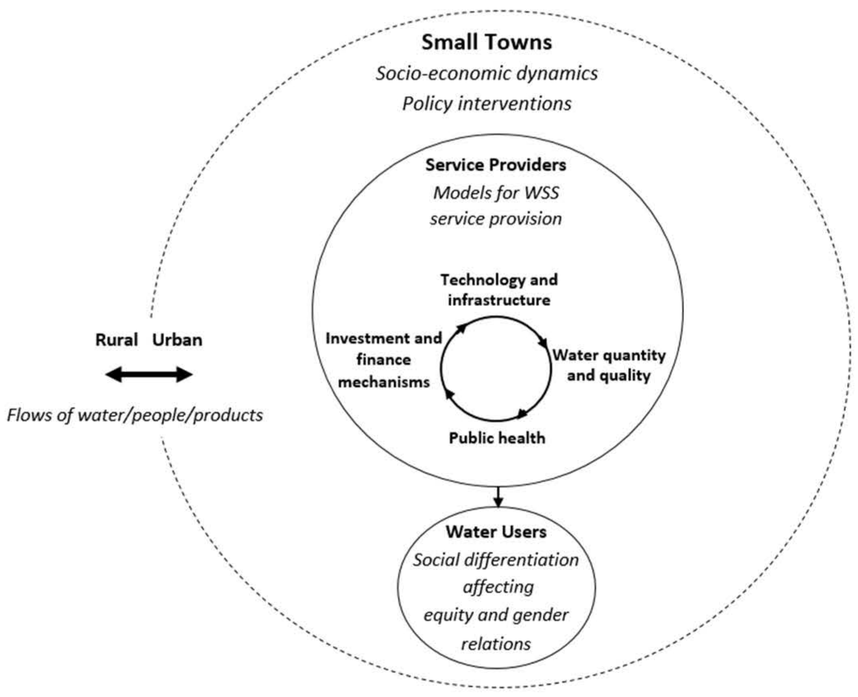
GOAL & EXPECTED OUTCOMES

The goal of this interdisciplinary research is to **develop** and facilitate the adoption of sustainable, efficient and equitable **models** for water supply and sanitation (WSS) service provision that suits the particular needs, capacities and dynamics of small towns.

The expected outcomes that this project envisions are the following:

- Authorities of WSS service provision in small towns are capable to deliver reliable and good quality services in an efficient and sustainable manner.
- Inhabitants of small towns receive improved WSS services regardless of their gender, age, social-economic class and location.
- Policies for WSS service provision in small towns are defined and tailored to the particularities of these small towns.

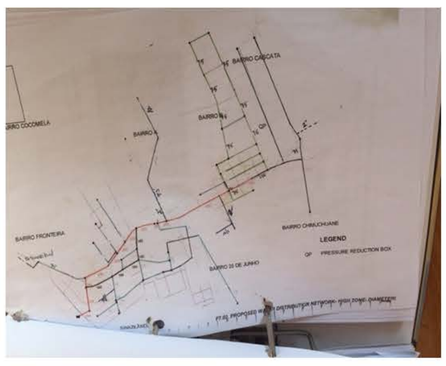
CONCEPTUAL SCHEME



The **models** comprise the following building blocks:
- management and operation systems,
- oversight and regulation development,
- financing mechanisms,
- infrastructural development,
- risk-based assessment and monitoring, and
- administrative physical and governance boundary definition.

Treatment station Caia, MZ

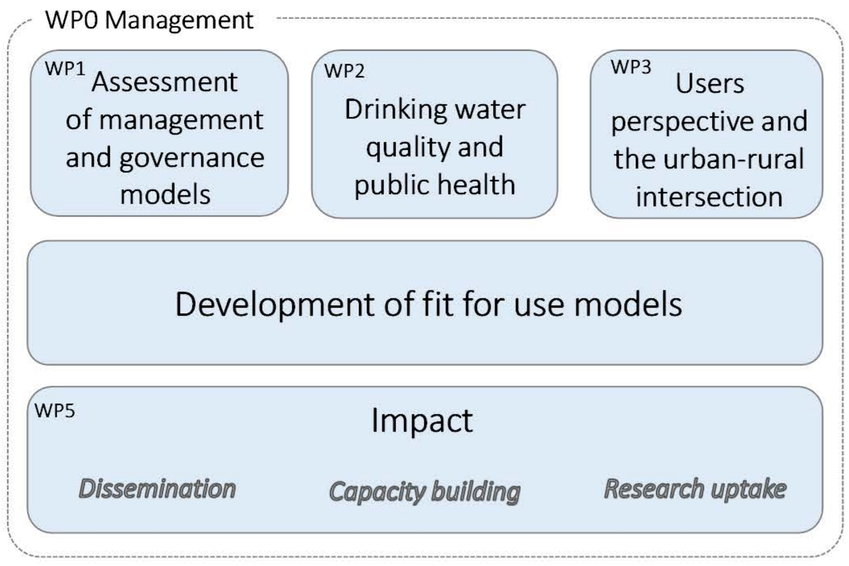
Water tower Moamba, MZ



Distribution network Namaacha, MZ

Overview small town Awila, UG (A. Cabrera)

METHODS



WP1 - Assessment of management and governance models

- Map water and sanitation schemes in small towns
- Analyse how models adjust or take into consideration the socio-economic characteristics of small towns
- Assess effects of dynamic populations on infrastructural (and management) models
- Describe how (private) operators develop their strategies in small towns

WP2 - Drinking water quality and public health: implementation of risk-based management of water supply systems

- Describe the current practices of water quality monitoring
- Describe spatial and temporal distribution of microbial drinking water quality, in relation to sanitation practices
- Implement Water Safety Plans in small-scale systems
- Design an ad-hoc water quality monitoring plan for small towns

WP3 - Users perspective and the urban-rural intersection

- Record the demography of the selected small towns and migration patterns in relation to (WSS) service provision
- Map the administrative and service provision boundaries of the selected small towns
- Assess implications of WSS service provision models and infrastructure development on access to and distribution of water and sanitation services among different groups of users
- Assess implications of WSS service provision models on urban-rural dynamics
- Study existing practices of citizens participation in WSS provision and identify opportunities for empowerment of users

WP4 - Development (and test) of fit-for-use models

- Comprehensive categorization of small towns using multi-scalar factors
- Development of fit-for-use WSS models taking into consideration technological choice, public health protection and dynamic contexts

WP5 - Impact

- Inception workshop in Mozambique
- Stakeholders preparatory workshop in Mozambique and Uganda
- Capacity building on public health, water quality monitoring and water safety plans
- Development of dissemination material with the outcomes of the project
- Development of research-into-use plans
- Sessions at WaterNet conference
- Dissemination through partners' networks

Case studies:
Uganda - Luweero region and Bushenyi region
Mozambique – Moamba, Mopeia, Mocuba, Chibuto

Thematic areas:
- Efficient water management, particularly in the agricultural sector
- Access to clean drinking water and basic sanitation

Cross-cutting themes:
- Water governance
- Climate change
- Gender & diversity

Total budget: 1,008,010 Euro
DUPC funding: 679,030 Euro

Project duration: 39 months (Q3 2016, 2017-2019)