

Designing for motivations in community-managed rural water supply

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Certificate of original authorship

I, Ian Cunningham declare that this thesis, is submitted in fulfilment of the requirements for the award of Doctorate of Philosophy (Sustainable Futures), in the Institute for the Sustainable Futures at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis. This document has not been submitted for qualifications at any other academic institution.

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List of acronyms

AACES	Australia Africa Community Engagement Scheme
ABCD	Asset Based Community Development
ACFID	Australian Council for International Development
ADC	area development committee
AI	appreciative inquiry
AMCOW	African Ministers' Council on Water
BPN	basic psychological needs
CADECOM	Catholic Development Commission
CBM	community-based management
CSDT	Center for Self-Determination Theory
CSO	civil society organisation
DC	District Commissioner
DFAT	Department of Foreign Affairs and Trade
DFID	Department for International Development
DRA	demand-responsive approach
DWDO	District Water Development Office
GDP	gross development product
GLAAS	Global Analysis and Assessment of Sanitation and Drinking-Water
GNI	gross national income
GoM	Government of Malawi
ICD	integrated community development
INGO	international non-government organisation
ISF	Institute for Sustainable Futures
JMP	Joint Monitoring Programme
KII	key informant interview
LGCD	local government and community development

M&E	monitoring and evaluation
MDGs	Millennium Development Goals
MGDS	Malawi Growth and Development Strategy
MoAIWD	Ministry of Agriculture, Irrigation and Water Development
MWK	Malawi kwacha (currency)
NCST	National Commission for Science and Technology
NGO	non-government organisation
NHMRC	National Health and Medical Research Council
NSO	National Statistics Office
O&M	operation and maintenance
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
ORT	other recurrent transfers
PAR	participatory action research
RAI	relative autonomy index
RWS	rural water supply
RWSN	rural water supply network
SBA	strength-based approach
SDGs	Sustainable Development Goals
SDT	Self-Determination Theory
SRQ	self-regulation questionnaire
TD	transdisciplinary research
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations' Children Fund
UTS	University of Technology Sydney
VDC	village development committee
WASH	water, sanitation and hygiene

WES Network	Water and Environmental Sanitation Network
WHO	World Health Organisation
WPC	water point committee
WPDx	Water Point Data Exchange

Village case study descriptors

The following table is included as a reference to help the reader navigate the six village cases and water committee member participants.

District and villages	Descriptor	WPC members and roles
Phalombe district villages	Villages in Phalombe district where CADECOM implemented integrated development projects using an asset-based community development (ABCD) approach. Boreholes were installed by CADECOM in each of these locations.	-
Helema	Village where the water point committee (WPC) had moderate efficacy. Members were relatively new, having replaced the previous WPC after corruption concerns.	Olivia (female,F), member Hendreson (male, M), member
Malekuwa	Village where the WPC had moderate efficacy. I have included a vignette from Cynthia who was from Malekuwa.	Cynthia (F), secretary Paul (M), chair
Nanchopwa	A village where the WPC had higher levels of efficacy. The water point was functional, but water salinity had led to some corrosion challenges.	Annie (F), secretary Francis (M), member
Blantyre district villages	Included villages in Blantyre district where CADECOM had implemented integrated development projects prior to adopting ABCD. Here they used a needs-based or 'top-down' approach.	-
Chilaulo	Village where Oxfam, not CADECOM, had previously installed the borehole. The management efficacy was low and relationship with users was poor.	Grace (F), member Esther (F), treasurer
Galufu	Village where Freshwater had previously installed the borehole. They also had shallow wells with handpumps. All were dry, the Freshwater borehole produced a minimal amount of water. The management efficacy was low.	Trish (F), member Charles, (M), chair
Nkhumba	A village where the WPC had higher levels of efficacy. The WPC were proactive and had access to an area mechanic. ABCD was introduced at this location part way through the relationship with CADECOM. However, no participants had memory of it. The borehole was installed by CADECOM.	Palesa (F), secretary Wisdom (M), chair

Thesis abstract

Malawi has achieved significant progress in rural water supply (RWS) coverage in the last 20 years. However, sustaining RWS services has proved difficult, compromising the health, economic, and education benefits associated with improved supply. As in most low-income countries, community-based management (CBM) is the dominant approach used in Malawi to manage RWS. In CBM, volunteer village water point committee (WPC) members are responsible for the operation and maintenance of RWS. The CBM model assumes a community's interest in sustained RWS will motivate them to take on management responsibilities. However, members' motivations have been oversimplified in academic and practice literature.

This doctoral research determined the drivers, nature and impacts of members' motivations. The research analysed: the types and quality of members' motivations; the influence of context, including an asset-based community development (ABCD) program approach, in shaping these motivations; and the implications of motivations for committees' management effectiveness. The research examined six WPC case studies in rural Malawi. Methods included semi-structured interviews, a borehole survey, and a motivation questionnaire. Self-Determination Theory, a theory of motivation, was used to explore motivation constructs. The theory proposes a continuum of motivation types determined by the degree to which behaviour is experienced as autonomous or controlled.

Most members' motivations were low to moderately autonomous. Higher-quality autonomous motives of WPC participation included the benefits of reduced water collection times, pro-social motives, and enjoyment associated with collaboration and opportunities to exercise initiative. Members' autonomous motivations were internalised, and associated with persistence and navigating management challenges. Controlled motives also drove members' participation, these included status-seeking, avoiding shame, and avoiding disappointing users and donors. Such motivations were lower quality, tenuous, and associated with feelings of pressure.

Autonomous motivations were supported by a positive WPC–user relationship, social and technical support from others, and the relevance of RWS to community development goals. These conditions supported members’ psychological needs of autonomy, competence, and relatedness, and were a precursor to autonomous motivations. Regarding relevance, the ABCD approach helped participants endorse water projects. Participants contrasted the approach with top-down “imposed” projects, which along with an absence of district and development partner support, were reported as controlling and demotivating.

A nuanced understanding of motivations is critical in sustaining RWS services. Thesis findings point to the importance of approaches to CBM which support members’ autonomous motivations. When this is done, members’ internalised motivations are likely to result in both improved management outcomes and RWS services.