6 CLEAN WATER AND SANITATION

POLICY BRIEF SEPTEMBER 2019





RURAL WATER RESOURCES MANAGEMENT AND WATER SUPPLY

LESSONS AND RECOMMENDATIONS FROM GCCA TANZANIA

This policy brief is based on the experiences of water resources management and water supply interventions of five climate change adaptation projects in Tanzania, financed under the EU-funded Global Climate Change Alliance (GCCA) initiative in the period 2015 to 2019. The policy brief is directed to policy and decision makers in rural water resources management and water supply, as well as related sectors such as agriculture, livestock and fisheries. The policy brief outlines the challenges encountered in the areas where the five projects were implemented and provides some recommendations to address these.

The five GCCA Tanzania projects are:

- Community Forests Pemba Scalable Resilience: Outspreading Islands of Adaptation (Pemba Island)
- **EcoAct** Eco-Village Adaptation to Climate Change in Central Tanzania (Dodoma)
- **ECOBOMA** A Climate Resilient Model for Maasai Steppe Pastoralists (Arusha)
- IGUNGA ECO-VILLAGE PROJECT (Igunga)
- Integrated Approaches for Climate Change
 Adaptation in the East Usambara Mountains
 (Muheza)









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KEY MESSAGES

- Tanzania water policies and regulations rightfully emphasise the role of communities in the design, construction, and Operation & Maintenance (O&M) of rural water supply systems
- Many Community Water Supply Organisations (COWSOs) are now operating at grassroots level, but are facing serious capacity and governance challenges that are not sufficiently addressed and that hamper effective O&M of the water supply systems in their communities.
- Tanzania has good legislation on the protection and management of rural water resources, but compliance is hampered by a lack of awareness, and an overall lack of enforcement.
- The policy and regulatory frameworks and technical guidelines related to rural water focus primarily on the domestic water supply and provides little guidance on other important rural water uses like agriculture, livestock and fisheries.
- Climate change is impacting directly on rural water resources and water supply systems, but is not yet considered in the key policy and regulations governing the rural water sector.

KEY RECOMMENDATIONS

- Strengthen the compliance with existing laws for water resources protection and management, through awareness raising on their importance and through the Rural Water Supply and Sanitation Agency (RUWASA) as foreseen in Act Supplement no. 5 of 2019.
- Strengthen the support to existing COWSOs through a process of continuous backstopping and monitoring, both on technical aspects and on governance aspects. This requires stronger linkages between communities and district staff (and the RUWASA) as well as timely and sufficient financing.
- To increase revenue collection, the wider use of revenue collection agents is recommended ¹.
- It is recommended to give more attention to non-domestic water uses (agriculture, livestock and fisheries in particular) in policies and regulations relating to rural water supply and management.
- Climate change needs to be mainstreamed at all levels of the policy and regulatory framework for rural water management.

INTRODUCTION

Clean, safe and an adequate water supply is vital for the survival of humanity, the existence of ecosystems as well as for socio-economic development. It is an essential pre-requisite for the achievement of the Sustainable Development Goal (SDG) six, which calls for universal and equitable access to safe and affordable drinking water for all by the year 2030. Tanzania's national Five-Year Development Plan 2017 – 2021 aims to have 85% of the rural population with access to piped or protected water sources by 2021.

The water sector is governed by the National Water Policy (NAWAPO) of 2002. The policy and the related Act no. 12 of Water Supply and Sanitation of 2009 and the Act Supplement no. 5 of 2019 underscore the importance of involving rural communities in the planning, implementation and management (including water fee collection) of water supply projects to ensure their sustainability through the establishment of the COWSOs.

Growing population pressure and growing demands for agricultural, livestock and industrial activities are increasingly threatening our water resources. Climate change, Climate change, with its predicted increase in extreme droughts and declining water resources will be compounding the problem, if not already doing so. The GCCA Tanzania projects have supported water interventions (for domestic and nondomestic use) as part of their drive to increase the adaptive capacity of the rural communities in their areas. Their experience shows that the management of water resources and water supply systems in rural areas is a complex issue that goes well beyond technical challenges and requires strong community involvement and capacity.

CHALLENGES

Based on the experience of the GCCA projects a number of key challenges have been identified that currently hamper effective climate change adaptation through water interventions.

Inadequate enforcement of by-laws and regulations for the protection of water resources

There is an urgent need to strengthen compliance with the laws and regulations governing the effective management of water resources in the rural area. The GCCA projects found for example that the rule to maintain a 60-meter buffer around water sources as required by the Environmental Management Act of 2004 is largely ignored. Also, political and economic interests are at times interfering with different initiatives that try to effectively protect and manage water resources in many of the basins. Awareness raising and effective engagement of policy makers on the rationale for wise water resources management in a changing climate is called for.

Limited awareness and capacity amongst water users

The main cause that hampers effective management of water resources and in particular effective O&M of water supply systems is a lack of awareness and of management capacity, rather than technical challenges. The projects also learnt that communities' awareness of possible impacts of climate change, which greatly affects water resources, is still low. Continuous awareness building, capacity building and technical backstopping on these aspects is required to enable the communities to understand, plan, supervise and effectively operate and manage their water resources and systems.

Little policy guidance on management of water infrastructure for agriculture and livestock

Act no.12 and the Bill Supplement of 2018 that operationalise the NAWAPO focus on domestic tap water supply systems and do not explicitly address the institutional and management requirements for rural water resources and water infrastructure for nondomestic uses. Several GCCA projects supported rehabilitation and construction of earth dams and small ponds for agriculture and livestock and found that the regulatory framework lacks guidance for the institutional set up that should ensure effective operation and management of these dams and ponds. It is furthermore important to ensure that the design of dams and ponds consider the surrounding environment. In pastoral areas for example water availability should be aligned with pasture availability to avoid land degradation from overgrazing. These aspects are currently not explicitly addressed in regulations and guidelines.

Lack of transparency and accountability

Some of the COWSOs formed to manage the community water supply systems have been accused of corruption and of misappropriation of revenue from water fees. This has led to conflicts in these communities and to people reverting back to using traditional unsafe water sources. Unfortunately, the financial audits, which are legally supposed to be conducted on a quarterly basis, are often not conducted due to poor documentation as well as non-attendance of district council officials mandated to carry out such activities.

Climate change not considered in water policies and regulations

The current NAWAPO and related regulations on rural water do not make any reference to the impact of climate change on water re-



sources. This impact can however be substantial, as some of the projects experienced firsthand when wells and ponds dried up prematurely during the drought in 2016/2017 and with heavy rainfall causing some damage to dams and gravity schemes in the 2017/2018 rainy season.

Although these events in themselves do not constitute proof of climate change, current climate change scenarios indicate that this type of event is likely to occur more frequently in the future.

POLICY RECOMMENDATIONS

Based on the challenges outlined above, a number of policy recommendations have been formulated. These recommendations can be adopted and implemented at different levels of jurisdiction, including but not limited to the COWSOs, district councils and at national level.

Improving legal and institutional arrangements

Community members often do not adhere to by-laws governing the protection of water resources and water supply systems in their areas. The establishment of the RUWASA in line with the Water Supply and Sanitation Act 2009/2018 signifies a key milestone in strengthening the adherence to the laws and regulations. This now needs to be combined with increased awareness raising at community level and amongst politicians on the importance of adhering to water by-laws to ensure the sustainable management of water resources and water supply systems for the benefit of current and future generations.

Strengthen community capacity and governance for management of water supply systems for domestic and nondomestic uses

More attention is needed for continuous capacity building of communities to ensure that water supply systems are effectively operated and maintained. The projects have promoted strong linkages between local communities and district councils and this has turned out to be a key aspect in promoting sustainable management. Regular monitoring and backstopping by district staff and the RUWASA is therefore strongly recommended, but will require sufficient and timely financing.

Monitoring and backstopping should not only look at O&M issues of domestic water systems but also of water supply systems for other uses, agriculture and livestock in particular. It should also not be limited to technical support but should also address governance aspects. There are often issues with transparency and accountability at community level, with COWSOs not managing



water fee revenues in a transparent manner. Elsewhere in Tanzania there has been a positive experience with the use of revenue collection agents (service providers as per section 37 of Act no. 5 of 2019), who have managed to substantially increase revenue collection compared to collection directly by COWSOs. Such a system could be rolled out more widely in the country.

Appropriate technical guidelines

Making use of appropriate "user friendly" and affordable technology, combined with capacity building, will help ensure that communities can effectively operate and manage their water supply schemes. Sophisticated technologies that may require highly skilled personnel will often be ineffective in rural communities. Solar pumps may be an exception to this rule when they replace diesel pumps that require much more maintenance. Technical guidelines also need to consider the surroundings explicitly, such as the need of pastoral systems to align water availability in dams for livestock with pasture availability.

Mainstream climate change aspects in water policies and practices

Currently the main policies and regulations around water resources management and water supply do not consider climate change aspects. Yet, water is one of the sectors that will be most directly affected by expected climate change impacts as the experience of the GCCA projects has shown. Mainstreaming climate change in water policies, regulations and guidelines is needed to help ensure that water resources management and design, and management of water supply systems consider the potential impacts of climate change such as longer droughts and more intense rainfall events.

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This publication has been produced with the financial support of the European Union. Its contents are the sole responsibility of Henku, A., Swennenhuis, J., Mpanda, M. and do not necessarily reflect the views of the European Union. Rural Water Resources Management and Supply: Lessons and Recommendations from Tanzania. GCCA Tanzania Policy Brief No. 1. Dar es Salaam, Tanzania 2019.



