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Improving the functionality of water investments in the drylands: Learning from Kenya's County Climate Change Fund

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Functionality of water investments

Despite global improvements in water coverage since the Millennium Development Goals, the functionality and longer-term sustainability of investments in water has lagged behind, often with a limited understanding on how and why investments in water supply fail (Bonsor et al. 2015). Achieving the ambitious goals for universal access to safe and reliable water for all by 2030 under Sustainable Development Goal 6 will depend on the functionality and sustainability of these water supplies.

Functionality status of 62 CCCF investments

Across the five counties:

- 51.6% were functional and operating well with communities able to access water
- 22.6% were partially-functional with some water accessible but in a limited capacity
- 14.5% were non-functional with the community unable to access any water.
- 11.3% were not-in-use seasonal pans or dams and were dry during the time of the assessment, but were otherwise functional

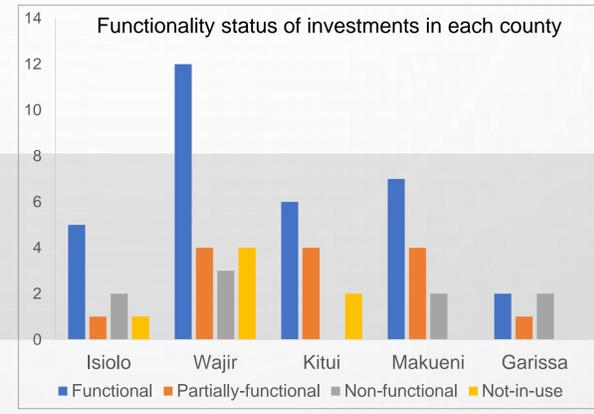
Sustainability Drivers

Elements that contribute to long-term functionality:

1. Majority of investments are rehabilitations
2. Separation of domestic and livestock water
3. Locally-prioritised relevant water investments
4. Inclusion of women at all levels of the projects

Water in the drylands

Water investments in the drylands are critical for water and food security, where access to water is essential for domestic and productive uses, including livestock production and rain-fed cultivation. Yet, ensuring the functionality and sustainability of water investments in the drylands remains an ongoing challenge, with evidence of approximately 20-40% failure rates of rural water supplies across East Africa and beyond (Banks and Furrey 2016; WBG 2018; MacAllister et al. 2020).



Collecting domestic water from a newly constructed water kiosk at Shimbirey Borehole in Garissa County. Photo credit: ADA Consortium

Conclusion

The majority of water investments were functional. Techno-managerial problems contributed to the non and partially functional investments. These are explained by a mix of governance, institutional, capacity, technology and financial deficiencies that underlie water provision in the ASALs.

Kenya's County Climate Change Fund (CCCF)

Kenya's County Climate Change Fund (CCCF) facilitates the flow of climate finance to the local level and strengthens public participation in the management and use of those funds. The CCCF has financed 109 public goods investments with 90 focused on increasing water availability and access. The CCCF mechanism was first piloted in Isiolo County in 2012 and then extended to four additional counties in 2013; Garissa, Kitui, Makueni and Wajir.

Main factors contributing to non- and partially functional investments

Factors are overlapping so in many cases more than one factor contributes:

1. Poor siting of investments
2. Poor design and / or workmanship
3. Damage due to vandalism or conflict
4. Lack of repairs and maintenance

Recommendation

To improve the functionality and sustainability of water investments emphasis on 'hardware' aspects and establishing new water points should shift to the rehabilitation of existing water points, improved governance, M&E, and other 'software' aspects.

Functionality survey and stakeholder workshops

We used a functionality survey to assess the functionality status of 62 water investments spread across Isiolo, Garissa, Kitui, Makueni and Wajir counties. The main factors contributing to non and partially functional investments were determined from physical assessment of each investment with input from respondents present at the sites. These were subsequently elaborated during two-day stakeholder workshops in each county to understand the underlying causes of poor functionality and challenges to their sustainability

Underlying causes of poor functionality

These are a mix of technical, social, institutional, environmental, and governance issues that are cross-cutting and interlinked:

1. Inadequate use of climate or hydrological information in siting and design
2. Lack of technical capacity of county water department
3. Poor supervision of contractors during construction
4. Cross-border conflict
5. Water investments are distant from settlements
6. Weak technical and management capacity of site management committees
7. Unclear roles and responsibilities, leading to lack of ownership of investments
8. Lack of access to and availability of spare parts
9. Absence of a preventative maintenance schedule
10. High costs of running investments and low user's willingness to pay for water
11. Absence of a M&E framework



Goats drinking from a newly constructed livestock trough at Yamicha Borehole in Isiolo County. Photo credit: ADA Consortium

References

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