

A policy proposal for integrating WASH and water resources management in the Kajiado Water Policy 2018

Kenya is classified as a 'chronically water scarce' country¹, consequently Kajiado County is categorised as a water scarce county². Still livelihoods depend strongly on water for drinking purposes, livestock watering, industry, as well as irrigated agriculture with water mostly coming from wetlands (swamps), hills (springs), boreholes, riverbeds (sand dams and scoop holes) and open water reservoirs (earth pans). Moreover, Kenya's target of achieving 100% coverage of safe water supply by 2030 and 100% access to basic sanitation services by 2030 is unlikely to be met. In 2014 Kajiado County had an Open Defecation Status of 25.7%³.

Sustainable Development Goal (SDG) 6 makes the strongest case for the integration of Water, Sanitation and Hygiene (WASH) and Water Resources Management (WRM). It focuses on water with the overarching goal to "Ensure availability and sustainable management of water and sanitation for all"⁴. With important targets that go beyond access to drinking water, sanitation and hygiene, to now also include water quality and wastewater treatment, water scarcity and water-use efficiency, integrated water resources management and water-related ecosystems⁵. Kajiado County is in the process of reviewing its Water Policy, which still exists in draft form. The draft policy has WASH and water resources and ecosystem management integration gaps like the inadequate coordination and consultation between the ministries of Health and Water at County level that will need to be addressed to ensure compliance with SDG 6. As well as the realization that hygiene and sanitation practices affects quality of water sources and availability of water helps realization of good hygiene and sanitation practices.

Introduction

Erratic rains, extreme temperatures and cyclic and prolonged droughts characterise Kajiado county. The variations in intensity and frequency of the above conditions may be manifestations of climatic changes whose full impacts are yet to be fully understood. Traditionally, the county has had a bi-modal rainfall pattern that could be changing as seen in recent shifts mainly resulting in less reliability and increasing unpredictability. As an example, crop failure in the county was reported at more than 90% in the drought year of 2009 while livestock losses were in the excess of 70% in most areas with devastating impacts on people's livelihoods. In light of this environmental uncertainty a diverse range of innovative strategies and institutions to minimize this unpredictability and risk are needed⁶. While droughts appear cyclic, climate change adaptation strategies following a catchment approach may be used to protect people and their livelihood assets from the hazards. Rainwater water harvesting through 3R –Recharge, retention and reuse (at catchment level) is a viable and necessary adaptive strategy.

Moreover, population growth and urbanisation is expected to translate into enhanced demand for clean and safe water, making it increasingly challenging to reach the international requirement of supplying at least 20 litres per capita⁷ and to balance urban and rural interests⁸.

WASH

Good sanitation and hygiene practices to a large extent depend on water availability while poor hygiene and sanitation behaviour and access negatively affects the quality of water resources. In Kajiado town for example,

there is no sewage system and the residents are reliant on unlined pit latrines. There also are no exhaust services nor faecal sludge disposal and treatment facilities in Kajiado town. Granted that the geology of the town is highly porous, rain water easily mixes with the contents of such pit latrines and seeps into the aquifer⁹. The residents get their domestic water from the boreholes in Kajiado town which draw from the contaminated aquifer which has high levels of nitrate.

There is non-enforcement of existing regulations as evidenced by the proliferation of privately owned boreholes sinking in disregard to set regulations and guidelines. Worse still, the supply of water from some of these infrastructures may not be suitable for human consumption as boreholes within Kajiado town sampled indicate high levels of nitrates¹⁰. Joint planning and implementation by Department of Water and Department of Health Services would go a long way in enhancing required coordination for much sought after integrated approach.

WRM

The degradation of water resources due to climate change, pollution and over-use is increasingly affecting access to safe drinking water, especially for poor and vulnerable children and their families. More than 1.7 billion people now live in water basins where water use exceeds recharge, with repercussions which put safe and sustainable drinking water at risk, including drying rivers, depleted aquifers and deteriorating ecosystems¹¹. This situation is replicated in Kajiado County. Green house farming is gaining momentum with the sinking of boreholes, which poses a risk of depleting the underground water sources in the long run. Strong winds are experienced during the dry spells, accompanied by very high temperatures and flash floods during the short and long rains eroding the soil and preventing retention of the water.

Key facts and implications

(Information from desk studies and observations)

- Studies suggest that boreholes around Kajiado Town collect water from the same weathered geological formations (aquifer)^{12, 13}.
- Droughts in Kajiado County have been increasing in frequency and intensity. While flash floods have become more severe and equally devastating. "These droughts often lead to severe loss of livestock whose carcasses are washed by floods into open water reservoirs causing further pollution of water reservoirs" says Ole Saidimu, Kajiado resident. Poor sanitation and hygiene

knowledge and practices (exhibited by amongst others open defecation, improper use of sanitation facilities and improper hand washing), environmental pollution, and poor disposal of human excreta are responsible for the spread of common and communicable diseases in Kajiado. This poses a problem during the rainy season because the seasonal river beds where the community draw their water gets contaminated by the fecal matter¹⁴.

- The top ten most common causes of morbidity in order of prevalence according to hospital reports are: upper respiratory tract conditions (29.7%), skin diseases (8.4%), diarrhoea (7.5%), pneumonia (5.1%), eye infections (4.3%), urinary tract infection (3.5%), malaria (3.1%), accidents (2.8%), typhoid fever (2.6%), rheumatism (1.8%), and ear infection(1.8%)¹⁵. Eight out of those ten are directly related to hygiene practices and safe water handling.

Whereas there is a strong correlation between WASH and WRM, in the Kenyan context the Ministry of Water, Irrigation, Environment and Natural Resources (MoWIENR) focuses on water resources and ecosystem management, while the Ministry of Health Services (MoHS) through Department of Public Health focuses on Sanitation and Health. The two ministries have limited collaboration or cooperation. Indeed, the Constitution of Kenya 2010 asserts that the governments at the national and county levels are "distinct and interdependent" and are expected to undertake their relations through "consultation and cooperation."¹⁶ However, Kenya's decentralisation process is still evolving and continued contestation of roles between the two levels of governments exists, besides generally insufficient cooperation of non-state WASH and Water Resources Management (WRM) actors¹⁷.

Conclusion

Main conclusions from the studies reviewed:

- Faecal waste is slowly infiltrating into the ground and contaminating open water sources, river beds, shallow and deep aquifers from where domestic water is sourced showing the interconnectedness between WASH and WRM.
- Related water quality risk might pose a health risk in the (near) future. This underscores the importance of Integrating WASH and WRM in planning and implementation.
- Lack of integration of WASH and WRM is undermining the ability of the County and National Governments to deliver on their inclusive service provision mandate.
- Need for groundwater mapping and monitoring campaigns to determine risks of depletion and pollution of the groundwater system before developing new water

sources. For example the boreholes in Kajiado town contain elevated levels of nitrates, indicating the slow infiltration of urban waste water into the aquifers posing a risk for water quality and proving the importance of proper waste water management.

Policy recommendations

1. Policy strengthening to include integration of WASH and WRM in the Kajiado Water Policy.
 - a. The MoWIENR and the MoHS should form coordination structures for joint planning and implementation of WASH & WRM programmes (forums). Such coordination structures should be established from ward level to sub-county level and finally to county level and should have both horizontal and vertical linkages among relevant stakeholders. This can only be effective if hinged on a policy document.
 - b. Organise regular sharing and learning forums from ward, sub-counties and county level for the different actors to share lessons and experiences.
2. Collaboration between WASH actors and WRM actors – both state and non-state alike– should be strengthened for instance through strategic agreements and (inter-departmental) understandings, formation and operationalising of technical working groups (committees for integration of WASH & WRM) and establishing clear communication channels.
3. The National Government is tasked with management of water resources through the Water Resources Authority (WRA) and its agents while county governments are tasked with water supply through Water Service Providers (WSPs)¹⁸. There is need for seamless coordination of the two levels of governments for sustainable service provision. Likewise, Health Services is a function of the National Government while Water Supply services is a function of the County Government. Integrated WASH and WRM programming in the County could be improved greatly with enhanced consultation and coordination by the two levels (national and county) of governments.

NOTES

- 1 World Bank, 2000
- 2 Kajiado CIDP 203-2017
- 3 State of Sanitation in Kajiado – County Sanitation Profiles – Ministry of Health and WSP 2014
- 4 "Goal 6: Ensure access to water and sanitation for all." Sustainable Development Goals. UN.
- 5 "Indicators and Monitoring." UN Water.
- 6 Amboseli Ecosystem Management Plan
- 7 WHO-Minimum water for domestic use (Technical Note No. 9)
- 8 Watershed Context Analysis Document
- 9 Knowledge Exchange mission SUSWA project
- 10 Knowledge Exchange mission SUSWA project 25 – 29 May 2015, Kajiado, Kenya
- 11 UN-Water, UN DESA & UNICEF. (2013). The Post 2015 Water Thematic Consultation Report
- 12 Hydrology and Hydrogeology of Sponge City Kajiado, Kenya by Arjen Oord (Acacia Water), May 2017
- 13 Knowledge Exchange mission SUSWA project, 25 – 29 May 2015, Kajiado, Kenya
- 14 Relief Web: Kenya: Safe drinking water for the people of Kajiado
- 15 Kajiado County Integrated Development Plan 2013-2017
- 16 Article 6 of the Constitution of Kenya 2010
- 17 Watershed Context Analysis Document
- 18 Kenya Water Act 2016